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THE GREAT CULTURAL TRADITIONS

Volume I

THE ANCIENT CITIES

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THE GREAT CULTURAL TRADITIONS

The Foundations of Civilization

IN TWO VOLUMES

Volume I

THE ANCIENT CITIES

The beginnings of cultural developments among preliterate men, the transmission of their achievements among early literate men, and the organization of the traditional structures of behavior, feeling, and thought in the ancient cities of the Near East, Asia, and Europe.

Volume II

THE CLASSICAL EMPIRES

The ancient Asiatic and European urban cultures in their imperial phase and decline, the interactions among them, and the reorientation of their cultural traditions under the influence of the displacement of their carrying populations.



Photograph by Dr. Karl Absolon, *chief discoverer of prehistoric remains in Moravia*

THE EARLIEST PORTRAIT

This carved ivory representation of a human head was found in 1932 at Vestonice, Moravia, on the site once occupied by paleolithic mammoth hunters. The best archeological opinion gives the artifact an age of about 30,000 years and regards it as the portrait of a woman.

THE GREAT CULTURAL TRADITIONS

The Foundations of Civilization

VOLUME I

THE ANCIENT CITIES

by RALPH TURNER, PH.D.

FIRST EDITION
SECOND IMPRESSION

McGRAW-HILL BOOK COMPANY, INC.
NEW YORK AND LONDON
1941

THE GREAT CULTURAL TRADITIONS

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PREFACE

> Science, divided into water-tight compartments, makes us feel uneasy;—a world split into selfish and quarrelsome nations is too narrow for us.
>
> —SARTON.

History originated as myth. To say this is not to suggest that it is false or useless; rather, it is to indicate that like all myths it serves a necessary purpose. In the case of history the function is to bind present life to past life so that the social continuity which supports social order is maintained. Properly understood, therefore, history is the social memory by which present life is made intelligible. Indeed, men cannot live without history; if they possessed none they would invent it—and, in fact, they have. Such invention, although it may be found inaccurate as regards actual occurrences, nevertheless performs its function. Men do not require a true history; they ask only for a satisfying one or, in other words, one to which they can appeal, knowing that it will provide justification for their present actions or convictions. History is the natural propaganda of a social order; for this reason the oft-quoted words "History is past politics" ought to read "History is present politics."

For the student of history this function of his subject creates a dilemma, if not a disorder. How shall he read the record of past human experience?

To read it so as not to satisfy dominant interests in his present is to invite criticism. To take shelter under the declaration "Let the facts speak for themselves" is to deny his own craft, for he must be naïve not to know that facts do not speak for themselves. Indeed, they speak as they are assembled and ordered, and that is the task the historian has undertaken to perform. To assert that "the facts speak for themselves" is merely an easy way of allowing them to conform to the demands of a present. Shall not the historian find refuge in the honest statement that, since not all the facts are available, no accurate judgment on the matter to which they pertain can be made? Since it is clear, however, that

all the facts can never be found, "suspended judgment" becomes another device that permits his subject to serve interests which can impose their will on him.

What, the historian must ask himself, do his data mean?

Perhaps he accompanies such questioning with the comfortable observation that preceding attempts to declare their meaning have produced assertions which later have been rejected. Honesty requires, though, that he recognize that most of these attempts were made by men who had little systematic knowledge of the data he possesses. Furthermore, he must be aware of the fact that other men—poets, prophets, politicians, and, above all in the American scene, the "stylites" of journalism—will do what he refuses to do. Not that his refusal to do as they do is weakness; rather it is the refusal to perform the function his specialization imposes that is weakness. By virtue of the fact that the historian has set himself the task of studying past action and thought, he has assumed the responsibility of indicating their meaning. And that meaning, whatever it may be, has significance for social organization. As a scholar the historian may sit in an ivory tower; as a historian he is in the social arena.

But to recognize his function is not enough; the historian must perform it. And independence of mind asserted in the face of dominant interests is not performance. Indeed, the historian who overtly proclaims his independence of mind is likely to mistake his own rationality—or for objectivity's sake, irrationality—for the forces of history. The historian must have standards of judgment.

I have no solution to offer for the dilemma which faces historians, but I ask readers to be aware that I am familiar with it. Whatever the awareness has contributed to this book can be discovered only by reading it.

In writing about the foundations of civilization I have assembled data and ordered them in certain ways.

A cursory glance at the table of contents will reveal even to the nonprofessional reader that few men, if any, know enough facts to write such a book; to acquire a command of the languages of the cultures surveyed, as well as expertness in the technical skills of geology, anthropology, and archaeology, would be an enormous task. I make no claim to have performed it. The work is, therefore, a social product. From professional workers in many fields of investigation I have taken over both facts and judgments; the justification for this borrowing resides in the fact that such

workers are presumed to maintain professional standards which give validity, within the limits of their knowledge, to their findings. In this borrowing I have been guided by recognized authorities insofar as I have been able to become acquainted with them. Where controversy exists among expert investigators, I have undoubtedly tended to favor the position most suitable to the development of the discussion. In some fields new materials have become available so recently that I have with difficulty become familiar with them and probably in some instances I have not rightly understood or used them. Furthermore, because of the variety of subjects under discussion, although completeness of coverage of available materials may be an ideal, incompleteness will always characterize the actual performance. At some points irrelevant materials may have been included, and at others pertinent matter has probably been passed over. I regret the confusing of the reader's attention with the irrelevant material; to those who may find the selected material improper or inadequate I offer the bibliographical notes as guides in a quest they may wish to undertake.

In the ordering of the assembled data I have used concepts borrowed from other social sciences, such as anthropology, human geography, sociology, social psychology, and economics. I have felt justified in making this attempt on the ground that inasmuch as these social sciences analyze human behavior, their findings must have some significance for the historian who studies human behavior as it has moved in time. Two of these concepts deserve mention, *viz.* "culture" and "social process," for they have constantly served my thinking. But how I have used them can be ascertained only by inspecting the application. I wish, however, to record my belief that there is a relation between the other social sciences and history that deserves fuller recognition than it commonly receives. By its nature history is a synthetic subject; *i.e.*, it studies the whole man and, ideally, all men in action as they have been in the past. Such a study must employ whatever methods and concepts are available for the analyzing of the behavior of these men, for their actions cannot be comprehended, either in parts or as a whole, without a knowledge of the elements and the processes of human behavior. Historical synthesis does not consist of piling up more and more data about more and more subjects; actually it involves the integration of data in always more ways so that the history becomes increasingly understandable as social movement in time. From this point of view it must be true that the social sciences which analyze human behavior have

utility for the historian. I do not claim that I have made either a complete or a correct use of these concepts; I would argue, though, that they ought to be used in historical study, if that study is to be as intellectually complete as present knowledge permits.

From this treatment has emerged the concept "urban culture," by means of which the general social, political, economic, and intellectual aspects of life are integrated in an orderly structure and seen to develop in a recognizable process. This volume describes the rise of the ancient urban cultures and the formation of the traditions which embodied their main achievements.

RALPH TURNER.

WASHINGTON, D.C.,
June, 1941.

ACKNOWLEDGMENTS

In the composition of the book I have had the kindly assistance of many persons. To each of them I offer thanks, and to certain of them I recognize special indebtedness. Dr. Guy Stanton Ford and Dr. Lester P. Shippee of the University of Minnesota, Dr. L. M. W. Laistner of Cornell University, Dr. David Owen of Harvard University, and Dr. Solon J. Buck of the National Archives expressed opinions on various parts of the work which were helpful in shaping the treatment of the subject as a whole. Dr. John A. Wilson, Director of the Oriental Institute of the University of Chicago, made exceedingly useful comment on the discussion of Egyptian culture. Dr. H. G. Creel, Assistant Professor of Chinese Literature and Institutions at the University of Chicago, gave suggestions about the material dealing with ancient China. On theological matters the advice of Bernard J. Appel was helpful. To Stephen Raushenbush I am indebted for an outlook on the career of Jesus and certain social aspects of the development of Christianity. Dr. Tom B. Jones of the University of Minnesota, who read the entire manuscript, was particularly helpful in shaping the discussion of Greek and Roman culture. Dr. Calvin W. McEwan, Field Director of the Oriental Institute Syrian Expedition, University of Chicago, who also read the entire manuscript, not only gave valuable advice about the early cultures of the Near East but also showed an interest in the whole work, which was of inestimable value.

In the preparation of the manuscript for publication special aid was given by Dr. Thomas E. Drake of Haverford College, who made suggestions about the presentation of materials, and Maxine Koon Cox, whose comments contributed to the modification of many passages. Dr. John P. M. Marsalka gave freely of his time and knowledge in preparing the bibliographical notes; I acknowledge a special debt to him. My daughter, Alice Virginia Kirby, also assisted in the checking of the bibliography.

I had the kindly assistance of Dr. T. Leslie Shear, Professor of Classical Archaeology at Princeton University, Dr. E. A. Speiser, Professor of Semitics at the University of Pennsylvania, Bishop William C. White, Professor of Archaeology at the University of

Toronto, and Dr. Erich F. Schmidt of the Oriental Institute, University of Chicago, in obtaining certain illustrations. I wish also to thank the Metropolitan Museum, New York City, the Museum of Fine Arts, Boston, the Museum, University of Pennsylvania, the Museum of the Oriental Institute, University of Chicago, the Freer Gallery of Art, Washington, D. C., the John Rylands Library, Manchester, England, the Birmingham Art Gallery, Birmingham, England, and the British Museum, London, for the permission to reproduce photographs which they supplied. I appreciate the gift of certain photographs by the Italian and Egyptian Embassies, Washington, D. C. The Royal Air Force made it possible for me to obtain three photographs, and the India Office, London, gave permission to reproduce an illustration from one of its publications.

I wish to express my appreciation to the publishers, noted throughout the book, who generously gave permission to quote passages from their publications or to reproduce illustrations found in them. This kindly assistance is testimony to the cooperative service which publishers, both in the United States and in foreign lands, give to learning.

A special debt is recognized to those numerous persons whose labors contribute to the continuous appearance of the learned periodicals upon which I have so greatly depended for materials.

I wish also to thank the staffs of the British Museum, the Columbia University Library, the New York Public Library, the University of Minnesota Library, and the Library of Congress for their efficient service.

The maps, charts, and color plates were prepared by Mildred Miles Hough; her skill and advice were continuously at my service.

Words are inadequate to describe the aid given by my wife at every stage of the study, the writing, and the publishing that produced this book; it was a constant labor, willingly given, for which I am deeply thankful.

I assume full responsibility for the mistakes which may be found in the book, whether simple errors of fact, or the wrong use of facts after they were removed from their usual contexts, or the misinterpretation of facts in terms of the concepts borrowed from the social sciences. Perhaps these suggestions will be helpful to those critics who find it worth while to note my errors.

RALPH TURNER.

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Part One

THE ORIGINS OF CULTURAL TRADITIONS

Chapter I

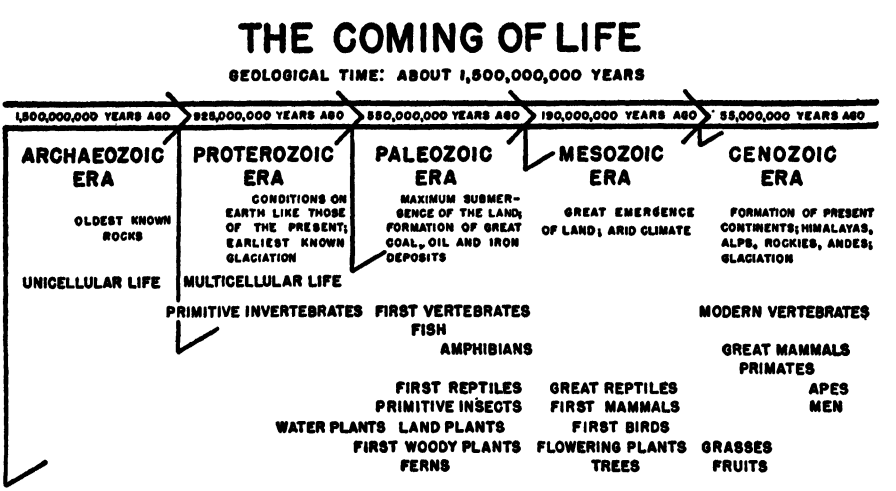
THE BEGINNINGS OF CULTURAL TRADITIONS

Men came to life only with all life.

The human organism embodies many of the achievements of biological evolution through the millions of years since life began on earth. Like all organisms it starts life as a single cell. Like all organisms it grows by the process of cell division. And like all multicellular organisms it is a structure of tissues, *i.e.*, groups of cooperating cells performing different functions.

In the evolutionary scale, the differentiation of cells into tissues began with the sponge. In the jellyfish both muscular and nervous tissues appeared. The rudimentary skeleton developed with the lancelet, a small marine animal; with the fish came the backbone and ribs. Human teeth are built of cells like those of sharks' teeth, and the lining of human nasal cavities consists of cells like those making up the feelers of all smell-oriented organisms, from worms to cats. The symmetrical pattern of the human body follows the design of the amphibians—the frogs, turtles, and reptiles—that first brought animal life from water to land. And the physiological processes of body heating, breathing, digesting, and procreating go on in the manner common to all mammals.

The close relationship of man with his nearest relatives—the primates, especially the monkeys and the anthropoid apes—is indicated by the fact that he shares with them many anatomical characteristics: 5 per cent with the Old World monkeys, 5 per cent with the orangutan, 8 per cent with the gibbon, and 9 per cent with the gorilla and the chimpanzee. Only about 30 per cent of man's biological equipment is peculiarly his own. Among the shared traits are the prehensile hand, nails, acute vision and hearing (in contrast to the strong sense of smell possessed by most ground-dwelling animals), collarbones, and the enlarged frontal lobe of the brain. "The brain of man, as the 'organ of mind,' . . . is essentially an



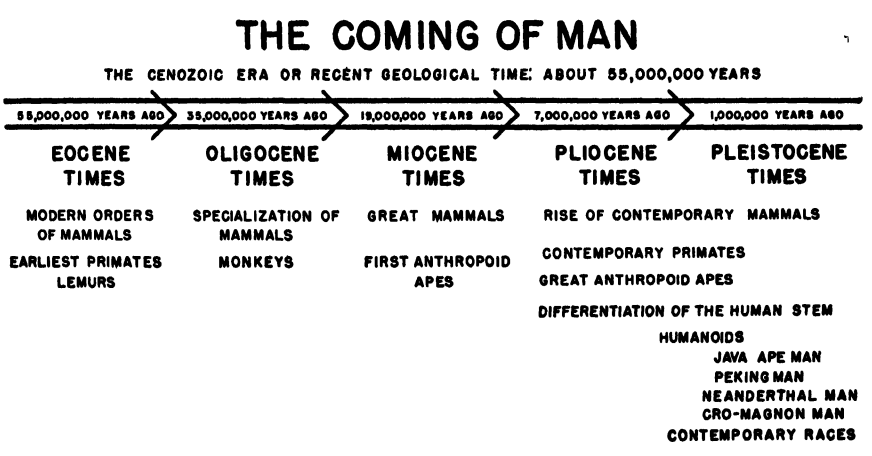
enlarged and more complicated model of the anthropoid brain. The structural difference is solely one of degree. The general evolutional pattern is the same, and there is no definite structure in either one which is lacking in the other."[1] Human blood is chemically more like the blood of the gorilla and the chimpanzee than it is like the blood of monkeys, and yet it is more like the blood of monkeys than the blood of any other animal. Many students of biology look upon this one fact as conclusive proof of the common descent of the monkeys, the apes, and man. Recent studies of the sexual activity, the serum proteins, and the metabolism of the several species support this conclusion.[2]

THE DIFFERENTIATION OF THE HUMAN SPECIES

Man, it must be emphasized, is descended from no existing type of monkey or ape; he is related to them only by virtue of the fact that he and they alike are the descendants of a common primate ancestor of the Eocene period of the Cenozoic era, *i.e.*, the first phase of recent geological times. In the background of the emergence of this ancestor was the development in the Mesozoic era of a new food supply, mainly fruit and nuts, which was to be obtained chiefly by climbing in trees. The distinctive adaptations required by this mode of life were the prehensile hand and foot, useful for gripping and, especially, for lifting the weight of the body

[1] Franz Boas and others, *General Anthropology* (1938), pp. 36–37. By permission of D. C. Heath and Company, Boston.

[2] See Solly Zuckerman, *Functional Affinities of Man, Monkeys, and Apes* (1933).



in movement through the branches. However, the original primate had few specialized biological traits and, consequently, was free for a diversified behavior. This freedom was the decisive factor in the evolution of its descendants, especially man.[1]

Only a conjectural explanation can be offered for the differentiation of the human species.

As hand feeders and tree dwellers the early primates developed grasping hands, keen sight, accurate judgment of distances, and precision of movement; such developments were accompanied by the growth of the nervous system that produced the enlargement of the frontal lobe of the brain. When one type of the early primates took to swinging from branch to branch by the arms, important anatomical changes occurred. The trunk, hanging from the arms, assumed a perpendicular position; the arms were strengthened and the hands broadened; the head and eyes were uplifted; and the organs of the abdomen and chest were shifted to new positions. These structural changes made possible the development of erect posture. Man, the chimpanzee, the gorilla, and the

[1] On the biological differentiation of the human species see William K. Gregory, *Man's Place among the Anthropoids* (1934); Sir Arthur Keith, *The Construction of Man's Family Tree* (1934)—a brief view of the various schemes of man's descent since 1865, when Ernst Haeckel drew up a family tree to represent man's place in the animal kingdom; Sir Arthur Keith, *New Discoveries Relating to the Antiquity of Man* (1931); Frederick M. Tilney, *The Master of Destiny: A biography of the brain* (1930); Frederick M. Tilney, "The Brain from Fish to Man," *The Scientific Monthly*, Vol. 45 (1937), pp. 289–306, 415–426; Edward L. Troxell, "The Thumb of Man," *The Scientific Monthly*, Vol. 43 (1936), pp. 148–150; Ernest A. Hooton, *Up from the Ape* (1931); G. Elliot Smith, *The Evolution of Man* (1927); O. Abel, *Die Stellung des Menschen im Rahmen der Wirbeltiere* (1931); and Hans Weinert, *Ursprung der Menschheit* (1932).

orangutan have probably descended from such a free swinging ancestor.

The human precursor probably parted company with the ancestor of the anthropoids before taking to a life on the ground. But the foot, developed as ground life became the permanent way of life, was, perhaps, the decisive adaptation in the differentiation of the human species. As the foot became more specialized, the leg lengthened, the thighbone became stronger, the pelvis broadened, the backbone took on a new curvature, and the head was balanced on the spine. At the same time the arms and hands decreased in size but gained in dexterity. The jaws, no longer necessary for fighting, retreated. The eyes finally perfected for binocular vision, became guides for the manipulative activities of the hands. As the jaw muscles weakened, the skull became thinner and expanded, permitting a further enlargement of the frontal lobe of the brain. The increased brain capacity made possible the coordination of those highly complex activities of which the feet, the legs, the arms, the hands, and the eyes are capable. The spherical shape of the head was the result of all these changes in structure. These changes, it should be understood, were supremely important because they made possible a new organization of behavior which, on the one hand, was developed in terms of tools and, on the other hand, was organized through social cooperation. The foot freed the arms and hands for manipulative activities; also as the organ of life on the ground it made practical offensive and defensive action by groups, and such action was necessary if man was to survive under the conditions he found on the ground.[1]

The factors which led the human precursors to descend from the trees to the ground were undoubtedly several in number. Perhaps increasing weight made life in the branches difficult. More probably the human precursors came down to the ground in order to obtain flesh as a food. But to get it they had to kill, and so they made killing their profession. "Hunting is as old as humanity." Environmental conditions during the Miocene period, the last climax of mountain building, when the main units of the Eurasian mountain backbone were formed, may have stimulated the adoption of a flesh diet and the descent from the trees and, consequently, a diversification of behavior, the biological correlative of which was a growth of the frontal lobe of the brain.[2] While The Himalaya and

[1] See Ernest A. Hooton, "The Simian Basis of Human Mechanics, or Ape to Engineer," *Antiquity*, Vol. 12 (1938), pp. 198–204.

[2] Joseph Barrell, "Probable Relations of Climatic Change to the Origin of the Tertiary Ape-Man," *The Scientific Monthly*, Vol. 4 (1917), pp. 16–26.

the Alps were being uplifted, great tropical forests in southern Eurasia and northern Africa were broken up, especially along their northern edges, leaving isolated islands of forests which, as aridity increased, dwindled to open park land and in many places to grasslands. As the increasing aridity and decreasing temperatures destroyed the tropical food plants, the tree dwellers faced great hazards and the selective process became more severe. Only those able to win a subsistence on the ground survived: they were the agile, the quick, the ready, and the handy. But singlehanded, it may be guessed, they were at a great disadvantage among the fierce competitors they found on the ground, and so survival was only for those who hunted with their kind. Mutual aid in violent pursuits was probably the primary law of human life.

Throughout Pliocene times, when a sharp differentiation of environments occurred not only between the lands above and below the Eurasian mountain backbone but also in the eastern and western regions south of it, several primate stocks underwent parallel developments; one of these stocks culminated in the great apes and another in man. The human stock is first identified just *before* or *at* the opening of Pleistocene or most recent geological times. Geologically these times produced only minor changes in the continents; climatically they brought a series of glacial and interglacial epochs. Since 1840, when the theory of the "ice age" was originally announced, much study has been given to phenomena which support it, and today, although the number of glacial and interglacial epochs is not agreed upon, the theory is widely accepted as providing an explanation of the environmental conditions under which the human stock evolved into its present forms. The standard view, which recognizes four glacial epochs—the Günz, the Mindel, the Riss, and the Würm, is based on Alpine evidences, and the last three epochs are correlated with glaciations that centered over Scandinavia. At present, it is not certain that the European epochs coincided with the glacial periods of North America and eastern Asia. In southeastern Asia, where the earliest representatives of the human stock have been found, there is little evidence of glaciation at any time.

Probably a common misapprehension about the ice age is that its glacial phases were universally cold; this was not necessarily true, because today glaciers exist in close proximity to both temperate and tropical areas. The decisive fact about a glacial period seems to have been not a cold climate but an instability of climate in which, either over highlands or in northern regions, the summer heat did not melt entirely the winter snowfall; in fact, the

difference between a glacial and an interglacial climate was probably merely a slightly lower summer temperature in the former than in the latter.

Instability of climate was, of course, a circumstance which caused men constantly to face conditions of life which could be met only with changed activities. Thus, when one asserts that man is a "function of the ice age," one means that biological selection operated continuously to preserve those representatives of the human stock capable of a flexible behavior. Organically this flexibility was achieved in the coordination of hand, foot, eye, ear, and brain, and from this coordination stemmed the manual dexterity which was expressed in the invention of tools. Socially, the flexibility was supported by the lengthened period of infancy and childhood which gave increasing opportunity for the young to learn from the old. Language was the social means of organizing the structure of behavior which this learning carried from generation to generation.[1]

When the human family is first dimly discernible to the imaginative eye against the dark background of rising mountains, declining temperatures, decreasing rainfall, wasting forests, and the great mammals of late Pliocene or early Pleistocene times, it is a hunting horde—actually it was probably many hunting packs along both the northern and the southern spurs of the mountain backbone of Eurasia and in northern and east central Africa. And the pack was everything human. It preyed. It starved. It gorged. It howled, babbled, jubilated, moaned. Above all it fought and killed. Before it the individual was powerless: except indeed as the pack lived, man lived not at all. Its violence was his violence. From it he drew a strength not his own. He dared no resistance to its commands. He knew no rewards but its approvals. And he feared no terror like its ferocity. Mass was paramount; member was little.

The Fossil Evidence of the Evolution of Man.

The clearest evidence in support of the foregoing or any other theory of the evolution of man is found in the fossils of early primates, monkeys, and apes, as well as men.

Eocene deposits have given up the remains of small hand-feeding and tree-dwelling primates. Fossils of monkeys and a small

[1] On the ice age see W. B. Wright, *The Quaternary Ice Age* (1937); R. A. Daly, *The Changing World of the Ice Age* (1934); also Hugo Obermaier, *Fossil Man in Spain* (1924), Chap. II, "The Glacial Epoch."

generalized ape have been found in Oligocene deposits. Many finds indicate that during the Miocene and Pliocene periods several varieties of anthropoid apes ranged from France to India. In Egypt a Miocene deposit has yielded the fossils of the organism that may have been the common ancestor of the anthropoids and the humanoids. In India Miocene strata have given up fossils of giant apes having teeth approaching the human form. In Ethiopia Pliocene materials have yielded the earliest known fully evolved anthropoid ape. Skulls found at Taungs, Bechuanaland, in Africa, to which have been given the name *Australopithecus africanus*, more nearly approach the human cranial form than the skulls of any other anthropoids; they are believed to represent a branch of anthropoids, now disappeared, to which the gorilla and the chimpanzee belong, rather than the humanoid line of descent. Although their geological location is uncertain, the Taungs skulls are probably Pleistocene. The position of the several species, of which the fossils noted here are representatives, in relation to the line of human descent is purely conjectural; they testify only to the general evolution of primate types toward the human form.

All fossils recognized as distinctly human have been found in Pleistocene materials, *i.e.*, in glacial, interglacial, or postglacial deposits. The number of these fossils is increasing constantly as investigators explore the Old World.

The earliest representatives of the human line of descent are known as *Pithecanthropus erectus*, or Java man, and *Sinanthropus pekinensis*, or Peking man. Recent discoveries establish that Java man lived about 500,000 years ago; Peking man, it seems, is somewhat younger. The brain case of Java man, although much larger than that of any ape, is barely as great as that of the humanoid type. Peking man is quite like Java man but has a slightly larger brain case and some of the traits of the Neanderthal type of the middle Pleistocene period. The teeth and jaws are suggestive of these structures in modern man.

Besides Java man and Peking man at least four other species of pre-modern, *i.e.*, non-*sapiens*, man are recognized. *Homo soloensis*, found in Java, *Homo heidelbergensis*, known from a jaw unearthed in southern Germany, and *Homo rhodesiensis*, discovered in South Africa, point to the wide dispersion of man in the middle Pleistocene period.[1] Among the traits which distinguish these men are a

[1] Some anthropologists regard *Homo soloensis* and *Homo rhodesiensis* as the ancestral type of the Australoid race; if this opinion is correct, they are the earliest known representatives of *Homo sapiens*.

flattened brain case, a sloping forehead, a protruding ridge above the eyes, a flat face, and a lack of chin. Since 1857, when *Homo neanderthalensis* was first identified, many widely scattered sites in Europe and southwestern Asia have yielded specimens, and very recently the type has been located in central Asia and northwestern Africa. The characteristics of Neanderthal man are not greatly different from those of the species noted above, which, indeed, may be regarded either as his forerunners or as specializations of his type. Before Neanderthal man, the first human type whose existence is proved by the indisputable evidence of numerous skeletons, the record of human evolution is highly conjectural; after him—he probably lived from about 80,000 to 20,000 B.C.—the record is fairly complete.

It is now generally accepted that *Homo sapiens*, or modern man, was fully evolved in the middle Pleistocene period, for the *Swanscombe man* and the *Galley Hill man*, found in the Thames valley in England, are regarded as true representatives of the type. As evidenced by these and many later specimens, the main physical changes which produced the modern human stock were (1) the development of a fully erect posture, (2) the refinement of the bones and muscles, (3) the shortening of the arms and the lengthening of the legs, (4) the formation of the chin and the voice box, and (5) the enlargement of the brain case. The line of descent in which these changes occurred has not been identified. Neanderthal man and his predecessors, except possibly Peking man, are not regarded as being in the direct line of modern man. Although this line is traced from the middle Pleistocene period, its antecedents are unknown. Some opinion holds that the non-*sapiens* species may have sprung from the gorilla line, while other opinion asserts that *Homo sapiens* developed from the chimpanzee or gibbon line. A similar confusion of opinion exists about the place of origin of the human species, although accumulating evidences point to an Asiatic location, not only for the humanoid stock but also for *Homo neanderthalensis* and *Homo sapiens*.[1]

[1] On fossil men see Sir Arthur Keith, *The Antiquity of Man* (2 vols., 1925); Sir Arthur Keith, *New Discoveries Relating to the Antiquity of Man* (1931); L. S. B. Leakey, *Adam's Ancestors: An up-to-date outline of what is known about the origin of man* (1934); H. F. Cleland, *Our Prehistoric Ancestors* (1935); and G. G. McCurdy, *Early Man as Depicted by Leading Authorities at the International Symposium . . .*, Philadelphia, March 1937 (1937).

On the Asiatic origins of man see A. S. Woodward, "Recent Progress in the Study of Early Man," *Report of the British Association for the Advancement of Science*, 1935, pp. 129–142; H. de Terra, "Preliminary Report on Recent Geological and Archaeological Discoveries Relating to Man in South East Asia," *Proceedings of the National Academy of*

The Social Factor in the Evolution of Mankind.

Unfortunately the usual consideration of man's evolution in terms of skeletal remains has obscured the fact that always his development went on in terms of behavior which was social in orientation: "Primitive societies are coeval with mankind itself—or rather they are anterior to man, since social life is a condition which the evolution of Man out of Sub-man presupposes and without which that evolution could not have conceivably taken place."[1] The primary fact in this orientation was the organization of individual behavior through a continuous interaction with other individuals; it may be defined as the social factor in human development:

> By the social factor in the strict sense we mean the interaction of man and man, organized and unorganized, simultaneous and successive, with their specific consequences, whether temporary or enduring through generations.[2]

To these interactions, whatever their modes and however organized, when considered as the milieu of individual life, is given the designation *social process*. It was antecedent to man as a species and is necessary to man as the primary manifestation of his human nature.[3]

Science, Vol. 24 (1938), pp. 407–413; and Hervey H. Shimer, "Man's Ancestral Home," *The Scientific Monthly*, Vol. 46 (1938), pp. 249–254.

For a general account of Western man's interest in his ancestry consult Stanley Casson, *The Discovery of Man: The story of the inquiry into human origins* (1939).

[1] A. J. Toynbee, *A Study of History* (3 vols., 1934), Vol. I, p. 73. By permission of the Oxford University Press. Also R. R. Marett, *Head, Heart & Hands in Human Evolution* (1935), p. 87: "For numbers have made Man what he is. Because he hunted in packs, he had to devise for himself a pack-law, as Kipling calls it; and the political animal . . . was launched on its career." By permission of Hutchinson & Co. (Publishers) Ltd., London. "Horde life, a species-way of living but not an instinct as among insects, persists because it has survival value, because it betters the life-chances of individual horde members. Persisting and developing it makes possible the development of language and the flowering of culture. It makes possible the specifically human way of life." From Sutherland, R. L. and Woodward, J. L., *Introductory Sociology* (1937). Chicago: J. B. Lippincott Company; p. 48. Aristotle put the point succintly: "Any one who is unable to live a common life or who is so self-sufficient that he has no need to do so is no member of society, which means that he is either beast or god."

[2] L. T. Hobhouse, *Social Development: Its nature and conditions* (1924), p. 210. By permission of G. Allen & Unwin, Ltd., London.

[3] On the social factor in the evolution of the human species see Carveth Read, *The Origin of Man and His Superstitions* (2d ed., 1925); Wilfred Trotter, *Instincts of the Herd in Peace and War* (2d ed., 1920); and Ernest W. Burgess, *The Function of Socialization in Social Evolution* (1916).

From the first, therefore, the natural milieu of the individual human being was a group of his own kind—a horde or a pack or a community. This fact set the development of the species in a course which, no matter how much it allowed freedom of action to the individual, always brought him in the end under the sanctions of a group and to the service of some interest that was at least as much the interest of the group as it was his own, and frequently more so. The evolution of man has been not merely the development of structures or peculiarly the unfolding of individuality but rather the diversification of a behavior—a way of life—in which social purposes and social controls ultimately and necessarily organize individual conduct.

THE CONSEQUENCES OF THE SOCIAL ORIENTATION OF HUMAN BEHAVIOR.

The importance of the social factor in the evolution of man cannot be over-estimated, for from it arose not only language and culture, the distinctive human achievements, but also the brain as "the organ of civilization":

> When we say that the human cerebral cortex is the organ of civilization, this does not mean that any single brain must perform the stupendous task of keeping the wheels of civilization moving. But in social organization every individual's behavior knits in with that of every other's, and so his cerebral functions act in a social as well as a physiochemical environment. And as his personal consciousness develops into a social consciousness, the cortical mechanisms are correspondingly enlarged. . . . The distinctly human type of cortical organization has therefore grown out of man's social relationships.[1]

The increasingly complex behavior which man's developing physical equipment made possible was actually a social product, and the brain evolved as the means of its organization.

1. *The Origin of Purposeful Behavior.* The psychological functions of the forebrain give to human behavior those elements which distinguish it from the behavior of man's nearest kin.[2] Man has a greater capacity to sense his world and a more active power to recall images, particularly visual and aural images, than the

[1] C. J. Herrick, *Brains of Rats and Men* (1926), pp. 20–21. By permission of The University of Chicago Press, Chicago.

[2] See Carl J. Warden, *The Evolution of Human Behavior* (1932), Chap. III, "When Anthropoid Became Human." See also Wolfgang Köhler, *The Mentality of Apes* (1925); R. M. Yerkes, *The Great Apes* (1929); Solly Zuckerman, *The Social Life of Monkeys and Apes* (1932); and Solly Zuckerman, *Functional Affinities of Man, Monkeys, and Apes* (1933).

anthropoid apes; he also has the unique ability to group these recalled images in patterns different from the ones in which they are received. As a result of working with this amplified image world, man's power of concentration increased over that possessed by apes, and he developed aptitudes for making abstractions in terms of numerous images and for making these abstractions instruments in dealing with his environment. Apparently the apes never conceive of such abstractions as time, space, shape, speed, weight, size, texture, and intensity, which are for man merely a few of the broad categories under which he orders the image world.

When the human brain became capable of making such abstractions, the flow of emotion into behavior was slowed down to permit opportunity not only for formulating generalizations but also for determining responses in terms of them. Thus, for example, whereas the first clubs were probably merely sticks seized in the heat of combat, the manufacture of the earliest weapon or tool involved the bringing together of definite judgments of size, weight, and shape. By manipulating crude rock, early man wrought these abstractions into a weapon which, at a time far removed from the time of its manufacture, would serve the same end as did the stick seized in the heat of combat. In other words, man became able to direct responses toward the achievement of ends he might select and work for during either short or long periods of time. Such behavior is purposeful and sequential, *i.e.*, acts are considered in relation to acts that have preceded them and to acts that may follow them.

Since the capacity for this kind of behavior evolved through social interaction, the purposes toward which it worked were always subject to social approvals and disapprovals. Thus the social factor in giving the individual the capacity for orderly and purposeful behavior maintained a control over that behavior which assured the service of a social interest.

2. *The Growth of Language.* Language, which, except as a social phenomenon, could have no existence or function—talking to oneself is commonly recognized as a form of mental instability—is the primary medium of social intercourse.[1] As a chief means of communication among individuals it sets up the interaction which is social reality; as a system of symbols it embodies both images

[1] On communication and language see article "Communication" in the *Encyclopaedia of the Social Sciences.* See also Edward Sapir, *Language: An introduction to the study of speech* (1921); William L. Graff, *Language and Languages: An introduction to linguistics* (1932); J. Vendryes, *Language: A linguistic introduction to history* (1925); and W. A. Russell, *The Development of the Art of Language as Exhibited in Latin and in English* (1933).

and abstractions which derive their meaning not only from the going experience of living individuals but also from the accumulated and preserved experience of generations of individuals. The social character of language is perfectly clear. For the individual it opens the way to experiences not his own; for the race it gathers meanings forged in the living of countless individuals. "A word is a vehicle, a boat floating down from the past, laden with the thought of men we never saw; and in coming to understand it we enter not only into the minds of our contemporaries, but also into the general mind of humanity continuous through time."[1]

Of the great antiquity of language there can be no doubt. The muscular structures for the movement of the throat necessary for speech were specialized in the monkeys. The gorilla and the chimpanzee apparently utilize the rudiments of speech. And the brain cases of fossil men show specialization in those areas which represent the power of speech. Evidently the anatomical structure necessary for speech first arrived at complete development in Neanderthal man. As the medium of pack life, language—at least in rudimentary form—probably contributed to the differentiation of man as a species and may have preceded in development any material instrument for the manipulation of the environment.

Although the origins of language are lost in the darkness that covers the entire early history of man, the services of language seem to be fairly clear.[2] In the first place language, by intensifying social interaction, gave firmer and sharper relations to the individuals within a group and at the same time specialized the approval and disapproval given individual conduct. The "voice of the pack" became articulate, and individual conformity was enforced, if not actually by direct reward or punishment at least with the known presence of a social sanction. In the second place language, by multiplying social stimuli, subjected individuals to more diverse and stronger pressures so that the need to make new and different responses was always more or less pressing. And in making new responses the individual became an innovator. When these innovations did not arouse group disapproval they were allowed to go on; they entered, of course, into the meaning carried in language and became therefore a part of the general mentality of the individuals

[1] C. H. Cooley, *Social Organization: A study of the larger mind* (1909), p. 69. By permission of Charles Scribners' Sons, New York.

[2] Karl Britton, *Communication: A philosophical study of language* (1939), p. 3: "Language is a man-made instrument of communication—man-made in the same way as institutions are man-made, rather than in the same way as a building or a bridge." By permission of Kegan Paul, Trench. Trubner & Co., Ltd., London. See especially Chap. I, "The Uses of Language."

speaking the language. Finally, as a system of symbols, language became the means of a new method of dealing with environment, for words are names for things and may be present when the things are not. Thus man can construct situations which do not objectively exist and can consider responses to them without actually making responses. What is done today is done not only in the light of yesterday but also in view of its probable effect upon what may be done tomorrow. "Hindsight" enlightens "foresight." Language made possible by means of "reflective thinking" a more efficient determination of "purposeful behavior."

As a summary of experience language embodies meanings already arrived at; through "reflective thinking" it adapts these meanings to the service of a going behavior, not only in terms of new experiences but also according to chosen purposes. The impact of action upon abstractions is continuous, so that abstractions are constantly being displaced by new ones. In this way language, through social interaction among individuals, constantly receives new meanings.

3. *The Rise of Culture.* That body of meaning carried mainly in language but also in other symbols is, at any time, *culture.* In contrast to social phenomena which are the interplay of individual activities through communication, culture is the content of the activities. For example, in all societies men and women marry—a social fact—but the ways of their marrying, *i.e.*, marriage customs—cultural facts—are of infinite variety. Men do relatively few things—make a living, marry, care for children, bury the dead, reward good servants, punish evildoers, kill enemies, worship God, and manipulate nature—but they do these few things in many different ways; and from time to time they get up new ways of doing them. Culture is the sum total of the *man-made* ways and means of doing things.[1]

Culture is purely the product of a social organization of life. It is the immediate product of the individual's socially evolved capacity for purposeful behavior and reflective thinking; he is the only innovator. But since he develops from infancy to adulthood,

[1] On the concept of culture see articles "Culture," "Collective Behavior," and "Custom" in the *Encyclopaedia of the Social Sciences.* See also Alexander A. Goldenweiser, *Anthropology: An introduction to primitive culture* (1937), Part I, "Animal, Man, and Culture"; Clark Wissler, *Man and Culture* (1923); C. A. Ellwood, *Cultural Evolution* (1927); R. B. Dixon, *The Building of Culture* (1928); A. L. Kroeber, "The Culture-Area and Age-Area Concepts of Clark Wissler," in Stuart Rice, editor, *Methods in Social Science* (1931), pp. 248–265; Sanford Winston, *Culture and Human Behavior* (1933); Carl J. Warden, *The Emergence of Human Culture* (1936); Ruth Benedict, *Patterns of Culture* (1935); and John Dollard, "Culture, Society, Impulse, and Civilization," *The Americal Journal of Sociology,* Vol. 44 (1939), pp. 50 *ff.*

the capacity to innovate works always in terms of cultural materials transmitted to him by his elders; thus his innovations are quite as much social as individual products.[1] Also his innovations persist only as a result of social acceptance and are passed on to succeeding generations only by social transmission. As a *culture-making* animal, man is unique, but the capacity belongs to the individual only by virtue of the fact that his equipment and capacities for behavior have been socially evolved. Creative individuals never function independently of socially selected and transmitted cultural materials: "The experience which grows is social." From the point of view of the individual, therefore, mentality is organized in terms of psychological materials carried by his *social milieu:*

> It is absurd to look at the mind simply from the standpoint of the individual human organism; for, although it has its focus there, it is essentially a social phenomenon; even its biological functions are primarily social. . . . The meagreness of individual experience in isolation from the processes of social experience—in isolation from its social environment—should, moreover, be apparent. We must regard mind, then, as arising and developing within the social process, within the empirical matrix of social interactions. We must, that is, get at inner individual experience from the standpoint of social acts which include the experiences of separate individuals in a social context wherein those individuals interact. The processes of experience which the human brain makes possible are made possible only for a group of interacting individuals: only for individual organisms which are members of a society; not for the individual organism in isolation from other individual organisms.[2]

In this connection it should be realized that just as society was the avenue by which the subhuman ancestor ascended to humanity, so society is the portal through which the individual organism becomes a personality. In each instance society was and is prior to the achievement of mentality.

CULTURAL TRADITIONS: THE GRAND UNITS IN THE HISTORY OF CIVILIZATION

As a species man is differentiated from other organisms by the capacity to build culture; within the species groups of men are

[1] Wilson D. Wallis, *Culture and Progress* (1930), p. 15: "Cultural mutations are merely divergences from ancestral type, for culture continuity holds throughout, and it is impossible to believe that it will be otherwise in ages to come." McGraw-Hill Book Company, Inc., New York.

[2] George H. Meade, *Mind, Self, and Society from the Standpoint of a Social Behaviorist*, (1934), p. 133. By permission of the University of Chicago Press, Chicago.

distinguished from one another mainly by the possession and transmission of separate cultures. Such cultures, it should be remembered, are built through time; they are the products of the continuing social process, or, more aptly, they are historically evolved. Thus new individuals receive from the group into which they are born an organization of experience, *i.e.*, a mentality and a behavior, and as members of the group become its carriers. In this connection it is proper to note that "what parents impart to their off-spring is not simply the lessons of their own personal experience, but something wider: the collective experience of the group."[1] Although the family may be the most important instrument of cultural transmission, it functions only as the agent of the group which maintains control over it. From this point of view a culture is discovered to be a socially developed and perpetuated tradition:

> Other living things have no history, or at any rate none that they can remember and record; whereas Man is differentiated from them by nothing else so much as by his power of accumulating a social tradition, and using it to enlarge and reinforce individual experience as a means of survival.[2]

The word "tradition" means something handed down from the past; more specifically it means that this something is valuable to the persons who receive and transmit it and, for that reason, should be preserved. A cultural tradition is therefore a socially organized way of life—embodying techniques, customs, emotional fixations, knowledge, and beliefs—which is a precious burden to the group whose life it shapes and which in turn is carried and developed by the group.

The Roles of Individual and Social Factors in Cultural Development.

All cultural innovation, *i.e.*, invention and discovery, has primary source in the action of some individual, but his action in turn has origin in the cultural tradition which the individuals with whom he associates have received and carry. It is important, moreover, to recognize that innovations appear in terms of lines of development fixed in a cultural tradition, and that those innovations which occur are organized into the tradition only through social selection and approval. Thus, in spite of individual action, a

[1] V. Gordon Childe, *Man Makes Himself* (1936), p. 33. C. J. Watts & Co., Ltd., London.

[2] R. R. Marett, *Head, Heart & Hands in Human Evolution* (1935), p. 43. By permission of Hutchinson & Co. (Publishers), Ltd., London.

cultural tradition embodies "a more or less consistent pattern of thought and action," and cultural growth goes on in terms of this pattern. Cultural growth involves, therefore, besides the occurrence of innovations, the integration of innovations into the pattern carried in the tradition:

> In all studies of social custom, the crux of the matter is that the behaviour under consideration must pass through the needle's eye of social acceptance, and only history in the widest sense can give an account of these social acceptances and rejections.
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> * * * * *
>
> The difficulty with naive interpretations of culture in terms of individual behaviour is not that these interpretations are those of psychology, but that they ignore history and the historical process of acceptance and rejection of traits. Any configurational [*i.e.*, pattern] interpretation of cultures also is an exposition of individual psychology but it depends upon history as well as upon psychology. . . . At different points in the interpretation of cultural forms, both history and psychology are necessary; one cannot make the one do the service of the other.[1]

A cultural tradition, however, is not a rigid structure of patterns, although the degree of rigidity may vary greatly from time to time, and growth is continuous. The primary factor in this growth is the interaction between present life and the forms transmitted in the tradition under which it is organized:

> There is an interaction, silent and subtle, if not crude and avowed, between past and present. Institutions may seem to perpetuate themselves by mere automatism or inertia. But this seeming automatism consists in their taking up and absorbing the incoming generation, every individual of which is a living mind seeking its own within the conditions in which it finds itself, and modifying them if only by some strain or stress, this way or that, to suit its purposes. Thus the continuity of an institution, and of a whole social system, consists in a living tradition in which at any given time the institution is moulding the lives and minds of men, but is also being itself remoulded by them. Naturally the more active the mental forces the less is the inertia of tradition and the greater the range of adaption. The forces making for change may focus themselves on a true social purpose of improvement, and these will excite an equally conscious resistance—traditionalism as opposed to tradition. Here as elsewhere development elicits a more explicit consciousness. But even the revolutionary theory is a growth to which successive minds contribute, and to gain any solidity must have its roots in the actual even if its apex is in the ideal. The purpose which transforms tradition

[1] Ruth Benedict, *Patterns of Culture* (1935), p. 232. By permission of the Houghton Mifflin Company, New York.

grows by a tradition of its own. Thus the proposition that the social structure is a living tradition holds generally, but the emphasis is now on the one term and now on the other, tradition must be kept distinct from traditionalism, and it must be borne in mind that the social tradition in its entirety is a system of many traditions, which as living movements may contend with one another for supremacy.[1]

Thus cultural traditions generate the forces of their own transformation. Interaction among individuals is continuous, and so also is the social selection of innovations by individuals. New forms of social interaction arise from new cultural achievements, and new cultural achievements have origin in changed modes of social interaction. In fact, except through the abstracting of new experience into a body of meaning socially selected and transmitted, cultural traditions could not have arisen, let alone developed through time. And every factor which affects the growth of cultural traditions does so only through the psychological activities of individuals as stimulated and organized in group life. Neither biological urges nor environmental pressures operate directly in the growth of a cultural tradition; between them and any effect they may have in human behavior, just as a glass may refract, diffuse, and focus light, mediates the social process and the cultural tradition it carries. The growth of cultural traditions is continuous, because social interaction is continuous; because the latter is implicit in human nature, the former is the essential fact of history.[2]

The Chief Modes of Cultural Development.

When the forms of social interaction of a given time are viewed together it becomes clear that the significant forces in the development of cultural traditions are psychological stresses which arise between socially organized present life and the forms of life socially transmitted from the past. These stresses have objective expression in literature, religion, philosophy, and science, *i.e.*, the modes of thinking, as well as in the social and political movements of a time. When viewed realistically these expressions are seen as

[1] L. T. Hobhouse, *Social Development: Its nature and conditions* (1924), p. 212. By permission of G. Allen & Unwin, Ltd., London.

[2] Carl J. Warden, *The Emergence of Human Culture* (1936), p. 20: "The processes which characterize the cultural order contrast sharply with those of the biosocial order. They have no direct connection with the slow and laborious operations of organic evolution. The patterns that arise and persist in the cultural realm are not a part of the hereditary endowment of the type. . . . The transmission of culture from generation to generation is secured by the continuity of the process of group conditioning." By permission of The Macmillan Company, New York.

involving a conflict between values realized in institutions, practices, and ideals socially transmitted from the past and concrete conditions of life in the present; in other words, there is contradiction between an approved way of life and the actual conditions of life among men. At different times these conflicts vary greatly in intensity and, of course, may have origin in many kinds of circumstances.

In these conflicts three modes of cultural development can generally be recognized: (1) a conservative holding fast to old forms—"traditionalism," (2) an assertion of new meanings, usually accompanied by demands for the acceptance of new forms of behavior—"radicalism," and (3) an adjustment of old meanings and forms to the new circumstances of life—"reorientation." Traditionalism and radicalism reflect the intensity of the conflict between the socially transmitted forms of life and the actual conditions of living; reorientation involves that adjustment between old forms and new life which maintains continuity between the past and the present. In this adjustment, although some old forms are displaced by innovations, most of the old forms are altered only in order that they may serve new life. Thus neither traditionalism nor radicalism triumphs. Both give way in a reorientation of old and new forms of life which, while serving new life, preserves continuity between the past and the present. Cultural development commonly goes on without bringing a crisis between traditionalism and radicalism, so that, except in extreme cases, reorientation occurs without the dislocation of old materials; thus it may vary from slow, indeed almost imperceptible, to revolutionary change.

The play of these modes of cultural development can be ascertained only by the study of history. In each instance the significant factors may be different or, if they are alike, they may have different intensities than in other situations and consequently give rise to different developments. History alone can delineate and provide at least some explanation of the development of cultural traditions.

The Study of the History of Cultural Traditions.

In the study of history as the record of the growth of cultural traditions certain terms are useful. Aggregates of individuals carrying a cultural tradition are known as *culture groups*. The lands inhabited by such groups are called *culture areas*. The chief communities in these areas—centers of intense social interaction—are designated *culture centers*. Thus the map of the earth at any given

time may be seen as a number of culture areas with their respective culture centers. The term *civilization* deserves special notice. Originally it meant a way of life characterized by cities. Today, although it has several specialized meanings, by general usage it refers to the whole life of a people—in broadest sense to the whole life of mankind. In this book it will be used in this broadest sense, particularly as this life is to be seen through the development of cultural traditions which are the supreme objective forms that organize human life.

All cultural traditions have had their origin in the fundamental capacities of the human species of feeling, thinking, and acting. All have developed from a common base in the behavior of the early representatives of the species. All have been organized and perpetuated through social interaction, social selection, and social transmission. They have become different from one another only as they have organized into themselves peculiar innovations. And from time to time they have borrowed materials from one another. They are to be understood only through a study of their history.

A question often asked is: "Why do the cultures of different varieties of man differ so considerably from our own?" To answer is quite simple. Cultures differ from one another to the extent to which their experience has differed. No matter with what variety of mankind we may be concerned, or with what groups of a particular variety, culture is in its broadest and fundamental sense not merely an aspect but a function of experience. By experience I mean anything that an individual, or group of individuals, has undergone or lived, perceived or sensed. . . . The culture of different peoples, as of different individuals, is to a very large extent a reflection of their past history or experience. . . . The generalized urges which all human beings in common inherit continue to be present in all human beings in all cultures, but how these urges are permitted to operate, and how they are satisfied, is something which is determined by tradition and varies not only in different cultures but in different groups within the same culture. . . . All normal human beings are everywhere born as culturally indifferent animals, and they become culturally differentiated according to the social group into which they happen to be born.[1]

The history of cultural traditions must be studied, therefore, as social history.[2]

[1] M. F. Ashley-Montagu, "The Socio-biology of Man," *The Scientific Monthly*, Vol. 50 (1940), pp. 486–487 *passim*.

[2] For a concise statement of the significance of the concept of culture for the study of history see Caroline F. Ware, editor, *The Cultural Approach to History* (1940), especially

THE CULTURAL ACHIEVEMENTS OF EARLY HUNTING MEN

The time when man the word user became man the tool user cannot be determined, but it seems altogether likely that speech and technology developed simultaneously. Probably man's first implements were merely sticks and stones picked up when he needed aid in some activity. The oldest remains said to show marks of human usage and also to be an evidence of human ingenuity are called *eoliths*. Their shape—naturally rounded on one side and roughly chipped on the other—seems to indicate that they were used for pounding. Controversy about them still exists, but they may be accepted, at least on the theoretical grounds that there had to be first tools, as the earliest artifacts, *i.e.*, the remains of purposeful human behavior. At present they are dated just before the opening or at the opening of Pleistocene times. More clearly identifiable early artifacts have been discovered recently in southwestern Asia—in Java, India, China, and, especially, Burma. Although the association of these artifacts with Java man and Peking man has not been definitely established, it appears that they antedate the oldest artifacts, other than the eoliths, yet discovered in the West. At present a thousand sites and more than a million artifacts bear witness to the cultural achievements of ancient hunting men, and year by year the number of these sites and artifacts increases and the record of early cultural growth becomes clearer.[1]

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the "Introduction." The editor emphasizes the critical value of the concept of culture for the analysis of historical data: "The concept of culture helps the historian to ask significant questions of the period to which he addresses himself. Since it implies that certain social processes are common to all societies, with variations in their manifestations culturally determined, it allows him to inquire into corresponding phenomena in all times and places. He may, in any society, view technological bases and the social relationships imposed by that technology; the bases of group association—the categories of 'we' and 'they'—and the social structure which govern the interrelationships among and within these groups; the value structure which sets the terms in which the society accords prestige and imposes taboos; the relation between sanctioned behavior and pressures away from such behavior. It thus provides a basis for the comparative study of societies. Comparative historical study is fraught with grave danger so long as phenomena, superficially similar or dissimilar, are compared outside their respective cultural contexts." Reprinted from Ware, *The Cultural Approach to History* (p. 13), by permission of Columbia University Press.

[1] For general surveys of the artifacts of preliterate cultures see article "Archaeology" in the *Encyclopaedia Britannica*, 14th ed., also article "Archaeology" in the *Encyclopaedia of the Social Sciences*.

A brief discussion of cultural developments in paleolithic times in the light of recent discoveries is found in C. F. C. Hawkes, *The Prehistoric Foundations of Europe to the My-*

Because the discovery of prehistoric hunting cultures was made in France and Scandinavia, the original designations for them were derived from French and Scandinavian local place names; today, however, when such cultures are known to have existed over the greater part of the Eastern Hemisphere, these designations are hardly applicable. Above all it should be realized that the European names do not mean that the places of origin of the cultures to which they are applied were in Europe. Just as the human species seems to have evolved somewhere in Asia or, perhaps, in Africa, so also is it probable that cultural development began in those areas. The discovery, just noted, of a very early hunting culture in southeastern Asia and the many finds in central Asia, southwestern Asia, eastern Africa, and South Africa substantiate this view;[1] Europe, it seems, was at the periphery rather than near the center of early human and cultural evolution.

The period during which hunting was the chief means of subsistence is known as the *old stone age* or, more technically, as the *paleolithic age*. Its general duration was from the beginning of Pleistocene times to the last phase of the Würm, or fourth, glaciation. Three cultural ages are clearly distinguished in this long period: (1) the lower old stone age, or early paleolithic times—from the Günz glaciation to the advance of the Würm ice sheet; (2) the middle old stone age, or middle paleolithic times—during the advance of the Würm ice sheet; and (3) the upper old stone age, or late paleolithic times—during the second phase of the Würm

cenaean Age (1940), Chap. II, "The Epoch of Formation"; a succinct survey of the archaeology of early cultures, its methods and findings, is A. Vayson de Pradenne, *Prehistory* (1940). See also W. B. Wright, *Tools and the Man* (1939).

The general treatises on the archaeology of preliterate cultures in English are R. A. S. Macalister, *Textbook of European Archaeology* (1921); G. G. McCurdy, *Human Origins: A manual of prehistory* (2 vols., 1924); and M. C. Burkitt, *Prehistory* (2d ed., 1925).

The classical treatment of prehistory is found in the French works, Gabriel de Mortillet, *Le Préhistorique: origine et antiquité de l'homme* (3d ed., 1900), and Joseph Dechelette, *Manuel d'archéologie préhistorique celtique et gallo-romaine* (2 vols., 1908–1910).

The standard American statement of the findings of the archaeological investigations of preliterate cultures is H. F. Osborn, *Men of the Old Stone Age* (3d ed., 1919), now out of date.

Other discussions of these findings are Hugo Obermaier, *Fossil Man in Spain* (1924), and Hermann Klaatsch, *Das Werden der Menschheit und die Anfänge der Kultur* (1936).

The standard reference work dealing with prehistory is Max Ebert, editor, *Reallexikon der Vorgeschichte* (15 vols., 1924–1932).

[1] On these discoveries see Henry Field, "The Antiquity of Man in Southwestern Asia," *American Anthropologist*, Vol. 35 (n. s. 1933), pp. 51 *ff.*; L. S. B. Leakey, *Stone Age Africa: An outline of prehistory in Africa* (1936); and H. de Terra, "Preliminary Report on Recent Geological and Archaeological Discoveries relating to Man in Southeast Asia," *Proceedings of the National Academy of Sciences*, Vol. 24 (1938), pp. 407–413.

glaciation to the opening of the period of rapid retreat of the ice sheet across Scandinavia about 14,000 years ago.

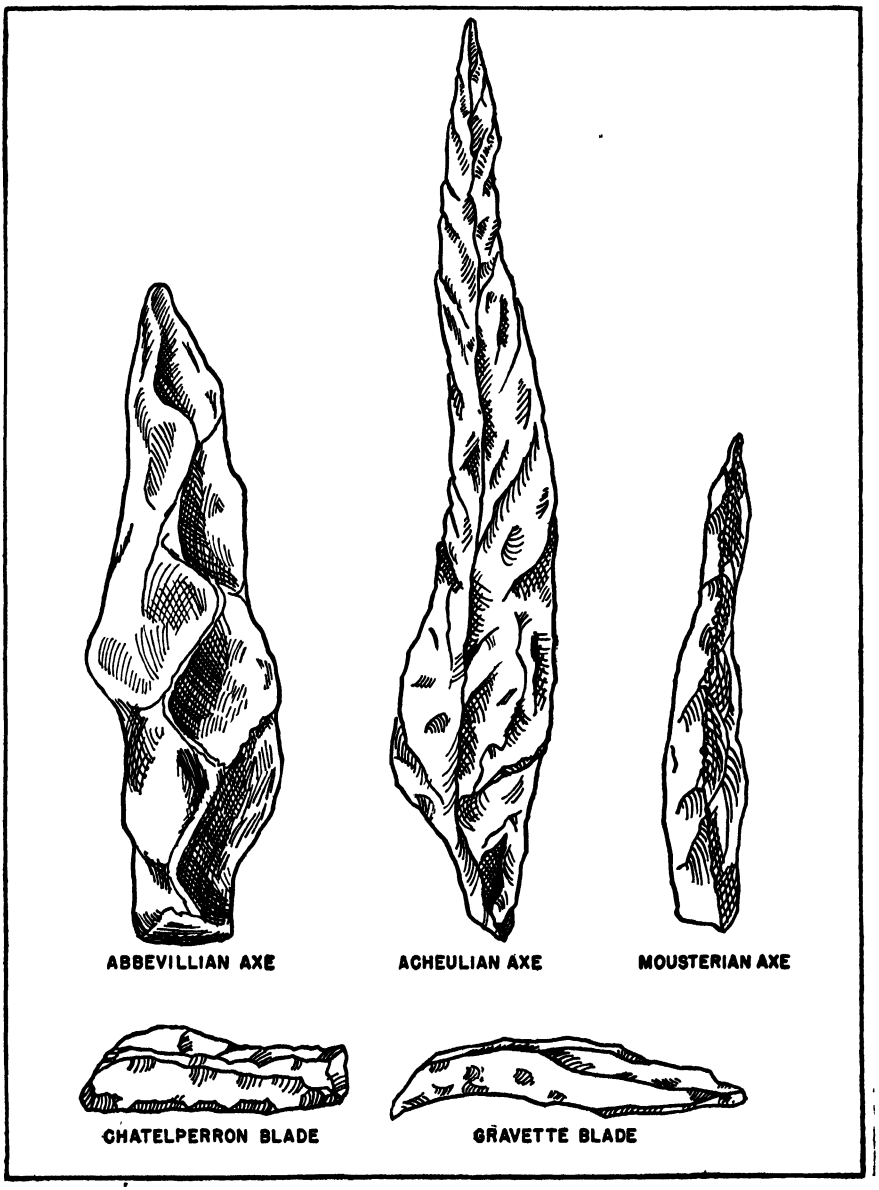
Because the paleolithic cultures of Asia and Africa can be correlated with those of Europe, it is necessary now to see cultural development in different terms and in a wider and deeper perspective than formerly. The evidence for both human evolution and cultural development now requires the student to take a world view. In this view it appears that the major phases of old stone age cultural development represent the rise and spread of three technological traditions over the Eastern Hemisphere. In early paleolithic times two cultures, one having as its chief implement a rough flint, called a core, shaped by striking it against another stone, and the other having as its chief implement a flake broken from a flint nodule by a sharp blow, spread over Asia, Africa, and Europe. The first, it has been suggested, moved in forested areas, while the second was at home in park lands and on open plains. A third culture, based on the bone splinter, may have spread over the tundras. In the middle old stone age the core and flake cultures mingled and gave rise to a great variety of local developments, each characterized by some specialization of the core or the flake. The distinctive implement of the upper old stone age was the blade, and the period brought the diffusion and elaboration of blade cultures, especially in western and southwestern Asia, northern Africa, and Europe. Although present knowledge does not permit the full acceptance of this or any other generalized view of paleolithic cultural developments, it does require the abandonment of the straight-line view of technological advance originally embodied in the designations of the cultural phases of the old stone age developed on the basis of the evidence of western Europe. Today students face the problem of shaping a coherent view of world cultural development, even for the earliest period of human achievement.[1]

The Lower Old Stone Age.

The evidence now at hand indicates that early hunting men inhabited, sparsely of course, most of Europe, Asia, and Africa, except perhaps the great forests of Indonesia and the Congo valley, during the lower old stone age.

[1] See Oswald Menghin, *Weltgeschichte der Steinzeit* (1931); also D. A. E. Garrod, "The Upper Paleolithic in the Light of Recent Discovery," *Report of the British Association for the Advancement of Science* (1936), pp. 155–172.

THE EARLY DEVELOPMENT OF THE CUTTING EDGE



In the recently discovered early old stone age culture of southeastern Asia both flakes and cores were used as implements. The core implements were predominant, but the fist hatchet, or hand ax, the most important implement produced by core industries, was unknown. Petrified wood was a favorite material. With Peking man, although his connection with them is uncertain, are found many short pieces of antlers as well as chipped stones. These early Asiatic artifacts are not associated with glacial phenomena, which, indeed, are not known east and southeast of The Himalaya.

The earliest lower old stone age culture in Europe is the Chellian, or, as now frequently designated, Abbevillian. Its typical artifact is a massive crudely edged hand ax. To produce this implement a flint core was struck against a stone as a hammer is struck against an anvil. In the Acheulian industry this implement was refined considerably. Its zigzag edge was trimmed by striking it sharp blows with a bar of wood or a piece of bone; this technique, known as percussion flaking, produced an elongated S-shaped edge. The point and the borer are also common Acheulian implements.

The earliest representative of the flake industry in Europe is known as the Clactonian. It seems to have been present there when the makers of Acheulian implements arrived. Its typical products were scrapers and points with well-trimmed edges. In a final phase, before the coming of the third glacial age, it produced the specialized implement known as the Levalloisian flake. This implement was struck from a nodule by a blow which split off a part of the nodule, the surface of which had been given a turtleback shape by flaking. Where the split and the worked surface intersected, there was a relatively thin, straight edge.

These core and flake cultures, which came in contact with one another in western Europe, stretched away to the east, where they probably had their original centers. In general the former lay south and the latter north of the Eurasian mountain backbone.

Little is known about the mode of living of lower old stone age men. Apparently it was a wandering existence in open park lands. Bits of camp-site debris—no permanent habitations are known—suggest that the hunters were able to take only young or sick or aged animals. They used fire as early, certainly, as the recently discovered culture of southeastern Asia.

The Middle Old Stone Age.

In the middle old stone age a variety of cultures, identified as the work of Neanderthal man, spread widely over southwestern

Asia, northern Africa, and Europe; recently it has been discovered high in the mountains of Uzbekistan, a central Asiatic republic of the Union of Soviet Socialist Republics. Mousterian, the name given to this array of cultures, is derived from a site, Le Moustier cave, in France, and everywhere the sites are caves or rock shelters, from which, probably, Neanderthal man drove the original denizens, the cave bears. Besides this animal, the culture is associated with the great furred mammals, the mammoth and the woolly rhinoceros, as well as the antelope and the reindeer, which lived in Europe during the Würm glaciation.

At its source, which probably was somewhere along the Eurasian mountain backbone in central or western Asia, Mousterian culture possessed a flake industry. Its typical implements were the hand point and the scraper. The point was the forerunner of the arrow and spearhead of later cultures. The scraper was given five or six shapes. Originally the technique of flaking was like that of the Abbevillian and Clactonian cultures, but later pressure flaking was introduced. The fact that the Levallois flake and the hand ax are found with points and scrapers at many sites is evidence that the great variety of Mousterian cultures was produced by a fusion of flake and core industries. The Mousterian ax is a smaller implement with a straighter edge than its predecessors of the Abbevillian and Acheulian cultures. The position of the hand axes in the Mousterian sites indicates that the implement was not developed directly from these predecessors. In the main Mousterian implements are refinements of the chief designs of both the flake and the core industries. But more important than the refinement of designs was the method of its accomplishment, namely, pressure flaking, for the displacement of percussion by pressure flaking is the first known technological revolution in the development of cultures.

The earliest evidences of an evolving body of sentiments and beliefs, namely, hearths and graves, have been found in the Mousterian caves. Around the hearths, for Neanderthal man knew well the use of fire, went on, it may be imagined, a community life in which family and neighborly sentiments were strengthened and language was considerably enriched. It may be imagined also that in the caves, to which the hunters continually returned, the concepts of home and property were first developed. In the graves, found beneath the floors of the caves, family members appeared to have been buried together. This practice suggests that the family was united by sentiments and that the dead were considered important to the living. The interment of ornaments, weapons,

and food with the dead hints that Neanderthal man believed in life beyond the grave. A recent find in Switzerland of skulls of bears carefully arranged so as, perhaps, to protect or propitiate them, hints also that Neanderthal man believed in animal spirits and felt a need to win and hold their favor.

Mousterian artifacts reveal the existence in Europe, Africa, and Asia—during the last glacial period—of related cultures patterned by a diversified stone technology, a body of simple sentiments, and probably a few religious beliefs. Although vague in outline, this view is the first that history affords of civilization as a whole.

THE ORIGIN OF TECHNOLOGY.

The lower and middle old stone ages are significant in the general development of civilization for having brought the beginning of technological invention, sometimes called "the invention of invention." Perhaps the critical act in this evolution was the use of one implement to create another implement. Certainly in this use was latent one of the principles which have nurtured the development of technology throughout subsequent ages, namely, the purposeful manipulation of physical materials and processes as a means of establishing a further use of physical materials and processes.[1]

A consideration of the types of early stone implements, their specialization, and their refinement through the application of skillfully directed blows reveals an intellectual advance. The selection of flint and similar stones as the best materials for the manufacture of implements by chipping was a first-rate application of the principle of the selective use of the environment, which has been the basic factor in the growth of man's mastery over nature. The multiplication of the types of tools, each more or less well adapted to the performance of a particular function, indicates the growth of an understanding of the relation of one act to others to be performed much later in time. The refinement of the process by which implements were manufactured shows a growing mastery of skills which had meaning not so much in themselves as in the development of other skills; for example, the making of the Mousterian point was preliminary to the development of its skillful use as a weapon or a tool. And the mastery of these different skills

[1] See Hugh P. Vowles, *The Quest for Power from Prehistoric Times to the Present Day* (1931), Chap. I, "Man the Tool User"; also R. D. Carmichael, "On the Character of Primitive Human Progress," *The Scientific Monthly*, Vol. 12 (1921), pp. 53–61; R. U. Sayce, *Primitive Arts and Crafts: An introduction to the study of material culture* (1933).

and their transmission involved the continuous use of man's capacity to learn from others; they indicate the constant enrichment of cultural traditions. All these developments suggest that throughout the lower and middle old stone age man's range of purposeful activity was increasing.

The greatest invention of the lower old stone age was the cutting edge, from which have been elaborated innumerable instruments for the manipulation of the environment. In the refinement of the hand ax the edge passed from a crude irregularity to a sinuous fineness. The greatest discovery was fire; with it man began to employ the processes of nature as aids in mastering nature. Contemporary industry, for example, depends mainly upon chemical processes, of which, indeed, fire, *i.e.*, combustion, was the first to be employed. The influence of the use of fire in the development of civilization has been almost too profound for appreciation. It meant not only an improvement of technology but also a development of security, sociability, and intellectuality. With fire man was safe from wild beasts. Around the fire man became warm and comfortable. In the fire man saw shapes that made his dreams seem real.

Because technology embodies the basic adjustment of men to their physical environment, it has always been important for social and intellectual, as well as economic, development. Tools are only materialized thought, and the circumstances of life they make possible necessarily react on thought. The technological elements of cultures have always been important, therefore, for all of their other elements.

The Upper Old Stone Age.

The upper old stone age, which coincided with the second phase of the Würm glaciation, came to an end about 14,000 years ago. In northern Africa and southwestern Asia the climate was probably cool and moist, becoming warmer and drier as time passed; in Europe it was arctic and subarctic. Cultural development seems to have reflected the changes of temperature and rainfall.

As previously noted, the upper old stone age brought the development and diffusion of cultures associated with modern man and based on the blade. Their original center was probably somewhere in southwestern Asia, for the earliest one—the Aurignacian—is known in Palestine. From this land it seems to have spread into northern Africa, southern Europe, and southwestern Asia. Its earliest European form is known as the Chatelperronian. Recent

discoveries, which established a connection between its European elaborations and those of Anatolia, Crimea, and Kurdistan, also indicate that it reached almost as far eastward as Lake Baikal in Siberia. If the lands in which Aurignacian industries are known are viewed as a single culture area, it appears that the culture never spread far from the Eurasian mountain backbone.

Although the typical Aurignacian implements were a finely chipped blade with a blunted back, *i.e.*, a knife, and a thick short blade, *i.e.*, a chisel, the culture, in contrast to the Mousterian, possessed a "truly bewildering profusion of tools"; prominent among them were bone needles, lance points, barbs, and awls. The hand ax disappeared. The lance points and barbs seem to have been hafted. The needles indicate that clothing made of skins rather than crude hides was worn. Bone industry, with elaborations in ivory and antlers, was generally typical of upper old stone age cultures. That the dead were buried with greater ceremony than in Mousterian times is indicated by the presence of many artifacts in graves.

Two blade cultures, perhaps closely related, were derived from the Aurignacian base—the Solutrean and the Gravettian.

The Solutrean culture appears to have spread westward from Iran to France. Its chief European area is now known to have been in Hungary and Austria. Its typical artifacts are fine lance points of laurel-leaf design and well-shaped blades. Its makers were particularly skillful at pressure flaking and carving bone. The incursion of Solutrean men into western Europe was relatively brief; perhaps they came as conquerors and remained only until the carriers of local Aurignacian cultures learned how to make weapons as good as theirs. The debris of their camp sites indicates that no animal they knew was so powerful that they could not kill it.

The Gravettian culture developed originally on the steppes and loess lands of southern Russia and spread both eastward and westward. Although it is known in France and England, its chief European sites were in Moravia; at Předmost and Vestonice recent exploration has found a wealth of artifacts. Besides efficient stone blades and tanged or shouldered points, its makers produced a wonderful array of implements in bone and ivory. They were also the authors of the earliest portrait, appearing as the frontispiece of this book, and of the female figurines, or "Venuses," which are among the most remarkable of upper old stone age artifacts. The debris of their camp sites identifies them as the mammoth hunters who ranged over Europe and central Asia during the second Würm

glaciation. Among the animals which they hunted were the horse, the bison, and the reindeer.

In the last phase of the Würm glaciation, *i.e.*, from about 20,000 to 11,800 B.C., three cultures occupied the area between the European ice sheet and the African desert area.

In northern Africa the Capsian culture and several derivatives, which were perhaps elaborations of the early Aurignacian in eastern and central Africa, spread around the shores of the Mediterranean Sea. Its typical artifacts—*microliths*—were small flints, burins, and scrapers; blunt-backed blades were rare. These implements suggest that the culture was an adaptation to the grasslands which the changing climate was spreading over the Saharan region; at this time the climate was cool and plant life abundant. During the last phase of the retreat of the ice sheet Capsian culture penetrated Spain and gave rise there, as well as in northern Africa and southwestern Asia, to the immediate antecedents of food-producing cultures.

Over the Pyrenees region in Spain and France the Magdalenian culture developed; it was derived from the Gravettian culture as modified in western Europe. Among its many weapons, which were highly refined, were the barbed harpoon for throwing, the bolas, *i.e.*, throwing stones, the spear and the spear thrower, the bow and arrow, blades, gravers, and needles. Although the blades and points of Aurignacian culture imply the existence of the spear and the bow and arrow, proof of their use is first found in the Magdalenian wall paintings. These weapons greatly extended man's power over certain aspects of his environment. With the spear thrower, Magdalenian men undoubtedly extended the range of the spear from 50 to 150 yards; with the bow and arrow they probably developed a high degree of accuracy. These weapons involved the first mechanical manipulations of physical power. The spear thrower, serving as a lever, made more effective the strength of the arm, while in the bow transverse stresses were transformed by the bowstring into the horizontal motion of the arrow. Magdalenian men were great hunters of bison and reindeer.

The Hamburg culture lay along the southern edge of the ice sheet, probably from southern England to east Prussia. Its chief site is a camp of reindeer hunters near Hamburg, Germany, but its makers are believed to have come there only in the summer months when the valleys were filled with melt-water. The distinctive artifact, a harpoon, suggests that the culture was derived from an east European Gravettian base.

The upper old stone age multiplication of weapons and tools and the diversification of skills implied by their manufacture and use were merely aspects of a development which also found expression in the cave art, the most remarkable product of the period. In the Magdalenian culture this art, which began in the Aurignacian culture, reached a perfection seldom excelled even in the art of cultures possessing far more complex technological equipments. In northern Africa this art may have been associated with the Capsian culture, and today it may survive among the Pygmies of west central Africa. Examples of the art have also been found at paleolithic sites in India.[1]

The Beginnings of Art.

The sequence of upper old stone age art forms seems to have run from simple lines, crudely drawn or engraved to represent part of a figure, to roughly outlined figures, to realistic renderings of details that synthesize in figures vigorously alive.[2] This sequence is observable in both the engravings and the paintings. Sculpturing and modeling had no continuous development; in fact, figurines sculptured in the round were Aurignacian and Solutrean, not Magdalenian, products. The Magdalenian polychrome paintings indicate such a high degree of skill that they must have been made by men possessing a specialized training. The lamps and bone tubes for colors found in the Magdalenian caves also point to the existence of such artists. It should be remembered in this connection that many of the engravings and paintings show the work of more than one hand.

The leading motifs in upper old stone age art are animal and human forms. The animals are depicted in all normal poses. Most of the famous polychrome paintings of the cave of Altamira, Spain, are representatives of standing, bellowing, and recumbent bison.

[1] On the cultures of the upper old stone age see D. A. E. Garrod, "The Upper Paleolithic in the Light of Recent Discovery," *Report of the British Association for the Advancement of Science*, 1936, pp. 155–172; M. C. Burkitt, *The Old Stone Age: A study of paleolithic times* (1933); L. S. B. Leakey, *Stone Age Africa: An outline of prehistory in Africa* (1936); George L. Collie, *The Aurignacians and Their Culture* (1928); and Hugo Obermaier, *Fossil Man in Spain* (1924).

[2] On the art of the upper paleolithic cultures see G. Baldwin Brown, *The Art of the Cave Dweller: A study of the earliest activities of man* (1928); G. H. Luquet, *The Art and Religion of Fossil Men* (1930). The finest reproductions of old stone age paintings are found in Henri Breuil and Hugo Obermaier, *The Cave of Altamira at Santillana del Mar, Spain* (1935); other reproductions may be found in Henri Breuil, *Les Roches peintes de Minateda* (1920); Henri Breuil and Louis Capitan, *La Caverne de Font-de-Gaume aux Eyzies* (1910); and H. Alcalde del Rio, Henri Breuil, and Lorenzo Sierra, *Les Cavernes de la région cantabrique (Espagne)* (1911).



From HENRI BREUIL *and* HUGO OBERMAIER, *The Cave of Altamira at Santillana del Mar, Spain (Madrid,* 1935)

A BISON, BELLOWING

The animals—bisons, horses, bears, and deer—of the cave of Altamira, Spain, are the most famous art remains of the upper old stone age. They are notable for accurate drawing and brilliant red coloring, with outlines and shading in black.

On the walls of the cave of Alpera there are thirty goats or antelopes, twenty-six stags, five cows, two horses, three deer, one moose, and six or seven wolves. The same paintings include sixty male figures. Sixteen are drawing the bow, six are walking, two are striking a deer, one is striking another man, and two are dancing. All are nude, but most of them wear a head-dress of some sort. The male figure was generally rendered in action. Occasionally it was given a mask, as in the Cave of Trois-Frères, in France. This figure (see page 98), undoubtedly that of a sorcerer or medicine man, has the horns of a stag, the face of an owl, the ears of a wolf, the arms of a bear, and the tail of a horse. The paintings associated with the figure suggest that the cave was a place of assembly where its living prototype inculcated the qualities necessary for success in the hunt. The few females in the paintings are shown wearing skirts.

Among the figurines the most common are representations of various animals, although the most remarkable are statuettes of

nude females whose sexual characteristics are emphasized. At present over ninety of these statuettes, found at Gravettian sites in both Europe and Asia, are known. At Vestonice, Moravia, where the carved ivory head pictured in the frontispiece was found, both animal and human figurines were discovered in considerable numbers. Most of the animal figures had been broken, a fact which indicates perhaps that they were employed in magical performances, and many of the statuettes were stylized parts of the female body, probably used as beads in necklaces. That these dominant motifs had origin in the essential interests of men, whether of that age or of any other, namely, food and sex, can hardly be doubted.

Representations of plants are rarely found among paleolithic art remains. There are, however, quite a number of forms which, because they are not pictures, must be regarded as abstract symbols. Their meanings are, of course, unknown.

These art remains constitute a most significant record of the advance of mentality. As technical achievements they indicate a mastery of drawing, sculpturing, modeling, and painting. As representations they embody the use of line, surface, shade, color, and perspective, both alone and in composite renderings; such uses reveal a high sensitivity to form and a capacity to abstract from innumerable images generalities of form, such as the lines of the neck, the back, and the hip and the positions of the feet as they strike the ground, which most directly summarize experience in visual patterns. The realism of the art testifies above all to the possession by these hunter-artists of powers of observation and abstraction equal to those of any later men. As aesthetic products the paintings and engravings express a sense of beauty which, recognizing such categories as mass and balance, has affinity with all subsequent aesthetic expression. In this connection it should be noted that old stone age artists never achieved "a composition." Finally, it should be recognized that the paintings and engravings, as man-made representations, opened an entirely new phase of history, namely, the era of the "creative world" in which thought could find expression for its own sake and which made possible ultimately the recording of thought in a special order of symbols, *i.e.*, writing. This statement does not mean that writing developed from upper old stone age cave art; it only means that with this art appears an order of thought in terms of which writing could be invented.

Various theories ascribe to these art remains a magical or religious significance. They were, it is argued, new weapons in

man's everlasting struggle for security. Somehow or other their makers must have believed that they gave a power over the animals which meant subsistence. The representation of wounds seems to be clear evidence of the hunter-artists' wishful thinking. Such argument does not mean that art originated in magic or religion; it means only that the expression of thought cannot be independent of its content. Old stone age art, like all true art, was an interpretation of going human experience. The concentration of attention required by hunting undoubtedly burned the forms of the animals into the minds of the hunters, and the desire to succeed in the hunt projected the forms into images. The skills arrived at in shaping weapons made possible the sharp rendering of the images. With interest fixed on the hunt, man, once in possession of the skills for the pursuit of animals in a new way, did not fail to undertake such a pursuit.

The Significance of the Old Stone Age in the Development of Civilization.

Throughout the old stone age man was a wanderer in the wilderness: the hunter and the hunted. Life was need and struggle: combat, torn flesh and blood, death. It was quickness of sense, precision of movement and speed of action, and all strength bitterly spent. It was fear that quaked before the unknown; it was readiness to meet the known. It was the blinding, emotional excitement of crisis. And it was talk that revived the excitement of the crisis. It was the full belly, the satisfaction of sex, and the sense of the fitness of things when the pack knew no discord. For countless centuries man fought the wilderness; in the end he triumphed by becoming the aggressor. With blade and flame he became its chief terror. With that social specialization which gave leadership to the pack, he brought knowledge as well as sentiment to the support of the violence that meant survival. In art he declared his need and boasted of his prowess. In ornament he revealed his vanity. And in religion, perhaps, he nurtured his fear and spoke his faith.

Thus civilization received its fundamental elements. Violence was its primary instrument. Fear was its central emotion. The sense of survival through social action was its strongest bond, and exhibitionism its obvious achievement. Long since has the hunter ceased to play a role in the development of civilization, but the qualities of his behavior became so deeply embedded in it that they have generally given broad characteristics to later cultural traditions. And particularly have they endured as the dominant aspects

of behavior in the face of crisis. Since the period of hunting life was so incomprehensibly long, these qualities of behavior not only were firmly established as the core of civilization but also may have received a biological organization, perhaps in the glandular mechanisms which direct the flow of energy in times of danger to the individual and the group. Insofar as there is a biological determinant of civilization, it may consist, conceivably, of whatever structural adaptations were made to the repeated bodily and psychological stresses of hunting life.

The thousands of centuries during which man lived as a hunter can be briefly chronicled, but their influence in the general development of civilization can hardly be overstated.

THE APPEARANCE OF THE MODERN ENVIRONMENT AND THE MODERN RACES OF MEN

In the long view of history the "modern age" may be seen to have begun between 14,000 and 8,000 years ago, when three fundamental aspects of all subsequent times slowly developed: (1) the now prevailing condition on the surface of the earth, (2) the now existing races of men, and (3) cultures based on continuous economic production.

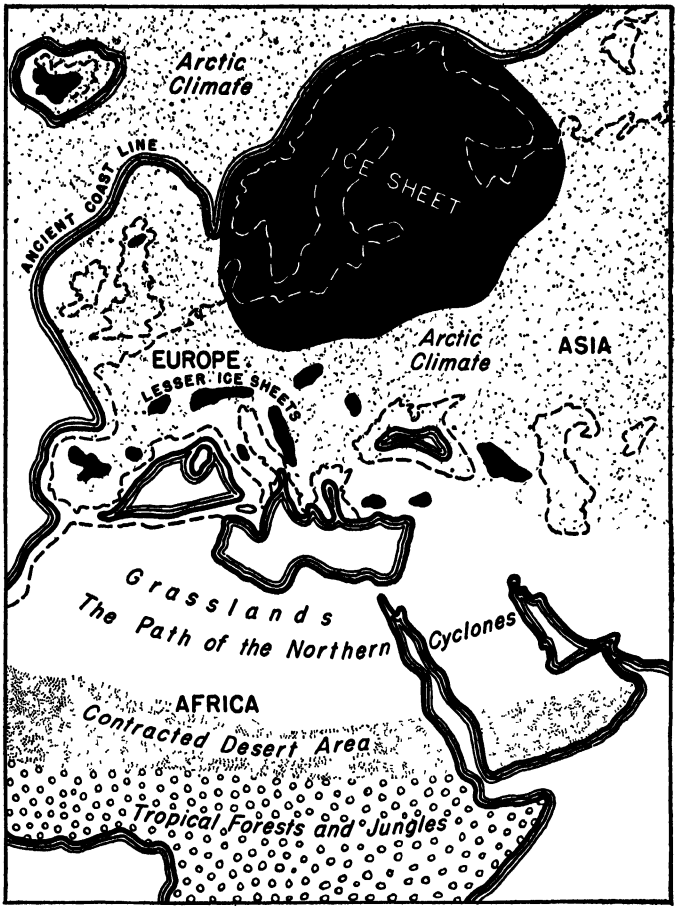
The Modern Environmental Regions.

Various geological facts, such as the accumulation of glacial drift, the erosion of valleys, the raising of seacoasts, and the formation of alluvial and peaty deposits, and some cosmic facts, such as the variation of solar heat and the precession of equinoxes, throw light on the climatic history of the earth during the Würm glaciation and subsequent or postglacial times. Recent studies of *varves*, *i.e.*, the deposits made by the annual flow of water from melting glaciers, have added considerably to the knowledge of this history. By counting varves, which are light-colored when formed in summer and dark when formed in winter, geologists have developed a climatic chronology for Europe in postglacial times. And there is some evidence for climatic movements in Asia and Africa different from but parallel to the European changes during these times.[1]

1. *Modern Climate.* Six climatic phases are recognized in northern Europe during and subsequent to the retreat of the Würm—the fourth—ice sheet:

[1] See Gerard De Geer, "A Geochronology of the last 12,000 years," *International Geological Congress*, 1910, pp. 241–247; Gerard De Geer, "On the Determination of Geochronology by a Study of Laminated Deposits," *Science*, Vol. 52 (1920), pp. 502–503; and

THE FOURTH GLACIATION



1. From 18,000 to 11,800 B.C. the European climate was arctic. Between the glaciers lay tundras and snow-covered plains. During these centuries the Atlantic cyclones moved across northern Africa and southwestern Asia, and the Saharan, Arabian, and Iranian areas that are deserts today were well-watered grassy plains.

2. From 11,800 to 6800 B.C. the temperatures rose gradually, and after 8300 B.C., when the ice began to retreat rapidly from southern Scandinavia, the climate became considerably warmer. Northern Africa, Arabia, and Iran were still well watered, and the Nile valley was a string

J. G. D. Clark, *The Mesolithic Settlement of Northern Europe* (1936), Chap. I, "The Natural History of the Area of Settlement."

of swamps during this period. But the advancing temperature heralded a decrease of rainfall and stimulated movements of both animals and men. After 8300 B.C. the period is called the pre-boreal.

3. In the boreal phase, from 6800 to 5600 B.C., the climate of Europe was warm and dry, for the temperature increased and rainfall declined. Forests, lakes, and bogs covered most of the continent. In northern Africa and southwestern Asia dessication forced men and animals into the areas where water remained plentiful, and the grain-producing grasses concentrated on uplands that retained moisture.

4. The Atlantic phase, from 5600 to 2500 B.C., was warm and moist in western and northern Europe. On heavy soils of the lowlands and on the well-watered upland divides the forests became dense. Only the sandy loams and loess soils were grass covered. The desert conditions that had appeared in northern Africa and southwestern Asia in the previous phase were intensified.

5. After 2500 B.C. the climate of northern Europe became drier, the level of water in the lakes lowered, and the forests thinned and contracted. In western Europe, however, the rainfall was sufficient to maintain the forests of the preceding period; in fact, they expanded over some of the uplands. In northern and eastern Europe the forests were forced back to the heavy soils of the lowlands and the growth of the grasses on the sandy and loess soils was checked. Desert conditions were now permanent in northern Africa and southwestern Asia. This phase—the sub-boreal—continued until shortly after 1000 B.C.

6. In the sub-Atlantic phase, which began about this time, the European climate became damper and colder, and the forests spread again at the expense of the moors and grassy plains. Local rather than general change seems to have affected Europe's climate since the beginning of this period.

Besides the retreat of the ice sheet the most important event in this climatic history was the shift of the cyclonic storm belt from northern Africa, Arabia, and Iran to its present location north of the Alps, the Caspian Sea, and The Gobi. In the course of this shift the tropical desert areas between the tropical forests and the subtropical regions widened. Thus the grasslands which had covered northern Africa and southwestern Asia during the last glacial period began to give way to semiarid plains and deserts. At the same time the northern subtropical and temperate regions were extended, but, because mountains and seas broke them, diverse climatic areas lay across southern and central Europe and Asia. On the highlands of southwestern and east central Asia a slowly

increasing aridity seems to have prevailed. The arctic and subarctic tundras swung far northward, and an area, wide in some places and narrow in others, extending from the British Isles and France to the Huang valley in northern China, was swept by the cyclonic storms.

2. *Modern Flora and Fauna.* During these climatic changes the plants and animals took their present form and found their present homes, except as both have been modified by the acts of men.

Along the southern slopes of the Eurasian mountain backbone a more or less continuous but narrow band of grassland followed the southern Mediterranean coast, the Syrian highland, the Tigris-Euphrates valley, and the Asiatic littoral to India, where it broadened out along the Indus River. In adjacent highlands, where limestone outcrops occurred, there were park lands, for the limestone was unfavorable to the dense growth of trees.[1] North of the Eurasian mountain backbone great new grasslands stretched from central Europe to China; they lay mainly upon the loess deposits which had been formed by dust blown southward from the drying glaciated areas.

Over the mountain backbone grew a new forest, broken into two divisions by the Hindu Kush Mountains. The western section began at the base of the Kopet Dagh Range, spread over the Elburz, the Zagros, the Caucasus mountains, and the Armenian Highland, and covered the slopes of the Lebanon, Taurus, Balkan, Carpathian, Sudetic, Alps, Cévennes, Jura, and Pyrenees mountains; its maximum extent was reached in the period of great humidity that followed the final shift of the cyclone path. The eastern section lay like a fan around the southern and eastern slopes of the great Asiatic mountain core. In the northern reaches of the western forests, which extended to the tundras bordering the retreating ice sheet, fir, pine, birch, and hazel abounded. Around the loess deposits, which like the limestone ridges were unfavorable to the growth of trees, a fringe of park land separated the grasslands from the forest. The heart of the forest consisted of oak, beech, elm, and spruce; on the southern border were walnut, chestnut, and apple. Between the forest and the desert grew the plum, the apricot, the peach, the vine, the mulberry, the olive, and the fig. At the very edge of the desert were the date palm and the

[1] See *The Cambridge Ancient History*, Vol. I, *Egypt and Babylonia to* 1580 *B.C.* (1928), pp. 54–55.

citrus fruits. Wild wheat, barley, and oats were at home on the southern limestone ridges.

The animals changed in conformity with the altered distribution of plants. The remnant of the old arctic fauna followed the ice sheet northward. In the northern forests the wolf, the bear, and many kinds of small fur-bearing animals found homes. Herds of wild horses and cattle roamed over the new northern grasslands. The pig ranged wherever the oak shed its acorns. Wild sheep and goats browsed in the high park lands. Asses and camels grazed on the sparse grasslands facing the deserts. Cattle and buffalo thrived in the lush growths of the subtropical river valleys. Lions, tigers, and hyenas roved through the southern park lands. Lesser species of modern animals found habitats in and about the great forest, which was for men an almost impenetrable barrier. Another remnant of the older fauna—including the great mammals like the elephant, the rhinoceros, the hippopotamus, the giraffe, and the anthropoid apes, and innumerable varieties of grazing animals—held its place in the tropical jungles and forests south of the new deserts.

3. *The Habitats of Modern Men.* The total result of these changes was the distribution of climatic areas, flora, and fauna in the general regions which have constituted the habitats of modern men.[1] Briefly defined, an *environmental region* is an area in which all physical circumstances, including position on the earth's surface, topography, natural resources, and climate, combine to produce a distinctive flora and fauna in terms of which the men inhabiting the area establish a common but peculiar way of life. Variations of altitude and of soil composition often break the prevailing characteristics of a region, giving local districts features which do not belong to the region as a whole. Ten great environmental regions pattern the surface of the earth:

1. The *tropical rain forests* encircle the earth along the equator; they are heaviest in the Amazon, the Congo, the Niger, and the Zambezi valleys. Their climate is featured by excessive heat and great humidity. Rainfall is more or less constant, but there are two rainy seasons each year. The excessive heat and heavy rainfall are exceptionally favorable to vegetation. Great trees, which knit their branches so tightly at the top that sunlight cannot reach the soil below, cover extensive areas. Where the

[1] For basic statements of the principles of human geography see Friedrich Rätzell, *Anthropogeographie* (2 vols. in one, 4th ed., 1921–1922); Jean Bruhnes, *Human Geography* (*ca.* 1920). Other discussions may be found in C. C. Huntington, *The Geographic Basis of Society* (1933); P. W. Walker, *Man's Adaptation to Nature: Studies of the cultural landscape* (1933); and P. M. J. Vidal de la Blache, *Principles of Human Geography* (1926).

forest is broken an almost impenetrable undergrowth appears. Reptiles and birds share with monkeys the hospitality of the trees. Insects abound and make life miserable for men and beasts. No large mammals thrive in these regions.

2. On either side of the rain forests and where mountains break them are the *tropical jungles*. They are hot and well-watered. Trees, shrubs, undergrowth, and tall grasses mingle in a not impenetrable wilderness. In the higher regions there are park lands, while across long stretches of open plains tall grasses form savannahs. These regions are the homes of the great mammals and hundreds of species of smaller animals.

3. The Sahara, Nubian, and Arabian Deserts form the largest *tropical desert region;* in the Southern Hemisphere, where the land areas are small, these deserts are restricted, except in central Australia. The climate is featured by great heat and almost no rainfall. Only where a supply of underground water is available does plant, animal, and human life exist.

4. There are two great *monsoon regions* in the Northern Hemisphere and three small ones in the Southern Hemisphere; each is on the eastern side of a continent. East central India, northern Indo-China, and southeastern China form the largest monsoon region. Its climate is featured by hot, wet summers and cool, dry winters; the temperature almost never reaches freezing. The heat and moisture of the summers produce a luxuriant vegetation, similar in some places to that of the tropical forests and jungles. But the cool winters break the year-round growth, so that cultivation is not greatly hindered. Southeastern United States—"the Old South"—is the second largest area of monsoon environment. Its features are not as severe as those of the Asiatic monsoon region.

5. The *subtropical regions* are on the western sides of the continents. The largest and most important subtropical region coincides with the Mediterranean Basin, but it extends also across Syria and Palestine to the Zagros Mountains. Its climate is featured by hot, dry summers and cool, moist winters. The lack of rainfall during the summer months withers vegetation, but winter, spring, and fall bring the luxuriant growth of great numbers of flowering and fruit-bearing plants. The cool winters are favorable to the cultivation of cereals. Domesticated animals thrive.

6. There are two *great continental deserts*, one in the plateau region of southwestern North America, the other in central Asia. The continental deserts are neither so dry nor so hot as the tropical deserts; because of the altitude, the winters are extremely cold. The vegetation is sparse, consisting of tough grasses, shrubs, and a few scraggly trees but is nevertheless sufficient to maintain herds of horses, cattle, and sheep if they are permitted to graze over large areas. Agriculture is possible only in the narrow river valleys. Mineral deposits frequently provide the basis of a settled community life.

7. The *cyclonic storm belts* swing around the earth in both the Northern and the Southern Hemispheres. In the Southern Hemisphere the belt touches South America and New Zealand; in the Northern Hemisphere it sweeps over North America from British Columbia to New England and over Eurasia from Ireland to northern Japan. These regions have hot summers and cold winters. But the unique character of the climate arises from the cyclones which move across the regions from west to east in a regular sequence throughout the entire year. The air currents of a cyclone have a counterclockwise motion around a storm center at speeds ranging from twenty to sixty miles an hour; such a storm is from three to six hundred miles across and requires from four to ten days to pass a given point. At such a point a definite sequence of weather conditions occurs: the first day is warm, with a south wind, but ends cloudy and rainy; the second day is warm and rainy, with an east wind; the third day is cooler, still rainy, and the wind veers to the northeast; the fourth day brings a sharp change to colder temperature, the rain stops, but the clouds still hang low; on the fifth day the wind usually turns to the northwest, increases its speed, and brings lower temperature, and the clouds break up. In the winter these storms bring a sequence of warm, snowy, and clear and cold—"snappy"—days; in the summer they bring a series of hot, rainy, and cool days. Thus the inhabitants of a cyclonic storm belt experience a variety of weather conditions known in no other environmental region and, as a result, are not permitted to fall into a routine of life following an unbroken seasonal rhythm.

Three clearly defined types of vegetation growths exist in the cyclonic regions. Over broad loess deposits are grasslands, like the prairies of North America and the steppes of southern Russia. Where the soil is favorable to growth of trees there are great forests, like those that once covered central Europe and east central United States. In marginal areas between the forests and the grasslands are park lands. The climate is generally friendly to the cereals—wheat, barley, oats, rye, and maize—and to the domesticated animals—the horse, the cow, the pig, and the sheep. The potato, originally a native of the tropical uplands, thrives, as do also the hardier fruits and garden plants.

8. Along the northern edges of the cyclonic storm belt that crosses North America and Eurasia are broad reaches of pine, hemlock, spruce, and fir—the *subarctic forests*. Large numbers of fur-bearing animals, such as the beaver, the otter, the muskrat, and the mink, find homes along the streams that are fed by heavy winter snows. Agriculture is barely possible in these areas of very short summers.

9. Bordering the northern edges of North America and Eurasia are vast *tundras*. Mosses cover their surface, which thaws out only for a very brief period during the summer months. The subsurface soil is always frozen, and so water in the summer and ice in the winter cover the land. Reindeer, caribou, and musk oxen graze on the moss, and fur-bearing

animals, such as the fox and the wolf, roam across stretches that extend to the forest on the south.

10. Over each pole of the earth is an *ice cap*, the remainder of the glaciers that once covered much larger areas. These ice caps are the home of only a few animals and birds, which, living along its edges, subsist chiefly on food taken from the sea.[1]

In the course of the changes which brought this general distribution of environmental conditions, innumerable local variations undoubtedly appeared and disappeared, so that there was great shifting of men carrying different cultures, especially as the tropical desert, subtropical, and temperate areas widened. But topographical features divided these areas into several regions, which, in spite of local variations within them, tended to promote the growth of unified cultures. At least six such regions lay across Africa, Europe, and Asia between the twenty-fifth and forty-fifth parallels: (1) the Mediterranean Basin, (2) the Fertile Crescent and adjacent lands of southwestern Asia and northeastern Africa, (3) Iran, (4) central Asia, (5) India, and (6) the north China plain and contiguous areas. Around the Mediterranean Sea were peninsulas, the future homes of local cultures which, in time, navigation could bind together in a single culture area. No other area was so much under the influence of the sea. In southwestern Asia converged land and water routes, which made it the meeting point of cultural materials from both eastern and western sources. In Iran and central Asia the clash of nomadic and peasant peoples was a constant factor in cultural development. The mixture of jungle, plain, and desert in India promoted a diversified cultural growth but did not provide a ready source of wealth for its support. On the north China plain, cultural developments, although from time to time stimulated by materials from the west, continued along lines originating with the people who first settled it. Communication among these several regions, although intermittent rather than continuous, was sufficient to permit the culture of each to influence that of the others. Thus each region became the home of an enduring cultural tradition, and these several traditions, in spite of the peculiar characteristics of

[1] On environmental regions see W. G. Kendrew, *The Climates of the Continents* (1937); John E. Pomfret, *The Geographic Pattern of Mankind* (*ca.* 1935); Leslie Brettle, *Social and Economic Geography* (1931). See also Lionel W. Lyde, *The Continent of Asia* (1933); Marion I. Newbigin, *The Mediterranean Lands: An introductory study in human and historical geography* (1924); A. Austin Miller, *Climatology* (1931); W. R. Kermak, *Human Environment and Progress: The outline of world historical geography* (1927); and P. M. J. Vidal de la Blache, *Principles of Human Geography* (1926).

their environments, shared, as time went on, more and more elements.

4. *The Environmental Factor in the Development of Cultures.* That man's life in the various parts of the earth reflects his environment is quite clear.[1] In the tropical rain forests man is a pathetic figure, forced to live on fruits, tubers, and small animals. Insects prey upon him, and diseases sap his strength. The tropical jungles are generally too friendly to him; with a little effort he lives so well that he does not try to learn to live better. The great tropical deserts are almost uninhabitable. The monsoon regions support enormous settled populations of tillers of the soil. The subtropical regions promote the growth of a diversified life, mixing together settled and nomadic peoples. The continental deserts barely nourish nomadic peoples, who frequently demand room for expansion in the grasslands of the cyclonic storm belt. Settled agricultural life is typical of the park lands of this belt. A mixed settled and hunting life prevails in the forest areas on either side of the grasslands and park lands. Beyond the polar forests man finds life in any form almost impossible. The Eskimos win a scant subsistence from the tundras and the sea. The bulk of the human race, over 60 per cent, is concentrated in the northern subtropical, monsoon, and cyclone regions, which have always been the seats of the more complex cultures.

Looking at these general facts, one group of students of geography and history sees man as a puppet pulled this way and that by topography and climate and declares that the movements of peoples and the growth of cultures have been "determined" by environmental circumstances.[2] They see the religion and art of a people reflecting the images and moods of their habitats. They see social conflict and cultural diffusion occurring along lines marked by natural means of communication and barriers to communication. They see the fundamental transformations of cultures impelled by climatic changes. Such influences of the environment cannot be denied.

[1] On the environmental factor in the development of culture see Roderick Peattie, *Geography in Human Destiny* (1940); Ray H. Whitbeck and Olive J. Thomas, *The Geographic Factor: Its role in life and civilization* (1932); Franklin Thomas, *The Environmental Basis of Society* (1925); W. L. Bunting, *Where Geography and History Meet* (1925); Lucien Febvre, *A Geographical Introduction to History* (1925). For an extreme statement of the influence of climate see Ellsworth Huntington, *Civilization and Climate* (1915).

The most satisfactory discussion of the interaction of geographical and cultural factors is J. W. Bews, *Human Ecology* (1937); this interaction is well illustrated in Nikolaus Creutzburg, *Kultur im Spiegel der Landschaft: das Bild der Erde in Seiner Gestaltung durch den Mensch* (1930).

[2] See J. C. Curry, "Climate and Migrations," *Antiquity*, Vol. 2 (1928), pp. 295 *ff.*

But to influence is not to determine. As a matter of fact nature offers man opportunities which he may or may not use, depending on his cultural equipment. In the United States western Pennsylvania provides an excellent example of the utilization of an environment by men with different cultural equipments. Before 1750 the region supported a few Indians who lived by hunting and hoe culture. By 1800 the area was well settled by Europeans practicing field agriculture and handicrafts. Today the region is the center of a dense population and an advanced industrial economy based on scientific knowledge. Clearly cultural, not environmental, factors explain this remarkable development, for certainly no important environmental changes have occurred in the region since 1750. Conservative students of geography and history are inclined, therefore, to take a moderate view of the role of the physical environment in the development of cultures. Their view is: "Environment is passive, not active. It provides the natural equipment, but it never determines whether or not, and to what degree, it shall be used. Hence it is deemed unwise to try to fit world culture patterns into the framework of the physical realms."[1]

The Modern Races.

It is now believed that the modern races are descended from a stock which developed parallel to Neanderthal man and was associated with the early core cultures. However, the earliest representatives of the stock, as previously noted, are the Swanscombe man and the Galley Hill man found in England. Piltdown man, or *Eoanthropus dawsoni*, whose age is uncertain, may be an even earlier representative. By the middle of the ice age the stock was fully evolved, and by late paleolithic times most of the variations of bodily structure and cranial form which distinguished contemporary men had appeared. The evidence which supports these assertions also indicates that the stock originated somewhere south of the Eurasian mountain backbone, probably somewhere in Asia; its breeding grounds may have been the restricted temperate areas at the edges of the tropical deserts during the glacial periods. Its typical traits were short stature, longheadedness, and a moderate cranial capacity. Recent finds in Africa, which were announced as evidences of a very early appearance of modern man in that continent, are not now held to antedate the European specimens.

[1] Vernor C. Finch and Glenn T. Trewartha, *Elements of Geography* (1936), p. 663. By permission of the McGraw-Hill Book Company, Inc., New York.

Although the Neanderthal type became extinct between the first and second phases of the Würm glaciation, some mixing of Neanderthal man and modern man occurred; early representatives of the hybrid race—*Skhul man*—have been discovered in Palestine, and there is reason to believe that it became widely dispersed in late paleolithic times, always, of course, in association with varieties of modern man. The hybridization was probably the result of interbreeding by males of the modern stock and Neanderthaloid females. The hybrid type was in no way inferior to the pure modern stock.

The earliest representatives of living types of modern man are *Crô-Magnon man* and *Grimaldi man*. The former is said to survive in France and the Canary Islands; the latter is identified as an early specimen of the Negroid race. Both lived toward the end of glacial times.

Modern man is differentiated from the Neanderthal stock and other predecessors by three important structural variations: (1) a refinement of the skeleton which sacrificed weight in order to gain speed, (2) a lengthening of the brain case, and (3) a broadening of the brain case. The lengthening and the broadening of the brain case, it must always be remembered, were two distinctly different developments. No satisfactory explanation of these changes is possible at present.

1. *The Great Racial Types.* In terms of the concept "race" men are grouped according to the biological traits which they possess in common. Six different traits in various combinations distinguish the modern races from one another: (1) stature, (2) nasal form, (3) jaw thrust, (4) color, (5) hair form, and (6) head shape. Of these six, color is the least important and hair form and head shape are the most significant. Three kinds of hair form are recognized: straight, curly, and woolly. Head shape is measured by the cephalic index, the ratio of the length to the breadth of the head. Three types of head shapes are recognized: the dolichocephalic, or longheaded, the brachycephalic, or roundheaded, and the mesocephalic, or intermediate. There are no pure races, *i.e.*, groups of men sharing some combination of these traits to the exclusion of all others.

When the representatives of modern man began to spread over Europe in upper paleolithic times, the stock, it seems, had been differentiated into four main races: (1) the Australoid, (2) the Mongoloid, (3) the Negroid, and (4) the Caucasian, or white. It seems that these races were produced, perhaps, in two pools of

modern humanity which appeared some time after the middle of the ice age. The first pool was in southwestern Asia and eastern Africa; from it longheaded varieties moved westward, northwestward, and southwestward. The second pool was in east central Asia, north of the Eurasian mountain backbone; from it roundheaded varieties filtered into western Asia and Europe, into southeastern Asia and the East Indies, and into northeastern Asia and the Western Hemisphere. The existence of man in the Western Hemisphere before the end of the last glaciation is now indicated by very meager evidence. The movements which originally distributed modern man over the earth cannot be traced at present; in their course, however, the basic stratum of the present population was established.

The Australoid race, represented in the present population of the world by the pygmy peoples of west central Africa, the Malay Archipelago, and Australia, probably developed along the southern edge of the grasslands covering northern Africa, Arabia, and Iran during the glacial periods. It is doubtful if the type was ever present in Europe, for seemingly it was pushed southward and eastward before the migration of modern man into Europe got under way. Its chief physical traits are longheadedness, a very short stature, a dark brown or black coloring, and woolly hair.

The Mongoloid race seems to have been specialized on an upper old stone age grassland north of The Gobi. Its distinctive traits are roundheadedness, short stature, a yellowish color, and straight hair. The makers of Solutrean culture, who penetrated Europe from the east, first carried the trait roundheadedness into Europe.

As previously noted, the Negroid race is represented in upper old stone age Europe by Grimaldi man. However, like the Australoid race, it seems to have been pushed very early toward the south, where, under tropical conditions, the traits now peculiar to it developed. They are longheadedness, tall stature, a forward thrusting jaw, a dark brown or black color, and woolly hair. No contemporary race is more typical of modern man than the Negroid. Other types of modern man, penetrating Africa from the northeast, have probably interbred with the early Negroids to produce the present population of eastern and central Africa.

The Caucasian, or white, race may have descended from Galley Hill man, whose distinctive traits were longheadedness, short stature, and a medium cranial capacity. The race has been identified in Europe at the opening of upper paleolithic times, and during these times it spread steadily over the continent. Although

its original center of dispersion may have been in southwestern Asia, various representatives reached Europe from both central Asia and Africa.

2. *European Varieties of Modern Man.* Because of the migration and interbreeding of the several kinds of white men at different times, as well as the persistence of the Neanderthaloid strain, modern European peoples are a medley of races. Three main types are recognized: (1) the Mediterranean, (2) the Alpine, and (3) the Nordic.

The Mediterranean race is, perhaps, a direct descendant of Galley Hill man; it has been identified in Palestine and northern Africa, as well as in Europe, with cultures that mark either the end of hunting as the chief means of obtaining subsistence or the beginning of food production. At the end of neolithic times it was dominant around the Mediterranean Basin and throughout western Europe. Its original traits were a white or brown color, short stature, and longheadedness. It did not receive Neanderthal traits. Now, owing to interbreeding, it has short and tall representatives, but the slight body is typical of both. The traits of the Mediterranean race are less conformable to a single pattern than those of any other race.

The Alpine race seems to have developed in the highland zone supporting the heart of the new great forest; its appearance in Europe has not been explained. Some evidence indicates that it came, perhaps, from the Anatolian Highland or even farther east during the migration of agricultural peoples. At any rate, its presence in Europe is definitely established only for the period since the breakup of the ice sheet, when, penetrating the continent from the east, it slowly won an almost complete domination of the central mountain ranges and their spurs, especially toward the north. Its distinctive traits are roundheadedness, curly hair, and short stature; the color varies from a sandy blond in western Europe to a dark brown in Iran. Since the breakup of the ice sheet, the spread of Alpine men has been the most significant development affecting the distribution of the races over the earth.

The Nordic race was specialized late in the period of glacial retreat or just after its close; its original center was the Baltic lands. In a strict sense the coloring of the Nordic race is only a specialization of the Mediterranean pigmentation. Besides blondness, its distinctive traits are longheadedness, tall stature, a prominent chin, a narrow face, and straight hair. Evidence from German sites indicates that its purity as a type was probably nonexistent very

early.[1] The movements of the Nordic race, sporadic rather than steady like those in the Alpine race, have taken the form of conquests of older types of modern man. Today it is dominant only around the North and Baltic Seas, and in these lands it is by no means the only type; to the south small pools are interspersed here and there among Mediterranean and Alpine men.

The evidence now available about the development of European races indicates that they appeared at different points in time, as well as in various places. At their base is the early Mediterranean stock. But mixed with it are both the hybrid race produced by the interbreeding of the modern and Neanderthal hybrids and some survivals of the earliest representatives of modern man that reached western Europe. The Alpine and the Nordic types are specializations either developed in Europe by interbreeding of types already present or produced by the infiltrations of Asiatic white men and their mixing with European stocks. The European races are without question the products of upper paleolithic and postglacial times. Probably no scheme of classification of types can indicate clearly the relations among them.

3. *The Peopling of the Western Hemisphere; the Amerind Race.* The final development in the peopling of the earth was the migration of Mongoloid men from Asia to the Western Hemisphere and the development there of the specialization known as the Amerind race. The bulk of the evidence now indicates that migrations, which occurred mostly in the last 14,000 years, were by way of the land bridge that once connected Siberia and Alaska. Probably the original migrants were a type related quite as much to the contemporary Tatars as to the contemporary Chinese. At least five different strains of the Mongoloid race have been recognized in the Americas, a fact which indicates that the migration from Asia was intermittent rather than continuous. Apparently a stream of migrants of uncertain racial identity also trickled to the Western Hemisphere from the islands of the south Pacific Ocean. A slight specialization of coloring is the chief distinction between the Mongoloid and Amerind races.[2]

[1] Wilton M. Krogman, "Cranial Types from Alishar Hüyük and Their Relations to Other Racial Types, Ancient and Modern, of Europe and Western Asia," in H. H. von der Osten and others, *The Alishar Hüyük Seasons of* 1930–32 (Oriental Institute Publications, Vol. 30, 1937), Part III, p. 247.

[2] On recent discoveries bearing on the origin of modern man see Henry Field, "The Antiquity of Man in Southwestern Asia," *American Anthropologist*, Vol. 35 (1933), pp. 51 *ff.*; L. S. B. Leakey, *Stone Age Africa: An outline of prehistory in Africa* (1936).

On general racial development see R. B. Dixon, *Racial History of Man* (1923); A. C.

3. *The Racial Factor in the Development of Cultures.* There are two views of the role of race in the development of cultures: (1) that differences of ability among the races has determined their social and cultural evolution and (2) that since there are no proved differences of ability among the races, race has not been an important factor in the development of cultures.[1] At present "racial determinists," represented in an extreme form by spokesmen for the National Socialist Party in Germany, declare that the Nordic race has been almost exclusively responsible for the development of Western culture. From the point of view of racial determinists the history of cultures has been little more than the struggle of the more able races to express their unique abilities. Thus partisans of the Nordic race declare that it has a right and a duty to dominate inferior races. Another school of racial determinists finds that only by the interbreeding of races, which releases biological energies long locked in fixed patterns, do creative abilities find the freedom that makes for cultural activity. Adherents of this theory point to the great work of mixed peoples, such as the Greeks, in the development of cultures. Partisans of the theory of Nordic supremacy claim, of course, that the creative power of the Greeks was due to their Nordic blood.

As a matter of fact, contemporary scientific investigations do not support either theory of racial determinism.[2] Indeed there is little scientific ground for assigning race a significant role in history. Apparently there are no general differences in ability among the races which are not duplicated within each of the races; nor does interbreeding either lessen or increase ability. All-important in

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Haddon, *The Races of Man and Their Distribution* (1929); J. Deniker, *Les Races et les peuples de la terre* (1926); Egon Freiherr von Eickstedt, *Rassenkunde und Rassengeschichte der Menschheit* (1934); Hans Weinert, *Entstehung der Menschenrassen* (1937).

On the peoples of Asia see L. D. H. Buxton, *The Peoples of Asia* (1925).

On European races see W. Z. Ripley, *The Races of Europe* (1900); Wilton M. Krogman, "Cranial Types from Alishar Hüyük and Their Relations to Other Racial Types, Ancient and Modern, of Europe and Western Asia," in H. H. von der Osten and others, *The Alishar Hüyük Season of* 1930–32 (Oriental Institute Publications, Vol. 30, 1937), Part III, pp. 213–276; C. S. Coon, *The Races of Europe* (1939). Coon's work is the most complete study yet made of the origin and diversification of the types of Western man.

On racial traits see G. P. Frets, *The Cephalic Index and Its Heredity* (1925); R. Martin, *Lehrbuch der Anthropometrie* (1928).

[1] On the racial factor in history see Madison Grant, *The Passing of the Great Race* (1916) —a statement of the Nordic theory; F. H. Hankins, *The Racial Basis of Civilization: A critique of the Nordic doctrine* (1926). See also T. G. Taylor, *Environment, Race, and Migration* (1937); Jacques Barzun, *Race: A study in modern superstition* (1938).

[2] On the psychology of races see T. R. Garth, *Race Psychology* (1931); also O. Klineberg, *Race Differences* (1935).

this connection is the fact that racial groupings cannot be correlated with any of the groupings—linguistic, political, and cultural—truly characteristic of the development of civilization. And the interbreeding of races may be stimulating to cultural developments because it brings together different cultural traditions quite as much as because it unites two blood streams. In fact, except as physical traits may become symbols of a distinctive cultural tradition and, as a result, unite those individuals possessing the traits with the culture, there is, if there are no important psychological differences among the races, no way for race to affect cultural growth.[1]

THE CULTURAL ACHIEVEMENTS OF EARLY PEASANT AND NOMADIC PEOPLES

Under the changing climatic conditions during the retreat of the glaciers early modern men learned how to utilize the growing processes of plants and animals so that a more secured food supply became available, and from this circumstance flowed developments that almost completely reorganized the daily life of common men.

The New Stone Age.

Because the changes which shaped the modern environmental regions killed off perhaps as many as half of the species of animals upper old stone age men had hunted, their successors were forced to develop a new food supply.

The first phase of the solution of this problem is known as the *middle stone age*, or *mesolithic times;* its cultures were characterized by paleolithic implements that were adapted to new uses. The second phase—the *new stone age*, or *neolithic times*—although named for the technique of grinding and polishing stone, solved the problem with two revolutionary innovations—the cultivation of plants and the domestication of animals. The middle stone age is dated from about 11,800 to 5600 B.C., although mesolithic cultures persisted in Europe until the arrival of food-producing cultures about the opening of the third millennium B.C. The new stone age can be dated even less accurately. Food production, as contrasted with food gathering by hunting or foraging, may have begun as early as 8000 B.C. on the grasslands of northern Africa and southwestern Asia. But this beginning is entirely conjectural. By 5000 B.C., however, it is reasonably clear, food-producing cultures had appeared in some parts of these areas. In Mesopotamia and Egypt the new stone age came to an end some time in the fourth millen-

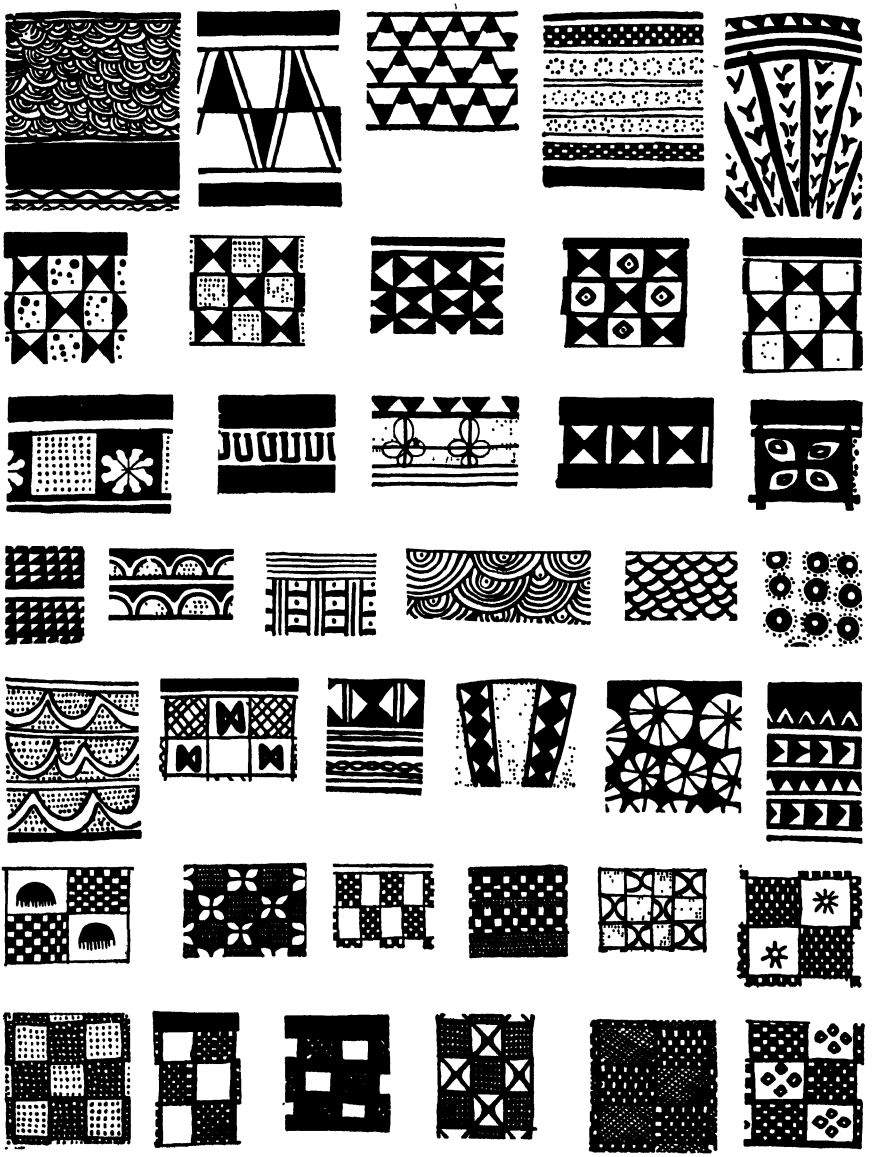
[1] See article "Race" in the *Encyclopaedia of the Social Sciences.*

nium B.C., when, in fact, it had not yet reached Europe. Neolithic cultures are, therefore, to be dated differently in various parts of the earth.

The archaeological evidence for mesolithic and the early neolithic cultures is extremely meager.

In southwestern Asia mesolithic developments are identified with the Natufian culture found in Palestine. Its makers possessed flint sickles, an evidence of cultivation, but no pottery; they were expert carvers of both bone and stone, producing in the latter material fine vessels and cylindrical pestles. Three mesolithic cultures, each embodying a different technological tradition, developed in northern Africa and western Europe. The Tardenoisian, derived from a Capsian base, which perhaps was also the source of the Natufian culture, was characterized by microlithic flint flakes, used either as knives or as points. Because these implements were not adapted to forests, this culture spread only over sandy and treeless areas. In western Europe it is found from Spain to the Rhine valley. There is reason to believe that it was an immediate forerunner of food-producing cultures. The Azilian culture, characterized by canoes, harpoons, and other implements for fishing, developed in the areas of swollen rivers and lakes that came with the melting of the glaciers. The Maglemosian culture was an adaptation of the cultures of paleolithic times to the forests that spread over northern and central Europe; its distinctive implement was a stone ax used for chopping. The makers of each of these cultures built habitations and maintained a community life.

Recent archaeological investigations have found evidence of early food-producing cultures in Egypt, Palestine, Syria, Anatolia, Upper Mesopotamia, and Iran. But no original center of origin is recognized. Whether or not they were derived from a Capsian base, as some authorities believe, is not clear, nor are connections among them definitely established. Some evidence points to the Nile valley as the original home of settled community life based on tillage. Other materials suggest that it appeared first in northern Arabia or Palestine or Syria. Still other facts indicate that it may have arisen on the limestone ridges of the Armenian Highland, where several of the plants and animals adapted to man's use were indigenous. Probably the distinctive achievements of early neolithic cultures—cultivation and domestication—were shared by a medley of peoples inhabiting scattered villages in these lands at the close of the sixth millennium B.C.



From Iraq, Vol. 2 (1935)

GEOMETRIC DESIGNS ON PAINTED POTTERY

These designs, found on pottery at Arpachiya, later the site of Nineveh, suggest one of the important by-products of the early ceramic industry, namely, the differentiation of conventionalized forms and the arrangement of these forms in patterns. This style of decoration belonged to the Syrian peasant-village culture.

The artifacts of these communities indicate that they were villages whose denizens cultivated plants and kept domestic animals. Among the plants were emmer and einkorn, kinds of wheat, and barley and millet; among the animals were the pig, the cow, the goat, and the sheep. The inhabitants also made pottery and cloth. Hunting was still an important occupation, for stone axes and arrowheads are common artifacts. There is little evidence of warfare at the sites.

In broad view, it seems that about the opening of the fifth millennium B.C. four recognizable food-producing cultures existed in Egypt and southwestern Asia. The Egyptian culture was confined to the edges of the lower and middle parts of the Nile valley. The Syrian culture, characterized by conventionalized geometrical designs painted on pottery, was originally limited to Palestine, Syria, and Upper Mesopotamia where the rivers left the highlands, but later it moved westward into Anatolia and eastward as far as Lake Van. The Anatolian culture, which possessed a plain pottery, spread across Asia Minor, the Armenian Highland, the Caucasus and Elburz mountains, and into central Asia. The Iranian, or Highland, culture, distinguished by a pottery painted with plant and animal designs, occupied the Iranian Plateau from Kurdistan to Baluchistan. Although these cultures were the base from which urban culture developed, direct connections between them and the early cities of Mesopotamia and Egypt have not been established. The distribution of these cultures is shown on the color plate, Eurasian Environmental Areas *ca.* 5000 B.C., facing page 44.

At present, therefore, it seems safe to conclude only that the cultural innovations which brought men to a settled community life based on continuous economic production were first integrated in northeastern Africa and southwestern Asia toward the close of the sixth millennium B.C. This judgment is supported by the fact that the various innovations organized in the new way of life seem to have been made at different places and at different times in these areas.[1]

The Cultivation of Plants.

The existence of flint sickles among the artifacts of the upper old stone age indicates that grain was grown long before settled community life arose. Only hypotheses can be made to account for

[1] On neolithic cultures see V. Gordon Childe, *Man Makes Himself* (1936); J. M. Tyler, *The New Stone Age in Northern Europe* (1921); M. C. Burkitt, *Our Early Ancestors* (1926); Harold J. E. Peake and Herbert J. Fleure, *Peasants & Potters* (1927).

the invention of cultivation. It may have been the achievement of women, for in all primitive societies practicing any form of agriculture the tilling of the soil is mainly their work. Perhaps cultivation developed when hunting men abandoned caves in favor of open camps during the upper old stone age. At the center of these camps were hearths, and around them were areas where the vegetation was destroyed by the running to and fro of their denizens. The soil of this area and the bordering fringe of vegetation was constantly being fertilized by camp debris. Man, it may be believed, kept to the chase long after its rewards became insufficient to maintain life, and consequently woman's work of foraging to supplement the food supply became constantly heavier and more important. As a forager for berries, fruits, nuts, and seeds, she was necessarily drawn to plants and the habits of their growth and fruiting. When seeds were brought to camp, inevitably some of them fell on the semi-cleared and fertilized soil around it, and there, when spring came, they sprouted and grew rapidly. Upon them fell woman's attentive eye, and to them she gave the care that stimulated growth, while the increased fertility of the soil, no doubt, made them sturdy and improved their yield. If such attention were given to several clusters of plants, the camp took on quickly a new pattern: scattered around it were plots of growing things tended by women, and within it was a new routine of life characterized by work, a more secure food supply, and settled habitation. Thus woman the mother became woman the laborer and took up that dual role which was to be hers in all the great cultures of ancient and classical times.

Among the varieties of plants whose seeds were brought to camp the cereals lent themselves most easily to cultivation. Their rapid growth in the spring and their quick maturity in early summer made the effort spent in their care almost certain of reward. The earliest cultivated plant is not known; it may have been wheat or barley, both of which, it seems, were known to upper old stone age men. By the fifth millennium B.C. both grains were cultivated in the areas of settled life of northeastern Africa and southwestern Asia. Then wheat grew wild in two forms—emmer in Palestine and einkorn in northern Syria. The cultivation of einkorn spread through Asia Minor, around the Aegean coasts, and finally to the Danube valley. Emmer reached Egypt very early. It also crossed northern Mesopotamia into northwestern Iran, where there sprang from it the variety known as bread wheat. From Iran this variety entered the lower Tigris-Euphrates valley, spread into India and

central Asia, and finally reached China and, after crossing the southern Russian plain, central Europe. Over three thousand years were required for this wide diffusion of bread wheat.

A recent investigation of the distribution of the varieties of plants has found several areas of origin of the cultivated plants. Southwestern Asia, including Asia Minor, Iran, Transcaucasia, and mountainous Bokhara, was the home of emmer, barley, rye, flax, the pea, the lentil, the onion, and several other vegetables. India gave cotton, rice, and many vegetables and flowers to settled life. From eastern Asia, including Mongolia, China, and Japan, came millet, a variety of barley, the soybean, the water cresses, and several kinds of fruits, notably the lemon. In northeastern Africa, especially mountainous Abyssinia, developed a hulled barley, a violet-grained wheat, a variety of oats, and a kind of pea. In the Mediterranean lands a variety of wheat known as durum, large-seeded flax, a large pea, the lentil, the beetroot, the olive, and the grape were native. The olive is thought to have originated in Egypt west of the Nile Delta, and the grape in Syria or Asia Minor.

From scattered regions along both sides of the area between the new forests and the tropical deserts came many other cultivated plants. The forests gave the apple, the pear, the strawberry, the blackberry, the raspberry, the walnut, the beechnut, and the acorn. The date and the fig were probably brought into cultivation at the edge of the desert in Syria, Mesopotamia, and Egypt. Citron, the citrus fruits, and spices seem to have originated in India and adjacent lands. The plum, the cherry, the peach, and the apricot came, it seems, from eastern Asia, for they spread through southwestern Asia and Europe from the east.[1]

Many factors played a part in the development of the cultivated plants. The distribution of varieties indicates that they originated, in the main, in mountainous areas where diversity of soils and climatic conditions impelled the multiplication of strains and provided opportunity for their adaptation to human use. Several plants, such as rye, oats, the cresses, mustard, the melon, peas, and carrots, were long carried as weeds in cultivated crops by the mixing of their seeds with those of the cultivated plants; when climatic

[1] On the beginnings of agriculture see N. I. Vavilov, *Studies of the Origin of Cultivated Plants* (1926); Harold J. E. Peake, "The First Cultivation of Wheat," *Man: A monthly record of anthropological science*, Vol. 39 (1939), pp. 34–36; Harold J. E. Peake, "The Early Spread of Agriculture," *Man: A monthly record of anthropological science*, Vol. 39 (1939), pp. 51–54; Harold J. E. Peake, *The Beginnings of Agriculture* (1928); John Percival, *The Wheat Plant* (1921); also Paul Popenoe, "The Date-palm in Antiquity." *The Scientific Monthly*, Vol. 19 (1924), pp. 313–325.

conditions unfavorable to the cultivated plants were encountered, these weed plants sometimes became crops. Thus, as wheat spread northward, rye, a hardier plant, evolved into a cultivated grain; similarly, oats emerged as a field crop as barley spread. For this reason there were several centers of origin of cultivated rye and oats; they first appeared as crops about the opening of the Christian era. Millet appears to have been spread from Mongolia by the nomads. From Syria eastward the main cultivated plants, both cereals and legumes, were small-seeded varieties; from Syria westward they were large-seeded varieties. Each variety of cultivated plant was adapted to a certain growing season, and apparently its spread was limited to areas having similar seasonal routines.

The operations of early agriculture were very simple. The first implement of cultivation was undoubtedly the digging stick, which is now found among most primitive peoples. With it the soil was pried up and broken; seeds were planted in small holes, over which branches were probably dragged as a harrow. The characteristic artifact of early agriculture is a stone celt, somewhat larger than the old stone age hand ax, which was hafted and used as a hoe. The spade, developed in several forms, became the universal implement for turning the soil. At first, it seems, harvesting was nothing more than the plucking of the heads of ripened grain. The early sickle was a composite tool of small flint flakes set in a piece of wood or bone. Originally threshing and milling may have been a single operation, for until very recent times the common people of southwestern Asia have ground hulls and grain together. The earliest mill was a flat stone over which a stone cylinder was rolled.

Once the clearing of land around the camp became an active pursuit, fire was turned upon the wild growth. Burned-over land, fertilized by ashes, was well suited to the growth of cereals, but its fertility was exhausted after a while, and so new clearing was necessary. This work probably first brought men into active cooperation with women as cultivators. The quest for land easy to clear and work caused neolithic men to collect in park lands, usually found between upland forests and river valleys, or on plains too small to be the homes of great herds of grazing animals. The former commonly lay on limestone ridges, the latter on loess deposits. Migrations impelled by the desire for more fertile soil led to a steady diffusion of agriculture over such areas. The weight of the evidence of the distribution of related wild and cultivated varieties of plants supports the view that agriculture originated in

northeastern Africa and southwestern Asia and first spread mainly through upland regions.[1]

The Domestication of Animals.

An animal species becomes domesticated only when it reproduces under human control, and among the hundred thousand or more species only about fifty have been brought into this relationship with man. The mere training of a single animal or the keeping of a young animal as a pet—both practices were undoubtedly common among hunting peoples—did not lead to domestication. Only circumstances which forced a selection of types suitable to live with man brought domestication; in fact, this selection may have been more the outcome of biological evolution than of human effort. In a broad sense both cultivation and domestication represent adjustments of living things—men, plants, and animals—to the environment. Men lived on the plants and animals they tended, and the plants and animals, in turn, survived through the care of men. Probably the key to the evolution of this complex adjustment was the need for water, which under the increasingly arid conditions of postglacial times became, especially for the inhabitants of the southern grasslands, more and more difficult to satisfy.

The dog was the first domesticated animal. It became associated with man in the upper old stone age, when it joined him in the pursuit of game and then lingered about the camp sites seeking food. "Throw the poor dog a bone" is probably a declaration having more than a sentimental significance in the growth of cultures. The ancestor of the domesticated dog was the wolf. Large dogs of the mastiff type were known in Egypt before 3000 B.C. and in Mesopotamia about as early. The hound was also present in Egypt at this early date. The terrier appears to have originated in the Baltic region in the late period of the upper old stone age; it reached Mesopotamia about 3000 B.C. and Egypt somewhat later. Modern dogs have been developed from these three types by breeding.

Cattle were forced into association with men near the sources of water supply in the semiarid regions of western and south-

[1] On the significance of the development of cultivation see E. D. Merrill, "Plants and Civilization," *The Scientific Monthly*, Vol. 43 (1936), p. 432: "Let it be emphasized here that modern man has not added a single basic food plant or domesticated animal to the long list of those selected and tamed by prehistoric man, for every important species was already in domestication somewhere in the world at the dawn of recorded history."

western Asia. On the open grasslands men probably followed herds from place to place. The untractable beasts were either killed or driven away, with the result that the herd came to live under man's care. The protection from wolves which man gave to young calves and growing animals also contributed, no doubt, to the evolution of the mutual dependence of the two species. In central Asia the ancestor of domesticated cattle was a long-horned type. Early Babylonia and Egypt possessed a short-horned variety. In Europe, long after the domestication of these Asiatic types, the "great ox," probably descended from an upper Old Stone Age variety, was brought under human care. The use of the cow as a dairy animal was probably much later than the use of cattle as a source of meat or the ox for draught purposes.

The sheep appears in the early neolithic sites of Egypt and Mesopotamia. That it came from western Asia is fairly certain, for no wild sheep ever existed in Africa. At least three varieties, it seems, were domesticated before 4000 B.C. European varieties important for their fleece sprang from a wild type native in central Asia and Iran. The goat, the first milk animal, descended from a wild goat, also a native of these areas.

The ass—African in origin—was domesticated in Egypt at a very early date; it was used first for carrying burdens, somewhat later for draft purposes, and still later for riding. It was not known outside of Egypt until about 3000 B.C. In Mesopotamia the Sumerians of the early dynastic period possessed a tamed variety of the Asiatic ass, known as the onager; it was used for draft purposes at the courts of the kings and in warfare. It was this variety of ass, probably originally domesticated in central Asia, that spread to China and India in the third millennium B.C.

Although some evidence suggests that the horse was tamed by old stone age man in Europe, it is fairly well established that the domesticated horse, first known in the ancient Near East, sprang from a spirited variety of southern Russia, probably at the close of the fourth millennium B.C. The variety of horse that reached eastern Asia was probably originally domesticated in Turkestan. There is little reason to believe that the horse spread eastward or southward from these centers until about 2000 B.C. Apparently the spirited horse of the central Asiatic grasslands reached Mesopotamia with invaders from the east and north between 1800 and 1600 B.C.; it was the ancestor of the later Arabian breed. Heavy draft horses and ponies appear to have developed in central and western Europe.

Varieties of the pig, which ran wild in the Pyrenees and Alps mountain areas of Europe, in the park lands of central and southwestern Asia, and in India and the Malay Peninsula, were domesticated in each area. As a scavenger the pig probably became a denizen of the early village, where association with men produced tamed varieties. It seems to have reached Mesopotamia and Egypt from the forested Caucasus and Taurus mountain areas in the fourth millennium B.C. The pig, next to the dog, is probably the oldest domesticated animal.

Great uncertainty exists about the place and time of the domestication of the camel. The Bactrian, or two-humped, camel, originally native to central Asia, may have been tamed as early as the late fourth millennium B.C., but it was not known in Mesopotamia until the opening of the first millennium B.C. The dromedary, or single-humped, camel of Arabia also became known about this time, when it displaced the ass as the most important beast of burden. Both varieties were introduced into Africa from Asia. The elephant was originally domesticated in India, some time before 2500 B.C. The cat, a natural ally of villagers against rodents, was tamed in Egypt, probably as early as the fifth millennium B.C., but it did not spread to southwestern Asia and Mediterranean lands until about the opening of Christian times. Ducks and geese were also domesticated in the Nile valley, but the chicken and the guinea fowl seem to have come originally from India, as did also the domesticated elephant and the water buffalo.

No important species of animal, it should be noted, has been brought under human management since ancient times; probably the great period of domestication was from 6000 to 4000 B.C. Modern Western man has failed in efforts to domesticate new species. This failure seems to indicate that the species originally domesticated alone possessed the biological plasticity necessary for adjustment to the human environment.[1]

The Elaboration of the Crafts.

That old stone age men were capable of high skills is amply demonstrated by their stone implements. Certainly the Solutrean laurel-leaf points are superior products even when compared with the products of much later craftsmanship, and these points were

[1] On the domesticated animals see Max Hilzheimer, *Die Haustiere in Abstammung und Entwicklung* (1920). More recent discussions by the same author are "Dogs," *Antiquity*, Vol. 6 (1932), pp. 411–419; "Horses," *Antiquity*, Vol. 9 (1935), pp. 133–139; and "Sheep," *Antiquity*, Vol. 10 (1936), pp. 195–206.

elements in a culture which had some affinities with the Capsian culture, from which, it seems, many later advances may have sprung. Thus the manipulative skill of old stone age men, as well as the principle of the selective use of the environment, was the basis of neolithic craftsmanship. But neolithic men applied the skill and the principle in a new environment, with the result that they quickly produced a variety of articles unknown to their predecessors.[1]

Besides the manufacture of stone implements, which neolithic men greatly improved by adopting the process of grinding, old stone age men, it seems certain, made baskets and various objects of wood and leather. The making of pottery was probably a derivative from these crafts. Recently in east central Africa there have been found, in what are generally recognized as Aurignacian sites, bits of fired clay whose surface markings indicate that they had been plastered over baskets. In Syria, where the pottery sequence is complete from sun-baked to fired pots, the original molds seem to have been gourds and leather cups. The earliest Egyptian pottery reflects the influence of leather containers. About 5000 B.C. pottery was spread throughout the area from the Nile to the Caspian Basin; toward 4000 B.C. three varieties of pottery were localized in southwestern Asia—one in Anatolia, another in Syria, and a third in Iran and on the western slopes of the Zagros Mountains. The selection of suitable clays for modeling, the discovery of the process of direct firing, the adoption of forms for special uses, and the development of distinctive decorative motifs were everywhere signs of the full emergence of settled community life. Tradition declares, it is worth noting, that the making of pottery was commonly woman's work.

The making of cloth seems to have developed from several old stone age practices. From basketry to cloth was only a step if fine fibers were used. The needle and the fishhook both indicate that upper old stone age man was familiar with string, undoubtedly made from some coarse fibrous materials. Probably bark was beaten into a crude cloth long before fibers were spun and woven; this practice may have arisen from the beating of skins in order to soften them. The first spinning device was a hollow stone disk

[1] The development of the crafts is discussed in Hugh P. Vowles, *The Quest for Power from Prehistoric Times to the Present Day* (1931), Chap. II, "The Development of Craftsmanship." See also Harold J. E. Peake, *Early Steps in Human Progress* (1933); R. U. Sayce, *Primitive Arts and Crafts: An introduction to the study of material culture* (1933); and G. Renard, *Life and Work in Prehistoric Times* (1929).

known as a whorl; it is found at many early sites in both Egypt and southwestern Asia. The existence of the loom is also testified to by materials found at some of the sites. Cloth was probably first made from flax or a kind of hemp, although it was produced at a very early time from the wool of sheep and goats. Because spinning and weaving have been universally regarded as women's employments, it may be surmised that women made the inventions which were their technological base.

The art of cookery was also an achievement of neolithic women. From the new products of the forest and plain had to be selected those fit for human consumption, and great credit must be given to the unknown experimenters who explored this environment with their tongues and stomachs. With the pot and jar new combinations of these products were endlessly made—many accidentally, to be sure. Fruits, berries, and grains left in a jar soured, fermented, and then turned to vinegar. Alcohol, it may be guessed, was a neolithic discovery, and the pickle a neolithic invention. Cheese probably originated from milk allowed to curdle and dry. The baking of bread and the preserving of meats also began in neolithic times. Thus women created a new diet and won a new mastery over men, who, like the animals they cared for, may be said to have first become tame in neolithic times.[1]

When men abandoned rock shelters and caves they began to build shelters where they camped on the open plain or at the edge of the forest. Both paleolithic and mesolithic huts are known. Many neolithic habitations were only shallow pits covered with roofs of branches and long grass. In Africa the earliest structures seem to have been circular stone houses, built by raising a ring of natural slabs into a sort of domelike form. In Egypt and Mesopotamia the first huts probably were merely reed enclosures without roofs. The cabin seems to have originated in the forested highlands of Asia Minor. New stone age tools which testify to the development of carpentry, masonry, and architecture are the broad stone ax, the adze, the gouge, and the chisel. Stone architecture probably had its first significant form in neolithic burial structures. Another neolithic architectural type was the fortified camp. Some villages were surrounded with earthworks, others with stockades, and still others were built on piles over water so that access to them could be cut off by lifting part of a narrow bridge connecting with the shore.

[1] On the relation of advances in technology to improvement of primitive man's diet see Roe E. Remington, "The Social Origins of Dietary Habits," *The Scientific Monthly*, Vol. 43 (1936), pp. 193–204.

Near the neolithic stone monuments are frequently found the quarries from which the stones were cut. Such work was related to the development of mining. Recent finds in England demonstrate that neolithic men in quest of flint dug shafts into the earth as deep as thirty feet. Picks of deer horn and shovels made from the shoulder blades of oxen have been found in these shafts.

In elaborating the crafts men added further to that routine of labor which had originated in tillage; as compensation they entered into an economic order of greater wealth than that ever known by hunting men.

THE MAIN TYPES OF NEOLITHIC CULTURES.

The foregoing cultural achievements gave rise to at least three new types of cultures in neolithic times: (1) *hoe culture*, (2) *nomadic culture*, and (3) *peasant-village culture*. At the base of each was a new mode of winning subsistence. Many hunting cultures, it should be recognized, persisted into and through the neolithic age.

1. *Hoe Culture.* Where the simplest means of cultivation settled into a fixed pattern the way of life known as *hoe culture* appeared. In this way of life no domestic animals combined with tillage to support life, and no manures were used to restore fertility to the soil. Only tiny plots were tilled, and yields were small. The dependence upon the weather was so great that any significant variation in temperature or humidity was almost certain to bring crop failure and famine. Women and children did the work of cultivation and also practiced such simple crafts as basketry, the sewing of hides, and the making of crude types of cloth. The men, who generally held to the chase, thought it the only fit occupation for males. The early groups which developed hoe culture seem to have inhabited small open spaces at the edges of the great forest, where both hunting and cultivation were possible. This mode of existence spread through monsoon and tropical regions where clearing the land was difficult but where a little labor was well rewarded.

2. *Pastoral and Nomadic Cultures.* Just as cultivation gave rise to a way of life based almost entirely on plants, so domestication made possible an economy resting on animals, namely, *pastoralism*, or *nomadism*. It was at home first, probably, in the highland areas of southwestern Asia, where the sheep, the goat, and the cow were native in a wild state, and, from these areas, spread to the semiarid wastes bordering the southern deserts and to the northern grasslands. In these environments men early began to tend herds and

flocks as the main, if not the sole, support of life. During the spring and summer men and herds moved toward the uplands; in the fall and winter they returned to the plains and valleys. Because settled life was not possible, men adapted their habitations, domestic crafts, and arts to a wandering existence and developed qualities of thought and behavior peculiar to their way of life. Sometimes the cultures having these elements are called "steppe cultures."

The nomad, or the plainsman, spent his days watching over the herd; to it he gave care—he was the "good shepherd." Not for him was the fatigue of any form of labor. When the herd was secure, he was at ease; when it was in danger, his violence knew no limit. Against beasts and human raiders he constantly fought; when free of these menaces, he often found opportunity to go marauding on his own. Loyalty to his group was the essence of honor; fighting rivals was its chief expression. His physical prowess and courage were prized qualities which he loved to exhibit, and, therefore, his conflicts were endless. Women were menials and toys for amusement; tillers of the soil were only another kind of "cattle."

The role of the nomad in the history of cultures was fixed by these qualities. He made long migrations in quest of green pastures. He made wild forays into settled areas. He made conquests that gave him power over the "cattle" that tilled the soil. He made violence the basis of rule and learned to talk of law as if his prerogative were to enforce it but not to obey it.

3. *Peasant-Village Culture.* Wherever cultivation, domestication, and craftsmanship combined to pattern a way of life, *peasant-village culture* appeared, and the great sociocultural type the *peasant* was formed.

It seems now that this combination was made first along the edges of the Nile valley and in southwestern Asia, where hoe culture and pastoral peoples must have been in contact at a very early date. Perhaps a kind of symbiosis in which each people became more and more dependent on the other contributed to an ultimate mergence of their activities in a new economy. In the course of this development men became more active as cultivators and women achieved greater skills in the crafts, while both took part in the care of animals. Probably plant and animal wealth were combined in many different ways in a number of places before a well-defined pattern of settled life was shaped.

With the peasant, behavior found at its core "work"—that quiet and steady direction of energy toward serviceable ends which distinguishes the "vulgar arts of peace" from the thrill of the hunt, the exaltation of religious excitement, the glory of war.

These agitations did not disappear from the behavior of the peasant, but they lost their place at the center of the emotional complex engrossing life; rather they became the materials giving quality to the outbursts of revolutionary and religious frenzy of which peasant peoples have been capable. From the very beginning of tillage the peasant had been compelled to guard night and day the crops which, by their rich growths, attracted wild beasts and birds, and in the defense of his own fields his courage was obstinate and his endurance unending. But he had no stomach for plundering.

The milieu of the peasant type was the village, where social interaction found channels quite different from those of the pack or the camp. Villagers met each other face to face in a continual daily round of universally known expectancies, and individual reputations were canvassed in that flow of comment which is everywhere known as "gossip." The violence which the pack had originally hurled against those disturbing its unity was now turned against those who threatened the routine of activities giving security and stability to the village. Old cruelties punished new crimes. This new security and stability united individuals in a strict allegiance to local interests. On the one hand they developed mutual aid in the form known as "neighborliness," and on the other hand they organized local patriotism into "provincialism." In terms of the first they gave aid to those who suffered from the ordinary hazards of life; in terms of the second they were blind alike to the advantages of new methods and the virtues of newcomers. The intensity of social interactions in the village fixed indestructibly the ways of peasant life upon individuals born into it. And the concentration of activity in a few limited employments so restricted the intellectual outlook of the peasant that for him the weather, the crops, births and deaths, and bits of scandal were the substance of reflection. The dependence of the peasant upon weather allowed him no release from that insecurity which, transmitted to him from hunting life, bound him inextricably to the past; for him the best that the future had to offer was only a return to "the good old days." Only through a social and cultural transformation, so far-reaching as to destroy the village, has the rigid conservatism of the peasant ever been greatly disturbed.

The Significance of the Neolithic Cultural Achievements in the Development of Civilization.

As previously noted, there was no single new stone age. Rather there was a transition from hunting to nomadic and settled community life which occurred at different times in various parts of the

world.[1] Perhaps this transition began at some places in the Saharan grasslands and in the Arabian, Syrian, Armenian, and Iranian areas as early as 8000 B.C., although this early date is conjectural, and certainly in a few parts of the world it is not completed even today. Just as there was no clearly defined new stone age, so also there was no single neolithic culture. By 5000 B.C., it seems, villages were strung along the Nile valley, spread about the fringes of the Fertile Crescent, and established beyond the Zagros and Elburz mountains in Iran and central Asia. Perhaps, about the same time, scattered bands of nomads began to wander across the areas which are now the Libyan, Nubian, and Arabian deserts and on the Iranian uplands and central Asiatic plains. Different modern races built these cultures in different environments, with the result that, although the basic elements of nomadic and peasant-village cultures everywhere were similar, they were combined in diverse ways.

The cultural achievements that contributed to this transition slowly promoted an almost complete reorganization of life. The population undoubtedly increased. Community life became permanent. Individual experience was diversified. Labor entered upon the process of division. The accumulation of wealth was accelerated. Planning became a factor in production. Work was organized under social controls. Security increased. New releases of individual energy became possible. Changed social organization redefined good and evil, especially in terms of cooperation and conformity within the village. And those elements of nature, notably the earth, the moon, and the sun, which moved with the new order of life (actually, of course, they moved it) were discovered to be deities. On the one hand men found their lives set more deeply into physical nature; on the other hand they lived in a more intensified social process. Thus societies were evolved which could carry enriched cultural traditions. The great achievement of neolithic man was the generation of new forces of cultural growth.

The period that brought the invention of cultivation, domestication, and the domestic crafts and arts is aptly described, therefore, as the "first great age of progress" in history. For the masses, indeed, it was the only important period of social and cultural change between the old stone age and modern times. In the main, until the rise of machine production and industrial cities, all social and cultural developments were merely superimposed upon peasants and nomads, who lived, worked, believed, and died in the

[1] See A. Vayson de Pradenne, "The Worldwide Extension of Neolithic Culture," *Antiquity*, Vol. 9 (1935), pp. 305–310.

manner of their ancestors, generations without end. Upon the continued performance of routines of life organized in neolithic achievements, rested the order, stability, and wealth of all subsequent cultures. In these routines was taken up that burden of labor in the fields, on the plains, and at the simple crafts which was to be the lot of common men until very recent times. Even in the most advanced industrial nations, it should be recognized, the masses of the population are only a few generations away from the organization of life that came into existence at least seven thousand years ago.

Chapter II

PATTERNS OF PRIMITIVE CULTURES

It is impossible to deduce from the artifacts of the old and new stone ages a clear view of early cultures, for beliefs, attitudes, customs, and institutions are not easily depicted with materials such as camp debris, implements, cave paintings, hearths, and bits of pottery. To supplement these evidences two types of material may be used: (1) the cultures of contemporary primitive peoples and (2) the traditions recorded when peoples learned to write, such, for example, as those embodied in parts of the Hebrew Old Testament, the Greek epics—the *Iliad* and the *Odyssey*—the Chinese "Book of Changes," and the Aryan Vedic Hymns. The value of these early written materials for the study of primitive cultures lies in the fact that they contain beliefs and bodies of knowledge developed under primitive conditions of life and transmitted orally for relatively long periods of time.[1] Yet even with these materials, it is probably not possible to arrive at more than a highly generalized view of the cultures that developed before the invention of writing; however, if any picture of these cultures is to be sketched, its lines must be drawn with them.[2]

ECONOMIC ASPECTS OF PRIMITIVE CULTURES

Early economic development was not simple, nor did it pass through a series of universal stages—collecting, hunting, herding,

[1] For statements of the contents of these early written materials see pp. 340, 381, 416, 419, and 481.

[2] For general discussions of primitive cultures see Franz Boas and others, *General Anthropology* (1938); Alexander A. Goldenweiser, *Anthropology: An introduction to primitive culture* (1937); Alexander A. Goldenweiser, *Early Civilization* (1922); W. I. Thomas, *Primitive Behavior: An introduction to the social sciences* (1937); W. I. Thomas, *Source Book for Social Origins* (1909); Ralph Linton, *The Study of Man: An introduction* (1936); R. H. Lowie, *An Introduction to Cultural Anthropology* (*ca.* 1939); Albert Muntch, *Cultural Anthropology* (1934); A. M. Hocart, *The Progress of Man: A short history of his evolution, his customs and his works* (1933); Clark Wissler, *An Introduction to Social Anthropology* (1929); A. L. Kroeber, *Anthropology* (1923); and A. L. Kroeber, *Source Book for Anthropology* (1920). The classic treatment of primitive cultures in English is E. B. Tylor, *Primitive Culture: Researches into the development of mythology, philosophy, religion, language, art and custom* (2 vols. in one, 7th ed., 1924; originally published in 2 vols., 1871).

and tilling—as was once contended. Certainly collecting and hunting were combined in paleolithic cultures, as, indeed, they were with herding and tilling in neolithic cultures.

Although it is now clear that neolithic economic achievements were mainly elaborations of elements of paleolithic life, there were great differences between paleolithic and neolithic economies.

In paleolithic cultures subsistence was won only by continuous efforts that had very uncertain rewards. Hunting was a dangerous occupation that yielded a precarious livelihood, and collecting was a subsidiary activity whose reward varied with the seasons. Weapons and tools were the chief goods that had enduring value, or, in other words, were wealth. Some attempts were made to store food, probably more from day to day than from season to season. A paleolithic economy had very few, if any, patterns derived from social institutions or technological procedures; its patterns were almost completely reflections of the seasonal movements of animals. It is doubtful that the production of weapons and implements was ever carried on by paleolithic men except as activities of the individuals who used them. With the invention of needles in the upper old stone age, a division of labor between the sexes probably became clearly established for the first time. The hunt, it may be believed, was almost always a cooperative undertaking.

As a result of the technological revolution of neolithic times, at least four new characteristics of economic life appeared. First, the division of labor became an important aspect of production, because for the first time men came to practice different occupations. Second, a social organization of production developed in the household, the man, the woman, and the children performing different tasks. Third, the kinds of goods that had enduring value were multiplied. Animals, especially cattle, lived from year to year, and grain could be and was stored. The craft products, although mostly consumers' goods, were sufficiently durable to become accumulating wealth. These circumstances combined to stimulate individual effort and to distinguish individuals in terms of possessions. Finally, some goods came to be preferred to others, *i.e.*, they were regarded as having higher values. Among these goods were shells, pearls, bits of bright stones, ornaments, furs, textiles, and weapons. The existence of these goods led to a growth of exchange or trade, both among larger numbers of individuals and over wider geographic areas. It is well established now that the earliest commerce carried on between northern Europe and the Mediterranean Basin was a trade in amber, which, as late as Roman times, was

still regarded as a magical substance. From this differentiation of the values of commodities followed a differentiation in the values of lands, and both achievements were important in the growth of a system of property rights. The accumulation of wealth made possible in terms of these four developments did not permit, however, the use of wealth as capital, *i.e.*, for investment; these kinds of wealth were useful mainly for purposes of display, not for further production or for the pursuit of profit. Indeed, just because neolithic economic achievements failed to establish an economy of wealth production for a profit, neolithic economies remained primitive, *i.e.*, organized by custom rather than by law.

As revealed in the economies of contemporary primitive peoples, the essential elements of a primitive economy are a technological tradition and a body of customs and attitudes which organize the relations of individuals for the quest of subsistence. Although great diversity exists in both of these elements, primitive economies, it is safe to say, embody a common pattern. This pattern consists of a basic principle of technological procedure, namely, the selective use of the environment, and a number of widely prevalent attitudes toward such basic economic facts as technology, labor, property, and wealth.

Above all it must be recognized that the economic activities of paleolithic and neolithic men cannot be correctly understood in terms of the economic patterns now prevailing in Western culture, for these patterns were created under far different circumstances from those that ever prevailed among early hunting, herding, and tilling men.[1]

The Selective Use of the Environment.

Evidence that the cultures of the old and new stone ages rested upon a selective use of the environment is provided by both their technological and their art remains. Examples of the application of this principle under different environmental circumstances are readily found among contemporary primitive peoples.

The Andaman Islanders, a collecting and hunting people who live on islands in the Bay of Bengal, have probably the simplest

[1] On the economic life of primitive peoples see G. P. Murdock, *Our Contemporary Primitives* (1934); C. Daryell Forde, *Habitat, Economy and Society: A geographical introduction to ethnology* (1934); Richard Thurnwald, *Economics in Primitive Communities* (1932); Stephan Viljoen, *The Economics of Primitive Peoples* (1936); and L. H. D. Buxton, *Primitive Labour* (1924). S. D. Porteus, *Primitive Intelligence and Environment* (1937), is a comparison of adjustments to different environments. Margaret Mead, *Cooperation and Competition among Primitive Peoples* (1937), analyzes economic motivation in primitive cultures.

economy to be found on the surface of the earth. Although they possess fire, they do not know how to make it. They had no domestic animals until 1858, when the dog was borrowed from Europeans. And they do not till the soil. Their foods are exclusively the natural products of the forest and the seashore. Yams, fruits, berries, and nuts are the chief plant foods; shellfish, fish, and pigs provide animal food. Honey is highly prized, as is beeswax, which is used for calking buckets and boats. Boats and buckets are made from trees having pithy centers. The digging stick, a crooked pole for taking fruit, and the adze, originally made with a blade of hardened bamboo, are the common implements. The bow and arrow, used more for hunting than for warfare, is the chief weapon; great skill and considerable knowledge are necessary for its manufacture. Habitations are low thatched huts built of poles; they are grouped about an open space in the forest. The floors are raised about a foot above the ground. Domestic equipment consists of baskets, wooden trays, and sea shells for serving food, and simply made utensils for cooking. Some of the pots are made of cleaned and kneaded clay, baked slowly in a wood fire; these are either pointed or rounded at the bottom. Other containers are made of bamboo joints. Ropes and string are the only textile products. Mats, skillfully made of strips of bamboo and string, are used for sleeping. Sometimes pigs, captured while young, are kept until well grown before they are eaten. The monsoon climate, which governs the seasons, regulates the food supply.

The Crow Indians, nomadic hunters of the western American plains, eat mainly meat, fresh or dried, make bows from elk horn, softened by immersion in hot springs, and cover their tepees with buffalo skins dressed until they are almost white. Like other nomadic peoples they have no domestic utensils that will break easily, and like hunting peoples generally they have no textiles but use skins and furs for clothing and covering.

The Kazaks, nomadic herdsmen of central Asia, depend upon flocks and herds for almost every necessity. In the spring and summer they live chiefly on milk and its by-products. In the fall they kill animals, especially the older ones which survive the long winters with difficulty. And in the late winter and early spring they gorge on meat from the animals which lack of forage compels them to slaughter. Although they weave a fabric from wool and camel's hair, their chief material for clothing and covering is felt, which they make by dexterously rolling thick layers of hair between skins. In summer they live in felt-covered tents known as yurts, which

can be raised or dismantled in an hour. In winter they take up quarters in sod houses near a shelter of trees or other windbreak. They practice no agriculture but hunt for sport.

The Ganda of equatorial East Africa are hoe-culturalists. The men clear the land of trees and brush, but the women perform all the work of tillage and harvesting. A woman with a good garden can support three or four men. The staple crop is the banana, known in some two hundred varieties, which they propagate by dividing the roots. The plants are set in rows about three yards apart; they bear in the second year. The fruit, generally eaten green, is prepared by steaming and served with a fish or meat gravy. Besides the banana, yams, maize, gourds, millet, from which a kind of beer is made, and tomatoes, recently introduced from Europe, are grown. The dwellings, circular structures with conical thatched roofs supported by posts, cluster together in small villages, which contain, in addition to the dwellings, such public buildings as a fetish hut, a cookhouse, and a storehouse. Fishing and hunting are carried on by the men, who also make garments and bedding. The Ganda have an aversion to herding.

The Eskimos of northwest Greenland live in an environment which supplies almost no edible plants. The only vegetable food eaten by the men is taken from the stomachs of slain caribou; in the summer women and children gather the leaves and buds of a few wild plants. Eskimo life turns with the seasons. When daylight comes, with spring, the men go to the edge of the ice to hunt the walrus, the chief food animal, and the women and children go to grounds where birds nest. Late in the summer the men go inland for caribou. During the summer they live in movable skin-covered tents, but when winter and darkness come, they return to permanent quarters in remarkably well-built stone houses. Three features of these houses are especially noteworthy: (1) the roof is cantilever in construction; (2) an underground passage, which serves as an entrance, supplies fresh air continuously to the single chamber; and (3) a raised platform around three sides of the chamber gives the occupants access to the warm air near the ceiling. A small window, made of animal membrane, is built into the wall facing east; a tiny puncture serves as a peephole and a slow outlet for the warm air. Water, made by melting snow over a blubber lamp, is used only for drinking. The fresh-meat diet is varied by occasional repasts of meat that has become "high." Whatever wood is available is picked up along the seashore. Weapons, as well as sledges, are made of bone, tusks, horn, and sinews. All clothing and covering are made of skins.

The principle of the selective use of the environment, which was at the base of all economic life from earliest times, is exhibited in these contemporary primitive cultures in the following ways: (1) basic necessities of food, clothing, domestic utensils, and habitation are derived from a few available natural resources; (2) primary occupations are developed in terms of the obtaining and processing of these resources; and (3) the routine of life throughout the year moves with the seasonal changes that affect these resources. It is notable that in every part of the earth where plants or animals or both are found men have been able to discover some source of subsistence and have found several ways to use it.

PRIMITIVE ECONOMIC ATTITUDES.

The solution of the problem of subsistence, with all of its concomitants in occupational activities and standards of living, is commonly accepted as final by contemporary primitive peoples. Their economic attitudes in part explain this finality and in part have origin in it.

1. *Toward Technology.* A high order of inventiveness was necessary in order that early men could devise adjustments to the various environments under which they lived; that this inventiveness was originally nothing more than trial and error under the pressure of need may be assumed, but once a discovery or an invention was made it led to others, so that when men hit upon a raw material and a way of working it other inventions quickly developed its use. The artifacts of the old stone age testify to the various uses of flint by early hunting men, and the technological achievements of new stone age men were, it seems, adjustments to an environmental change which, by destroying old resources, made necessary the use of new ones.[1]

An inspection of the technological equipment of contemporary primitive peoples reveals many examples of great ingenuity within narrow limits.

Everywhere over the earth habitations are constructed which show fine adaptation of materials to the peculiar needs for shelter that distinguish different environments. Everywhere weapons are skillfully contrived; this is particularly true as regards the utilization of various materials in the construction of the bow.

Early men, it may be believed, did not lack either the curiosity or the inventiveness necessary to devise technological equipment; rather, under the pressure of need, their curiosity and inventive-

[1] On inventiveness see R. U. Sayce, *Primitive Arts and Crafts: An introduction to the study of material culture* (1933), pp. 48–73.

ness were limited to a narrow range, defined generally by the simple satisfactions of the needs that meant subsistence and, therefore, survival. If their technological equipment made possible these satisfactions, they found little reason to improve it. Thus tradition, it may be believed, everywhere accepted very early the condition that the prevailing technological equipment was complete and set up obstacles against innovations. In this connection it is proper to observe that innovation was probably stimulated more by contacts with peoples possessing different technologies than by inventive individuals. Within a group having a well-defined technological tradition every individual acquired a familiarity with the group's whole technological equipment, except in cases where some occupations were confined to women, others to men, and a few, usually skilled, to certain families. This general familiarity with a group's technology was perpetuated by the transmission that came with its common use by all members of the group.

At least two other factors, besides tradition, contribute to the suppression of inventiveness among contemporary primitive peoples. (1) Everywhere they are inclined to credit an invention or even its skillful use to the action of supernatural beings, and the more complex a technological procedure becomes, the greater is this inclination. The effect is to create a dependence upon magic in the whole field of technological endeavor. Such dependence means, of course, that inventiveness is diverted from those manipulations of the physical world that give results to efforts to obtain the aid of supernatural powers. (2) A correlative of this inclination is the failure to understand the relation of factual knowledge to technological advance. Primitive men build up a body of factual knowledge very slowly, and they seem never to understand that the modes of behavior which mean well-being are based on an application of this knowledge in manipulations of nature. Together these two factors not only divert primitive men's attention from technological effort but also starve their inventiveness by preventing the growth of the knowledge with which it could work.

Inasmuch as these factors, as well as tradition, probably influenced early men, it is not remarkable that through long periods of time technological advance was almost imperceptible.

2. *Toward Labor.* In contemporary primitive cultures labor at those occupations upon which subsistence depends is expected from all adults, and in some instances from children. Only the elders, medicine men, and chiefs, who serve the group by guarding

tradition and winning the favor of supernatural powers, escape the universal obligation to perform physical work. But this escape is seldom complete, for every individual is expected to master the simple occupations. To those who develop high skill great respect is shown, and certain occupations, which call for special ability, such as making weapons, carving wood, and weaving cloth, are considered more dignified than the common crafts. All labor is remunerated. Unskilled labor at the simple occupations is paid for by gifts of food. Skilled workers are paid by gifts of special foods and goods which are considered as having more than ordinary value. The rule of payment is to give value equal to the service rendered. Unpaid labor, *i.e.*, slavery or serfdom, appears, it seems, when a conquering group imposes work instead of death upon its victims.[1]

3. *Toward Property.* The ownership of property exists in several forms among contemporary primitive peoples. Among hunting peoples the right of private property is limited almost entirely to weapons, ornaments, and other movables. Land is universally recognized as a form of property, but ownership, seldom vested in individuals, is generally held by clans or families under a vague overlordship of the tribe. In some cases the head of the family may dispose of the land or pass it on to an heir. The freedom to hunt over lands owned by families, at least for certain animals, is extended to all members of the clan and tribe. Trespassers are not tolerated on tribal lands. In hoe cultures the private ownership of plots of land near the villages is commonly recognized, but from time to time a redistribution of these lands is carried out. Often several types of property rights in land exist side by side. A tribe will hold certain lands, the clan others, and the individual still others. Among nomads family property, held by the father, is common. Only among peasant villagers does the full right of private property in tilled land occur. Although no dates can be set for the appearance of any of these conceptions of property, it seems clear that primitive peoples probably maintained a system of mixed property rights, with collective rights outweighing individual rights. The individual's right of private property, it may be said, is never absolute, for other individuals either may claim a right of use when occasion demands or may share in its disposal under certain rules.

[1] Richard Thurnwald, *Economics in Primitive Communities* (1932), p. 137, note; also p. 136: "The entire social and ethical life in primitive civilizations is based on such repayment with, as far as possible, return services and deeds of equivalent value." By permission of the Oxford University Press and the International Institute of African Languages.

An example of this mixture of property rights is provided by the Andaman Islanders. When friends meet, they always exchange gifts. Visitors always bring and receive gifts. Young persons give to older ones without expecting a return. Any request for an article is granted; to refuse such a request is a serious breach of etiquette. The canoe, which is the most prized property an Andaman Islander can own, belongs to the man who picked out the tree from which it was built, although several men may have taken part in its construction. Canoes are lent, never given away. Usually they belong to older men. Trees bearing a highly prized fruit are also owned by individuals. No one may pick fruit from such a tree without the owner's consent; if consent is granted, the gatherer of the fruit must give part of the harvest to the owner. In the hunt, game belongs to the man whose arrow first strikes it; a glancing hit does not establish a claim. The utensils of the home are owned by the woman; the man cannot dispose of them. Huts are family property. Food is shared by all who are present when it is prepared. The choicest portions of an animal are given to the elders and the medicine man. A married man may reserve from his catch of fish or kill of game enough for his family.

4. *Toward the Accumulation of Wealth.* Because contemporary primitive men obtain subsistence only by dint of great effort and struggle, they are generally poor and often in want, and abundance, when it comes, is looked upon as the bounty of spirits. Under these circumstances the desire to accumulate wealth is less intense than when wealth is present in amounts sufficient to make the effort to obtain possession of it worth while. In fact, wealth is seldom acquired by contemporary primitive peoples except as a means of gaining social prestige; they do not regard the possession of wealth as a desirable end in itself, nor do they understand the accumulation of capital as a necessary factor in the increase of wealth. Among some tribes men become chiefs by virtue of the accumulation of property; among others they rise through the grades of secret societies as they acquire wealth. Among the Indians of the northwest coast of North America a form of competitive consumption, known as the potlatch, exists; men, it is said, "fight only with gifts." An individual cannot refuse a gift and must return one equal in value to the gift he has received. To burn property received as gifts and then to make gifts in return for them is the highest form of economic display.

Many practices obstruct the accumulation of wealth among contemporary primitives. The religious beliefs which lead to the

burial of food, ornaments, and weapons with corpses dissipate wealth. Trade, which is usually barter, does not permit the free pursuit of gain, first because the number of articles exchanged is small, and second because tradition often so defines the use of articles that their free exchange is impossible. Only among a few tribes is trade more than an incidental aspect of economic life. Regulations which require the sharing of food and the free lending of implements and utensils restrict private accumulation. But the low capacity to produce wealth is undoubtedly the prime factor in suppressing the desire for gain as contemporary Western men know it. The struggle for subsistence is too severe to permit primitive peoples to think of "getting rich"; they must be satisfied with "getting enough to eat." When they do accumulate wealth, they regard it as significant not as an economic but as a social achievement. The desire for social prestige, it seems safe to assert, is far older than the desire for riches.

In the economic aspect of primitive cultures, as in all others, the initiative of the individual is sharply restricted by customs which establish both his occupations and his standards of consumption. Neither technological nor economic advance is recognized as normal.

SOCIAL ASPECTS OF PRIMITIVE CULTURES

Because early cultures had their economic bases in collecting or hunting or husbandry or tillage, their communities were packs or nomadic camps or villages.[1] Such communities had few members and were relatively isolated from one another. Usually the members of these communities occupied areas well marked by natural boundaries and, since their simple technology limited the exploitation of the environment, they could not move freely except in areas having the natural resources to which their economies were adapted. When husbandry and tillage brought an increase in wealth, the groups became larger and underwent some internal specialization, particularly as the result of a simple division of labor, but they did not lose the homogeneous character of the smaller communities of collecting and hunting economies.

[1] W. G. Sumner and A. G. Keller, *The Science of Society* (4 vols., 1927), is the most complete survey of primitive social institutions, customs, and beliefs. It has been summarized in A. G. Keller, *Man's Rough Roads: Backgrounds and bearings from mankind's experience* (1932). A useful older work, recently translated from the German, is Julius Lippert, *The Evolution of Culture* (Trans. by G. P. Murdock, 1931). Other relatively recent studies of early societies are R. H. Lowie, *Primitive Society* (1920); L. T. Hobhouse, *Social Development: Its nature and conditions* (1924).

Social specialization among contemporary primitive peoples develops generally in terms of prestige rather than wealth. Three types of individuals commonly acquire some kind of authority on the basis of prestige: (1) the elders who speak in the name of tradition, (2) men outstanding for courage and physical prowess, and (3) men and women who possess a quick intelligence or a mental quirk giving them what seem to be uncanny powers. The position of such leaders is, however, hardly personal, *i.e.*, they act in the name of the group rather than as individuals, just as do the ordinary members of the group. The activities and expectancies of every member of any primitive group are fixed by rigid social controls.

Above all, contemporary primitive peoples preserve their cultures in an oral tradition and through the informal learning by the young from the old of technological procedures and customs; in other words, the continued existence of the group and its way of life is possible only through an intimate social interaction and control, so that survival is more a matter of group organization than a fact of biological fitness or individual achievement. That primacy of mass over member which is older than the human race imposes upon individuals a process of social selection which weeds out the unfit as defined by services to group survival.

In-group and Out-group Morality.

Because the primitive group enforced the subordination of individual needs and desires to its interest, individual behavior was orientated in terms of socially declared rules of conduct. On the one hand these rules, by fixing the relations of individuals within the group, established an *in-group morality;* on the other hand, by determining the behavior of individuals toward persons outside the group, they set up an *out-group morality*. But the group itself recognized no rules as governing its conduct; it was, therefore, unmoral. For the individual the might of the group made right; for the group might was right. The paradoxical situation in which justice is best served by violence is as old as humanity.[1]

1. *The Distinction between the In-group and the Out-group.* The distinction between the in-group and the out-group is almost universally displayed by contemporary primitives in the claim of superiority of the in-group over all out-groups. The proud declara-

[1] The classic discussion of in-group and out-group morality is W. G. Sumner, *Folkways: A study of the sociological importance of usages, manners, customs, mores and morals* (1907). See also Robert W. Williamson, *Religion and Social Organization in Central Polynesia* (1937).

tion of the Carib Indians, "We alone are men," epitomizes this claim. It is sublimated in the belief of the Ainus of northern Japan that the deity took his name from the first man—an Ainu, of course. It is also the content of such familiar conceptions as the Greek "barbarian," the Jewish "gentile," and the Hindu "mlechcha." This distinction is the moral basis of the conception "stranger." The rules of in-group conduct do not apply to the stranger, and under them he is "rightless." In early times he was probably regarded, like other animals, merely as game, for, as certain evidence indicates, he was sometimes killed and eaten. Certainly the fossil-artifact of the upper old stone age in which an arrowhead is embedded in a human vertebra at least suggests the fate that may have then awaited strangers everywhere. In some cases the stranger is not killed, he is only despoiled. To steal from him is, as among the Eskimos, a smart trick; to lie to him is a form of cleverness, only to be deprecated when he discovers the imposition.

Contrasting with these harsh practices is the treatment of the stranger as a guest. At what time the concept "guest" appeared cannot be determined; it exists now among all contemporary primitive peoples. Usually the stranger acquires the guest right only after making signs of peace and joining in a formal reception. But once the stranger is accepted as a guest, he is accorded a highly courteous treatment. The widespread belief that a stranger may be a spirit leads, of course, to good treatment, for injury to such a being may bring dire consequences upon the in-group. But regardless of the amenities which for one reason or another contemporary primitive peoples extend to out-group persons, they always except them from the observation of in-group practices; only by formal initiation which gives status as a kinsman can a stranger become subject to the rules of in-group morality.

2. *The Relation of the In-group to Out-groups.* The evolution of the in-group cannot be traced. The time when the members of the original hunting packs began to recognize degrees of blood relation, as well as other aspects of social differentiation such as leadership and class lines, probably will never be known. Tribes may have developed as a result of the preservation of a bond of kinship in an increasing and spreading population.

Almost all contemporary primitive peoples are organized in *sibs*, or kinship groups, which have either one or the other of two forms: (1) the *clan*, in which related persons trace descent through the female line, the mother, or (2) the *gens*, in which related persons

trace descent through the male line, the father. Since the members of these clans and gentes are generally believed to have descended from some common ancestor, often an animal or a bird, *i.e.*, a totem, the blood relation of their members is fictional rather than actual. Apparently the only common characteristic of these totemic clans and gentes, which are found especially among hunting peoples, is the exogamous marriage, *i.e.*, the members must marry outside the clan or gens. The general function of the clan or gens is to protect its members when crimes, as defined by in-group law, are committed upon them; in cases of murder the clansmen frequently take up the blood feud against the guilty party. Except as a member of a clan the individual has no rights under primitive law. Military service is also organized through these units. Nineteenth-century students of early social development felt that the clan preceded the gens, but present authorities can find no reason to believe that either preceded the other everywhere. Besides these rigid kinship groups other associations such as *phratries* or brotherhoods (known as *moieties* when there are only two) are differentiated within the in-group; they carry on social, educational, and religious functions. The main functions of tribes and the loose confederations which they sometimes form are political and military.

The relation of out-groups to one another is normally a state of readiness for war, but usually peace prevails as long as members of the groups confine their activities to mutually recognized geographical limits. Almost all contemporary primitive peoples claim certain lands, and as long as these lands are not trespassed upon they are peaceful.

But warlike outbreaks undoubtedly were common during early times. They were inspired by the desire for plunder or adventure, and sometimes by spirits speaking through tribal leaders. Probably such inspiration could be correlated in most instances with a growth of population which necessitated the taking of new lands or with a failure of game or crops which forced excursions beyond the normal boundaries of the groups. However, wars among early men were seldom fought, it seems, as undertakings of entire tribes; rather they were conducted by war bands which individuals joined as they saw fit. The wars probably ended more often with the amalgamation of the groups through the seizure of women by the victors than they did with the extermination of a defeated group.

The view which sees primitive peoples as essentially peaceful seems to be false, as is also the idea that warfare was a highly

organized activity. Of those endless conflicts which accompanied the dispersion of the modern races over the earth very little will ever be known. But the intensity of the in-group feeling in all contemporary primitive groups testifies to the struggles which their ancestors had to wage. The stamp of man's long war against man is indelibly imprinted upon all cultures. Socially it is manifest in the intense emotionalism arising whenever the in-group appears to be endangered; individually it is displayed in a blind allegiance to the in-group. No crime can be committed in the defense of an in-group: this is the universal law of warfare.

3. *The Content of In-group Morality.* Offenses recognized by in-group law may be divided into three classes: (1) against the group, (2) against the spirits, and (3) against persons.[1]

In the first class are treason, consorting with strangers except in accordance with established practices, and violations of the marriage regulations. Equally grave are offenses of the second class because they are looked upon as being quite as dangerous as crimes against the group, if not more so, for according to primitive belief the welfare of the group ultimately depends upon the favor of the spirits. Thus violations of tribal prohibitions, the disturbances of tribal ceremonials and rituals, and the practice of witchcraft against the in-group are everywhere severely condemned.

Next to loyalty to the in-group probably the most intense feeling among primitive men is the horror of sexual intercourse within prohibited degrees of relation. The concept "incest" may have arisen out of the hard facts of life, when, if mating was too easy, the consequent birth rate intensified the struggle for existence. As the single universal aspect of totemism, exogamy may be correlated with the severe life that everywhere faced hunting peoples; it is a device to check the growth of population and force individuals to assume the full responsibilities of mating. In this connection it should be noted that marriage among primitive peoples is not so much the mating of the sexes as it is admission to full membership in the in-group and the assumption of responsibilities that go with such membership. Exogamy is a practice of the clan or gens; endogamy, or marriage within the group, is usually tribal. Thus exogamy and endogamy may occur among the same people; these practices merely mark the two extremes of blood relation within which marriage is permitted.

[1] See L. T. Hobhouse, *Morals in Evolution: A study in comparative ethics* (1915); L. T. Hobhouse, *The Material Culture and Social Institutions of Simpler Peoples* (1915).

The hard conditions of hunting life probably account also for the widespread practice of monogamy. Polygamy, the marriage of one man with several women, seems to have developed only as wealth increased. On the other hand polyandry, the marriage of a woman with several men, seems to have arisen where the conditions of life were excessively hard, as, for example, in the highland areas of central Asia. Promiscuity, except among adolescents, seems nowhere ever to have prevailed. Sexual desire, it seems, is less intense among preliterate peoples than among men of advanced literate times, for undeniably the cultural expression of sexual stimuli serves to arouse desire among the latter in ways that do not exist among the former. In fact, some primitive peoples seem to maintain what amounts almost to a mating season similar to that which prevails among certain species of animals and birds.[1]

Two general types of family organization exist among contemporary primitive peoples: (1) the *matriarchate* and (2) the *patriarchate*. In the matriarchate descent is through the mother, and the mother's brother is commonly more important than the husband. In the patriarchate descent is through the father, and the husband's sister is frequently as important as the wife. In either form of the family the husband-wife relation may be considered important or unimportant. Probably the matriarchate antedated the patriarchate, although no general rule as to this precedence is warranted by known facts. On the other hand, it seems clear that the patriarchate emerged as the dominant form when property in cattle and land appeared.

There is little evidence that the inferior position of women common among nomadic, pastoral, and peasant peoples existed among hunting peoples. In fact the inferior position of women which has typified the traditional cultures of Asia and Europe has been the result largely of the lowering of woman's status to that of man's private property, either the father's or the husband's. Perhaps the discovery of the role of the father in procreation contributed something to the emergence of the patriarchate as the dominant form of family organization, but economic factors were undoubtedly more important.

[1] On the primitive family, marriage, and sex among primitive peoples see E. Westermarck, *The History of Human Marriage* (3 vols., 5th ed., 1925); Robert Briffault, *The Mothers* (3 vols., 1927); E. S. Hartland, *Primitive Society, the beginnings of the family & the reckoning of descent* (1921); J. L. Myres, *The Position of Women in Primitive Society* (1926); B. Malinowski, *The Sexual Life of Savages* (3d ed., 1932); Margaret Mead, *Coming of Age in Samoa* (1929); and Margaret Mead, *Growing Up in New Guinea* (1933).

The ways of love-making among primitive people are almost as diverse as the forms of the marriage relation. Mutual scratching is probably the most common practice of courtship among primitive peoples, some of whom proudly display these marks of amorous experience. Nose rubbing and louse picking are other modes of primitive caressing; kissing is not widely practiced. Capture, purchase, and betrothal by parents are the usual methods of taking a wife; romantic love is hardly known to primitive peoples. Except for the condemnation of incest, however defined, sexual offenses are generally condoned. Frequently adultery is accepted as a normal occurrence to be punished only when it becomes notorious. Unchastity is similarly dealt with. And divorce is generally easy, involving little more than mutual consent. The remarriage of widows and widowers is allowed everywhere. Concubinage exists under the same conditions as those which give rise to polygamy. On the whole freedom rather than restraint characterizes the relation of the sexes among contemporary primitive peoples; that this was the case among early peoples is the testimony of their mythologies.

Primitive men, it may be guessed, discovered very early that the sexual relation ought to be regulated, but they never agreed upon the limits and means of control. It is probable, however, that the regulations, whatever they were, generally gave men a favored position over women, who were frequently subject to physical chastisement by their husbands. But whatever the regulations, they were strictly enforced upon the members of the in-group.

Almost everywhere among primitive peoples crimes against the person are punishable under the *lex talionis*, *i.e.*, an eye for an eye and a tooth for a tooth. The murder of an adult is the most serious of such crimes. Usually the clansmen of the victim seek out the murderer for a bloody vengeance. But murder is not condemned in all cases. The commandment is not "Thou shalt not kill" but "Thou shalt kill when the in-group interest demands it." Thus the murder of out-group enemies is always right, and the killing of in-group infants and aged persons is approved when their death means security for the in-group.

Inasmuch as the system of private property rights is not highly developed, theft is usually regarded as a minor crime, and whole classes of crimes such as fraud, embezzlement, extortion, and counterfeiting, which appear with the growth of trade and the use of money, are of course unknown. The primitive attitude toward honesty in economic relations is well summarized in the belief of

the Crow Indians that only dishonest men need to use large numbers.

4. *Diversity and Uniformity in In-group Morals.* A survey of the codes of contemporary primitives reveals a great diversity of regulations governing all human relations. Among the African Bushmen chastity is not a virtue. Among the African Bantu the wife of the polygamist may have her own lover. Among the aboriginal Australians every husband assumes that his wife has committed adultery if she has had the opportunity. Among the Papuans of New Guinea promiscuous sexual relations are generally allowed before marriage. The same diversity exists in the rules governing the taking of life, the holding of property, the maintenance of decency, and the respecting of age. Killing the aged and the young, burning widows, torturing criminals, wantonly slaughtering defenseless enemies, sacrificing human beings to the gods, and eating human flesh—among one people or another all of these practices have been approved. The atrocities and abominations of one people have been the normal forms of behavior for other peoples.

Although diversity in moral practices is a universal phenomenon, uniformity in basic ethical principles is quite as general, because the need for orderly human relations is everywhere the same. Perhaps the simplest rendering of the universal moral code runs in the manner of the commandments of a certain African tribe, "Be brave, kill, and marry according to the ways of your fathers." The commandments of the Natchez Indians, believed to have been revealed by the sun-god, closely parallel the familiar Hebraic code: "Do not kill except in self-defense, do not commit adultery, do not steal, do not get intoxicated, do not be avaricious; be generous and hospitable." That the minor defects of character are about the same among all men is well indicated in the circumstances under which the Aleutian Indians of northwest North America feel shame:

> It is shameful to babble to one's wife about the secrets of the tribe; it is shameful, while hunting with another, not to offer the best part of the game to one's companion; it is shameful to brag of one's deeds, especially the imaginary ones, or to call another derogatory names. It is also shameful to beg alms; to caress one's wife in the presence of others or to dance with her; or to bargain personally with a purchaser, since the price for goods offered is to be fixed by a third party. For a woman it is shameful to be unable to sew or dance or in general, not to know how to do things

within the scope of woman's duties; shameful to caress her husband or even to converse with him in the presence of others.[1]

Similarly other contemporary primitive peoples mildly condemn the liar, the braggart, the babbler, the bully, the glutton, the beggar, the "chiseler," the shirker, the meddler, and the libertine. So also they almost universally approve of the unselfish, the dependable, the courteous, the diffident, and the honest individual. And they all enforce standards which define immodesty, obscenity, uncleanliness, and nudity. There are everywhere standards of good conduct and good taste which approximate a single general rule:

> The ethical code, being the logical outcome of social intercourse, varies very little in the same social and intellectual strata and tends always towards the same standards as the intelligence rises and the circle of society expands. Family affection, respect for seniors, loyalty, bravery, leading to the moral compulsion of accepting any challenge to fight or gamble, truth or troth, these are virtues embodied in whatever early codes there be. . . .[2]

Not new virtues, but new men to practice old virtues has been the main course of the evolution of morality.

Social Controls among Primitive Peoples.

Social controls consist of all those devices by which an individual is brought to conduct himself according to the desires and commands of others. Such controls usually are imposed by granting rewards for proper behavior and by inflicting punishment for improper behavior. Since man developed as a gregarious species, social controls are as old as mankind; in fact, early men invented the forms of social control which still exist everywhere.[3]

1. *Government.* Government is that form of social control which is exercised directly in the name of the authority and power of the in-group. Political evolution undoubtedly began with the emergence of an individual or a number of individuals acting in

[1] Peter Kropotkin, *Ethics: Origin and development* (1924), pp. 69–70. By permission of The Dial Press, New York.

[2] E. W. Hopkins, *The Origin and Evolution of Religion* (1923), p. 253. By permission of the Yale University Press.

[3] See H. I. Hogbin, *Law and Order in Polynesia: A study of primitive legal institutions* (1934); R. H. Lowie, *The Origin of the State* (1927); B. Malinowski, *Crime and Custom in Savage Society* (1926); and E. S. Hartland, *Primitive Law* (1924); C. K. Meek, *Law and Authority in a Nigerian Tribe* (1937); I. Schapera, *A Handbook of Tswana Law and Custom* (1938).

the name of the in-group. Perhaps the practices of the Andaman Islanders are examples of the beginnings of this evolution. They accord primacy to the "big-man" who, by skill in hunting and fighting, by kindness and generosity, and by freedom from outbursts of temper, shows capacity to aid others in times of need. Although the big-man possesses no authority, young men gather around him and older men value his opinion; his is the power that social approval establishes. Often he has a "right-hand man." Possibly the Andaman big-man is the embryonic "chief" or "king," and his right-hand man the nascent "prime minister." The Andaman Islanders also recognize the special position of the elders, the old men and women who know the tribal myths, preserve the simple rituals, and interpret the application of customary rules of conduct. The young address the elders with special names, which, it is interesting to note, are also used as designations for legendary figures. Perhaps this practice is suggestive of that early confusion of political authority with the power of the spirits, *i.e.*, the belief in the divine foundation of government. Authority and power were, it may be believed, originally the functions of actual leadership.

Primitive peoples have many judicial procedures. The blood feud, which was probably the first method of punishing offenders against in-group morality, is the common means of enforcing the *lex talionis*. But modifications of the blood feud frequently transform it into a set fight or a test of the endurance of pain; probably the ordeal by torture was an elaboration of such tests. Among nomadic or peasant peoples possessing recognized forms of wealth blood vengeance is usually transmuted into a compensatory fine paid by the offender or his relatives to the victim or his relatives. Examples of public discussion by elders and arbitration by specially chosen men as the means of settling disputes are rather common among contemporary primitives. These practices foreshadow the development of a judiciary. By compurgation, *i.e.*, the swearing by a number of his fellows that he is innocent, a person charged with crime is sometimes cleared. The jury may have originated from this procedure. Very few primitive peoples allow a single individual to bring offenders to trial and punishment.

In whatever form political control exists among primitive peoples, it functions always in terms of the in-group interest, and somehow or other the members of the in-group are conceived as participating in it. The *folk* is a unity. This fact is noteworthy because such a psychological unity helps to explain the ease with

which later men have been able to accept individual or class rule and to invent theories to justify their acceptance. Among all political phenomena none is more significant than the achievement of identification with the folk either by an individual or by a class, for such identification is always the ultimate basis of power. When Samuel Johnson defined patriotism as the last refuge of a scoundrel, he directly proclaimed that anything can be accepted in the name of the in-group interest and indirectly asserted man's primordial tendency to lose all sense of right and wrong when someone proclaims, even without foundation in fact that the in-group interest—survival—is threatened.

2. *Education.* Among contemporary primitives the education of the young is carefully, if informally, directed. Its general character may be seen in the following description of the objectives of the educational practices of the Bathonga, an African tribe:

> Bathonga education is specifically directed toward fitting the child into the cultural framework, to develop in him the appropriate attitudes of respect to the elders, to the chief, and to the gods. Nor is the child simply permitted just to grow up. But at every stage, from the time the little boy is old enough to care for his father's goats to the time he has passed through the arduous regimen of the initiation school, he is forcibly impressed with the distinctions between older and younger, until as a man he is no longer a wild, unformed little savage but a dignified and cooperative member of his father's village.[1]

By informal learning the primitive child masters the skills and manners necessary for adult life; by formal instruction he is impressed with the necessity and informed of the means of preserving the in-group. Usually this instruction, which is imposed on girls as well as boys, is given when they reach puberty.

In the initiation ceremony, from which females are rigorously excluded, the boys are usually segregated and placed under special guards. Older men, frequently masked, impersonating the heroes, gods, and devils of the tribe, appear before them and tell tales, preach sermons, and utter prayers and curses. The infliction of physical pain in order to test courage is a normal element of the initiation ceremony. Sometimes the skin is slashed or a finger broken or a tooth knocked out; sometimes the boys are starved or expelled from the clan and forced to live by their own efforts for a time. In every situation, regardless of fear or pain, the

[1] Margaret Mead, *Cooperation and Competition among Primitive Peoples* (1937), p. 375. McGraw-Hill Book Company, Inc., New York.

boy is expected to accept completely whatever is imposed upon him.

The aim of these practices is to impress upon the boys the necessity of observing in-group practices and of serving the in-group interest. Generally the ceremonies are skillfully devised so as to arouse emotions and attach to them the desired lessons. No other social experience of primitive man is as intense as the initiation ceremony. Failure in the ceremony means exclusion from the privileges as well as the obligations of adulthood; usually this means loss of the right to marry, but in some instances it means expulsion from the group, a punishment that amounts to the death penalty. Since most primitive peoples look upon the child as lacking full human status until after the initiation ceremony, the admission to the tribe is the necessary preliminary to the acquisition of the status of adulthood; in other words the adult individual exists only by virtue of acceptance into the in-group on terms set by the group.

The whole effect of the initiation ceremony is to bind the individual into the in-group and to fix upon him a rigid mental outlook and an unbending moral code; above all, it aims to organize his emotional responses to situations so that any attack on the in-group will arouse devotion and anger. Thus the in-group makes explicit its primacy over the individual.

3. *Tabus, Folkways, and Mores.* In all primitive cultures the spirits are the final arbiters of right and wrong. The approvals which declare some forms of behavior correct come from them, and the prohibitions which forbid other forms of behavior also come from them. The greatest of all social controls is the *tabu*, *i.e.*, the prohibition whose violation is believed to bring upon the offender and, because of his offense, upon the in-group the wrath of outraged spirits. The tabu synthesizes the fear of the spirits with the commands of the in-group code:

> The all-seeing daimonic [*i.e.*, the spirit] eye was sleepless; no time or place was immune from its surveillance. Detection was sure. Further, the penalty inflicted was awesome. Granted that the chief might beat or maim or fine or kill, there were yet limits to what he could do. The spirits, on the other hand, could inflict strange agonies or frightful malformations and transformations. Their powers extended even beyond the grave and their resources for harm outran the liveliest imaginings. In short, they inspired, not a daylight-fear but a grisly, gruesome terror—ghost-fear. Consider the threat of the taboo, and its effectiveness. It is beneath this unearthly whip of scorpions that humanity has cringed for long ages and

there is no doubt that its disciplinary value has superseded all other compulsions to which mankind has ever been subject.[1]

Frequently there is little sense in the tabus which the ever watchful daimons enforce. Among the Fiji Islanders, for example, it is tabu to ask anyone who intends to go fishing where he is going, for to do so is to prevent him from catching fish. It is also tabu among the Fijis to eat pork while making a bell. Fear prevents violations of tabus, and guilty parties have been known to die of fright.

It is the common belief that the violation of a tabu brings its own punishment. Thus the Andaman Islanders do nothing to punish an offender against the spirits but trust to fear to accomplish the desired result. Usually, however, a primitive group takes some action against the most dangerous criminal it knows. Commonly he is shunned, and not infrequently he is outlawed, *i.e.*, he is driven into the wilderness, where a violent death is almost certain.

Folkways and *mores* are forms of social control that bear upon the intimate affairs of daily life. Folkways are incidental customs governing ordinary social intercourse; mores are basic controls over intimate behavior. Neglect of the former is criticized but not necessarily punished; violations of the latter are met with hostility and aversion. The mores are subtle and powerful factors in shaping individual behavior:

> The mores come down to us from the past. Each individual is born into them as he is born into an atmosphere, and he does not reflect on them, or criticize them any more than a baby analyzes the atmosphere before it begins to breathe. Each one is subjected to the influence of the mores, and formed by them, before he is capable of reasoning about them. . . . The justification of them is that when we wake to consciousness of life we find them facts which already hold us in bonds of tradition, customs, and habit. The mores contain embodied in them notions, doctrines, and maxims, but they are facts. They are in the present tense. They have nothing to do with what ought to be, will be, or once was, if it is not now.[2]

To every individual tabus, folkways, and mores declare with finality, "Whatever is, is right." They define the patriotism, morality, and piety which are the content of the respectability

[1] W. G. Sumner and A. G. Keller, *The Science of Society* (4 vols., 1927), Vol. 2, p. 1479. By permission of the Yale University Press.

[2] W. G. Sumner, *Folkways: A study of the sociological importance of usages, manners, customs, mores and morals* (1907), pp. 76–77. By the permission of Ginn and Company, Boston.

every in-group member aspires to possess. They silence criticism of the established ways of life. And they discourage innovation, holding up tradition as the sole guide of right conduct. Together with government and education, they compel each individual to observe the socially selected and approved rules of in-group morality as right and reasonable, *i.e.*, as the sole embodiment of truth and justice. In this manner individual conformity to the going social order is made to seem the norm of rational behavior; this identification of social conformity with rationality is the supreme achievement of primitive men in organizing the social control of individual behavior.

The Primitive Conception of Justice.

Contemporary primitive peoples everywhere possess a conception of fairness—*justice*—and the earliest recorded traditions indicate that ancient preliterate men had a similar conception. The content of this conception, which is embodied in the in-group code, varies from group to group, but its central principle is everywhere the same, namely, all men are equal before the clan or tribal law. This primitive state of equality among in-group members is generally known as *clan democracy;* under it the individual member of the in-group possessed rights which other members of the in-group were bound to respect. It must always be remembered that these rights are defined by and established in *custom;* they are not embodied in a bill of rights or justified by any body of theory. The primitive conception of justice does not embody the idea that an individual possesses rights which his in-group under all circumstances is bound to respect.

Early men, it seems clear, were at the mercy of a custom to which they were expected to conform, and their in-group could commit no crime against them, for they were rightless except under its sanctions.

INTELLECTUAL ASPECTS OF PRIMITIVE CULTURES

Inferences from old stone age materials, the testimony of recorded traditions, and the known facts about contemporary primitive cultures indicate that early in the development of the race a body of beliefs now generally called *mythology* was formed. Analysis of existing materials bearing on this body of beliefs reveals that it contained four major assumptions: (1) a world of good and evil spirits, some powerful and some weak, invisible and eternally active in the affairs of men, (2) the possession by man of a

spirit, *i.e.*, a soul, (3) the life of the soul apart from the body, especially after death, and (4) the necessity for the cultivation of the favor of both the good and the evil spirits if man is to prosper. A little study of the Chinese, the Aryan, the Semitic, the Greek, and the Teutonic mythologies is sufficient to reveal the existence of these conceptions among the peoples who founded the great cultural traditions of the Eastern and Western worlds, and all contemporary primitive cultures embody them.

The "truly untutored philosophy" of the Andaman Islanders is a first-rate rendering of these beliefs in the imagery and routine of the monsoon climate:

> The chief Andaman deity is Biliku, sometimes male and sometimes female, who is identified with the stormy northeast monsoon. Biliku's anger is ever to be feared; it is stirred by the smell of burned beeswax, by the digging of yams, and by the killing of cicada grubs. The association of Biliku's anger with these events is due to the fact that the stormy monsoon follows the hot season when the honey and the yams are taken and occurs at the time when cicada grubs are plentiful. In order to enjoy these foods the people must endure Biliku's anger. But Biliku is also beneficient. He invented fire, discovered honey, and taught the domestic arts practiced by women. He is supposed to dwell at the top of the highest mountain that the Andaman Islanders know. Opposed to Biliku is Tarai, who is identified with the southeast monsoon; storms are their combats. In such struggles Biliku is pictured as a woman, throwing firebrands across the sky. Associated with Biliku are minor spirits—*Lau*—who do all sorts of mischief. There are four classes of major evil spirits: *Eremchauga*, the spirits of the forest; *Juruwin*, the spirits of the sea; *Nila*, spirits which live in the heart of the breadfruit tree; and *Chol*, the spirits of disease. The sun and the moon are spirits, and the stars are their children. After death the soul of man departs to the jungle world—Chaitan—under the earth, but ancestral spirits return from time to time. When angry, ancestral spirits are extremely dangerous. The soul of every child has an existence prior to life on earth. The spirits of animals may take many forms. Every event in the life of the Andaman Islanders is believed to be bound up with the activities of these beings.[1]

[1] See A. R. Radcliffe-Brown, *The Andaman Islanders* (2d ed., 1933); for materials on the beliefs of primitive peoples the best sources are the numerous recent studies of simple cultures in all parts of the world. Among the great number of such studies the following may be noted: R. H. Codrington, *The Melanesians* (1891); E. Best, *The Maori* (1924); B. Spencer and F. J. Gillin, *The Arunta: A study of a stone age people* (1927); Robert W. Williamson, *Religious and Cosmic Beliefs of Central Polynesia* (2 vols., 1933); J. Bachelor, *The Ainu and Their Folk-lore* (1901); Henri A. Junod, *The Life of a South African Tribe: the Tonga* (1913); Apolo Kagwa, *The Customs of the Bagand* (1934); S. S. Dornan, *Pygmies and Bushmen of the Kalahari* (1925); H. A. Stayt, *The Bavenda* (1931); M. Delafosse, *The Negroes of Africa: History and culture* (1931); G. B. Grinnell, *The Cheyenne Indians* (1923);

The Concept "Daimonic Universe."

The universality of beliefs similar to those of the Andaman Islanders among peoples living under orally transmitted cultures justifies the conclusion that early man conceived of the universe as a host of intangible and invisible beings who worked good and evil for man outside of, contrary to, and in spite of physical forces and circumstances. Furthermore, although early man probably recognized the existence of physical forces and objects, he was prone to interpret most occurrences in the physical world as manifestations of nonphysical powers, so that, indeed, all occurrences, physical and social alike, were understood as "spiritual events." A universe so conceived consists of an indescribable array of spiritual powers. In simplest form these powers are usually called *animistic;* when systematized in mythologies they are called *daimonic.* As a view of the organization of the world in which man lives, they may properly be designated the *daimonic universe.* All primitive thought was, it seems, developed in terms of this universe.

1. *Did Old Stone Age Men Believe in a Daimonic Universe?* At what time in the history of man did the concept "daimonic universe" appear? As previously noted, the Mousterian graves suggest the belief in the continuation of life after death, and this belief is always associated with the more general conception of spiritual beings. Many students of the cave art hold that the paintings of animals was bound up with a belief in animal spirits, while the representation of the sorcerer of the Cave of Trois-Frères,[1] it is argued, suggests that there existed individuals who corresponded to the medicine men of contemporary primitive peoples. Since medicine men operate almost entirely in terms of a daimonic universe, it seems that such a representation as that at Trois-Frères is excellent evidence for the existence of the conception of a universe of spiritual powers as early as the upper old stone age. Certainly that capacity for vivid representation manifest in Magdalenian art was fully able to people an imaginative world with daimons, so that in spite of the lack of evidence and the disagreement of the students of early intellectual development, it seems safe to con-

K. Birket-Smith, *The Caribou Eskimos: Material and social life and their cultural position* (1929); Franz Boas, *The Religion of the Kwakiutl Indians* (2 vols., 1930); R. H. Lowie, *The Crow Indians* (1935); Clark Wissler, *Indians of the United States: Four centuries of their history and culture* (1940). See also James Hastings, editor, *Encyclopaedia of Religion and Ethics* (1925), articles "Algonquins," "Bantu," "Buriats," "Cherokees," "Dinka," "Huron," "Masai," "Negrillo," and "Zuñi."

[1] See p. 98.

clude that old stone age man arrived at those general abstractions which have entered into all mythologies.

2. *How Did Early Man Come to Believe in a Daimonic Universe?* Man lives now and, it is fair to assume, has always lived in the presence of stimuli having three distinct sources: (1) the social environment, *i.e.*, among his fellows, (2) the physical environment, *i.e.*, in external nature, and (3) his own biological make-up; and by some method of arranging and evaluating these stimuli he abstracts from them a conception of the universe as a whole and his place in it. The concept "daimonic universe" was, it seems, his first interpretation of these types of stimuli.[1]

Of the primacy of social stimulation over physical and biological stimulation in the evolution of conscious behavior there can be little doubt. Child behavior, when it ascribes personality to toys, pets, and other familiar objects is evidence of this primacy. When it is remembered that society was antecedent to the human species, providing, indeed, the avenue of its emergence, the power of group impulses in the experience of early men must be recognized as having been overwhelming. Thus early man, without effort of logic or guidance of instinct, probably saw the physical world as a social world; there was, in fact, no other way for him to see it, and so inevitably the whole as well as the parts of the physical world was conceived in social terms. At its source the belief in spiritual powers is nothing more than the ascription of attributes of personality to physical phenomena:

> . . . for the savage, it is life itself that really matters, life in things, animals, persons and spirits. The ultimate realities are his children, his cattle, his gardens, his clansmen, his ancestors and their attendant spirits. Everything in the universe lives, or has something living attached to it, and the savage theory of life embraces life as its fundamental unity. . . . This binding thread of life runs through all the manifestations of the universe; life is the same in person, thing or spirit.[2]

Contemporary primitive cultures provide many examples of the treatment of a physical phenomenon as a person. Thus, for example, the South African Kaffirs shout in the face of a thunderstorm in order to halt its progress, and the Point Barrow Eskimos

[1] See Otto Schneider, *Studien über die empirischen Grundlagen des Zauberglaubens bei Primitiven* (1937); J. S. Lincoln, *The Dream in Primitive Cultures* (1935); T. K. Oesterreich, *Possession, Demoniacal and Other, among primitive races, in antiquity, the middle ages, and modern times* (1930); A. J. J. Ratcliff, *The Nature of Dreams* (1939).

[2] Vernon Brelsford, *Primitive Philosophy* (1935), p. 52.

brandish knives toward the aurora borealis in order to scare it away.

Social pressures, of course, were—in early times as now—invisible, intangible, and powerful; they were, indeed, the very stuff of spiritual power. Long before men knew anything about physical forces as such, they were, it may be believed, familiar with a pervasive nonphysical force against which resistance was dangerous and useless.

Among the Andaman Islanders the definition of spiritual forces in terms of social experience is exemplified in many beliefs. Any dangerous natural activity is correlated with anger, the only antisocial passion they recognize.[1] When angry, Biliku sends storms. Any implement useful to the group is believed to have a power to protect against evil, and the greater its service the greater the power. Thus the bow and arrow is a safeguard against spirits of the forest, and a necklace of small pieces of fish arrows is a protection against the spirits of the sea. Fire, the most serviceable possession, is the most powerful of all protections against evil spirits. Life itself, since it is conceived as a struggle between the human group and the spirits, really is understood only as a social struggle, for the physical world is dealt with always as if it consisted of living beings.

The differentiation of invisible and intangible power into particular spirits was the easy consequence of the misinterpretation of many normal experiences. Perhaps the experience most easily misunderstood is the dream. The Andaman Islanders believe that they meet spirits in dreams; their word for "soul" actually means "dream image." The Papuans of New Guinea believe that dreams are communications from spirits. And the Bina, an East Indian people, think that during sleep the soul leaves the body to keep council with spirits.

[1] A. R. Radcliffe-Brown, *The Andaman Islanders* (2d ed., 1933), pp. 384–385: "The order of nature only affects him through the social order, and the two therefore necessarily seem to him to be parts of one whole,—the order of the universe. . . . The forces of the world . . . are not the blind mechanical forces of modern science: rather are they moral forces. Their action upon human beings is not only to be witnessed in external events, but is to be experienced in the man's own consciousness or conscience. He feels within himself their compulsion when he would run counter to them, and their support when he leans upon them. The law of the world, then, is a moral law, its forces are moral forces, its values moral values; its order is a moral order.

"This view of the world is the immediate and inevitable result of the experience of man in a society. It is a philosophy not reached by painful intellectual effort, by the searching out of meanings and reasons and causes; it is impressed on him in all the happenings of his life, is assumed in all his actions; it needs only to be formulated." By permission of the Cambridge University Press, London.

The well-known beliefs about dreams among all peoples of literate times indicate that such notions have an antiquity which reaches far back into history. There can be little doubt, therefore, that early men thought that in dreams they entered the spirit world, where they met not only the souls of the living but also the spirits of the dead and other beings quite mysterious. In the dream, taken at its face value, the world of spirits was known directly. Little wonder then that the thing dreamed was more significant, if not more true, than an ordinary experience.

Innumerable experiences of waking hours seem to verify the testimony of dreams. There is the silent shadow, the grimacing image in still waters, the noisy wind, the falling star, the yellowish darkness of the eclipse, the dread lightning bolt, the roaring thunder, and that uttermost stillness of evening: the world is alive. There are headaches, ringing in the ears, twitchings of muscles, itching, fevers, stinging pains, rumblings in the belly, and sneezes: man's body is often in torment. There are fits, convulsions, coma, amnesia, and hallucinations: man is sometimes beside himself. And there are the frenzy, ecstacy, stupor, and insensibility to pain in which, on occasions, both he and his fellows lose themselves. Such things happen all around him. Who? How? Besides himself there is no one to act. No one? Only invisible and intangible beings. At times he sees them. In a fleeting instant something moves in the bushes, behind a tree, just over the ridge of a hill; in the sky there is a shape; a nebulous form moves in the darkness; a fading figure disappears in the mist. And sometimes he hears them. Up from the valley comes a voice. Yes, there is a voice. At night there are many voices not heard by day. An inner voice sometimes speaks even without sound.

If a psychological phenomenon is sought which synthesizes these various experiences in an enduring form, it may be discovered in the memory image. This image, immaterial but vivid, recalled at will and set into endless patterns, and accompanied by various emotions, may be regarded as the true content of the primitive man's world of spirit.

How could early man deny what almost every variety of his experience and every act of his memory seemed to confirm? From social stimuli came the substance of spiritual forces. From physical and biological stimuli came the definition of particular daimons. From the memory image, in both waking and sleeping hours, came the spiritual world. The wonder is not that early man arrived at the concept "daimonic universe"; it is rather that, con-

fronted with raw experience, any men ever arrived at any other view of the universe.

THE COROLLARIES OF THE BELIEF IN A DAIMONIC UNIVERSE.

Whenever man arrives at a conception of the fundamental structure of the universe, he necessarily attempts to act in terms of that conception, for to do otherwise would be to run counter to the most powerful forces he knows; as a result, therefore, man understands the occurrence of events, interprets right and wrong conduct, manipulates forces and objects, avoids and relieves pain, and seeks well-being according to his conception of the fundamental organization of his total environment.

Since early man understood the universe as a vast array of daimonic powers, he necessarily developed modes and principles of action suitable to life in their presence. As corollaries of the concept "daimonic universe" these modes and principles of action completed the intellectual pattern of primitive cultures.

1. *The Idea "Luck."* Everywhere primitive men believe in luck—the uncontrolled play of the daimonic powers, bestowing favor and disfavor regardless of human effort, need, or desert. When hunting is successful luck is good; when no game is taken luck is bad. When crops grow well luck is good; when the harvest is small luck is bad. Men prosper or suffer accordingly as their luck is good or bad. The courageous, the strong, the clever, the witty, and the wise possess their qualities because of their luck. The luck idea explained the uncertainty of life.

2. *Fetish.* In the play of daimonic forces which distributes luck, certain daimons may intervene to aid man. When these daimons are believed to reside in material objects of any kind, these objects are *fetishes*. All charms, luck pieces, talismans, etc., are fetishes. Among primitive men any object which attracts attention may become a fetish. All primitive peoples have fetishes in endless varieties; the only quality common to all is that they house a spirit who aids men. Often such spirits are the private aid of a single individual. Their power is generally believed to be operative only under certain conditions. The fetish is the simplest aid man possesses in dealing with the all-powerful spirits.

3. *Tabu.* As previously noted, the *tabu* is a moral instrument; it designates certain objects and acts as sacred, *i.e.*, not to be touched or performed except with the special permission of the spirits. The tabu differentiates objects and acts into two classes, the common and the holy. The holy belong entirely to the spirits;

man deals with them only as he obtains the approval of the spirits. To obtain this approval he must purify himself by the performance of acts which make him fit to act with the spirits. Certain objects and acts are regarded as unclean; to touch or perform them is to become impure in the sight of the spirits. Such impurity can be removed only through ceremonies of purification. Through tabus the moral life of primitive men is organized in accordance with the wills of the daimonic powers.

4. *Magic.* *Magic* may be defined as a technology for the manipulation of daimonic powers; by magic man compels the daimons to act according to his wishes. The fundamental idea of magic is that there is a causal connection between events. But this causal connection exists in the intangible world of unseen and uncanny forces, not in the world of physical objects and processes. Magical procedures, therefore, attempt to direct the uncanny forces in the realization of human purposes. The method of such procedures rests upon analogies, *i.e.*, because under a given combination of circumstances a certain event occurred, the repetition of that combination of circumstances will lead to the recurrence of the event. Since, however, the recurrence is due to the action of uncanny forces, the procedure to bring about the recurrence of the event in no sense conforms to a combination of physical circumstances at any time. Thus magical practices generally seem utterly fantastic. To cure a wound, treat the weapon making the wound. To bring rain, beat drums to make a sound like thunder. To punish an enemy, burn a lock of his hair or throw the clippings from his nails into a river. To cause cows to have striped calves, plant striped poles near water holes where the cows come to drink. To cure smallpox, wrap the sick person in a red cloth. The more fantastic procedures are too complex and apparently meaningless to justify their description here.

Primitive men generally practiced two kinds of magic, "white" for doing good and "black" for doing evil. Sorcerers usually performed white magic, witches black magic. It was possible, of course, to set one magician against another, and magicians usually explained their failures to get the proper results by claiming that a more powerful magician was working against them. Magic reveals man as a coercer of the spirits.[1]

[1] On magic in preliterate cultures see A. C. Haddon, *Magic and Fetishism* (1908); L. E. W. Benedict, *A Study of Bagobo Ceremonial, Magic, and Myth* (1916); E. E. Evans-Pritchard, *Witchcraft, Oracles and Magic among the Azande* (1937); F. J. Hayter, *Deadly Magic, including the Australian pointing stick* (1938).



From a drawing by HENRI BREUIL

THE "SORCERER" OF THE CAVE OF TROIS-FRÈRES

This "terrible masterpiece," as it has been called, is an upper old stone age representation of an individual whose type, combining yearning and learning in some pattern, is designated the "intellectual." The primordial intellectual, like his successors in all cultural traditions, certainly believed, if he thought in terms of the daimonic universe as the evidence indicates, that he possessed an understanding of the universe which made his activities a decisive factor in winning a more satisfying and secure life for men.

5. *Divination.* By *divination* man undertook to discover the prospective activities of the spirits. To do this he developed methods of foretelling events or of reading signs in the world round about. The methods of divination are as endless and meaningless to us as the procedures of magic. All primitive peoples have some method of taking omens—by listening to the sounds of the wind or water, by watching the flames of a sacred fire, by rattling together holy bones, by rolling cubes or disks or spheres having peculiar markings, etc. Such methods are always in the hands of special diviners. A more general method is to read signs which appear in the external world or in dreams. Among the Samoans of the South Seas the flight of owls or bats indicates that a war or battle will be won by those warriors toward whom they fly. The howling of a dog is a sign of misfortune, as it was to Tom Sawyer and Huck

Finn. A centipede crawling on top of a mat is a sign of good luck; under a mat, it is bad luck. It is a sign of bad luck if a lizard crosses one's path. Every primitive people has a conglomeration of beliefs in such signs, omens, and portents; the whole world is alive with meaningful manifestations of the wills of the daimonic powers.

6. *Shamanism.* The need to deal and communicate with the spirits led to the specialization of individuals to perform such functions. As evidenced by the paintings at the Cave of Trois-Frères, such individuals existed in the upper old stone age. In contemporary primitive cultures they are known as *medicine men*, *shamans*, *wizards*, and *sorcerers*. But regardless of name they are everywhere alike. They talk with the gods. They placate spirits. They exorcize devils. They drive away evil winds. They treat diseases. They make rain. They interpret dreams. They divine the future. They hand down traditions. And they stand guard over tabus. Among some peoples the shaman believes himself to become possessed of a spirit which makes known to him right courses of action. Commonly such individuals, usually men, but sometimes women, exercise significant authority in clan or tribal councils, and often they receive special economic rewards. Above all, as "experts" in dealing with the daimonic powers, they enjoy social prestige. Sometimes insane, but usually of superior intelligence (often they simulate the mental abnormalities regarded as manifestations of special power in dealing with the spirits), they live by their wits and the credulity of their fellows. Mountebank, priest, poet, prophet, actor, artist, and scientist, all in one, the primitive medicine man was the social progenitor of the intellectual of later ages.[1]

7. *The Daimonic Theory of Disease.* The *daimonic theory of disease* is one of man's oldest ideas. Natural health and natural death are conceptions unknown to primitive men; they universally believe that disease and death are the work of spirits. Many contemporary primitives recognize special classes of daimons that cause disease. Sometimes ailments are believed to be sent by outraged ancestors or by persons who employ witches in order to injure others. The treatment of disease is, therefore, merely a branch of the general relations which primitive men maintain

[1] See J. L. Maddox, *The Medicine Man. A Sociological Study of the Character and Evolution of Shamanism* (1923); R. F. Fortune, *The Sorcerers of Dobu* (1932); W. T. Corlett, *The Medicine-Man of the American Indian and His Cultural Background* (1935). For the social evolution of priest classes from the primitive shaman see R. C. Darwin, *Die Entwicklung des Priestertums und der Priesterreiche; oder, Schamanen, Wundertäter und Gottmenschen als Beherrscher der Welt* (1929).

with the spirits; thus it consists chiefly of the use of exorcisms, charms, spells, incantations, and magic. In these practices many drugs and concoctions, as well as fetishes, are employed. The Fiji Islanders judge the strength of a medicine by the froth it makes when shaken; other peoples consider evil taste and vile odor as proofs of the efficacy of a medicine. The Andaman Islanders treat pleurisy by rubbing the sufferer with beeswax. They apply the fat of the flying fox for rheumatism. They scarify the forehead to cure headache; this practice is not as severe as trepanning, *i.e.*, the perforation of the skull, known to have been performed by very early peoples. By painting the body red—a color believed by all primitive peoples to be associated with life—the Andaman Islanders believe that the spirits causing disease can be warded off. They wear human bones as charms to guard against angry ancestors.[1]

8. *Myths.* Primitive peoples do not look upon *myths* as stories; on the contrary they regard them about as contemporary Western men regard scientific theories. Myths are explanations which account satisfactorily for the world, men, and the activities of the daimons. It is a remarkable fact that the myths of all peoples deal with the same general problems, such as the origin of the earth, the creation of man, the beginnings of culture, and the appearance of peoples. The usual formula for myths is a struggle of good and evil daimons or a relation between a spirit and a man which has outcomes significant for men. Often the myth turns about some element of human character—strength or weakness—which the spirits reward or punish. Besides the "great spirits" who order the world, almost every mythology includes "culture heroes" who are credited with making the basic inventions or founding the important social institutions. The charm of myths flows from the combination of imagery, emotion, and narrative which by stimulating the senses seems to declare the truth.

9. *The Idea "Soul."* Primitive men believe not only that there are spirits for every object, process, and quality in the physical world but also that man possesses a spirit, usually called a *soul.* Every child, it is generally held, is born with a soul. The

[1] See W. H. R. Rivers, *Medicine, Magic, and Religion* (1924); Don McKenzie, *The Infancy of Medicine: An inquiry into the influence of folklore upon the evolution of scientific medicine* (1927); Forest E. Clements, "Primitive Concepts of Disease," *University of California Publications in American Archaeology and Ethnology*, Vol. 22 (1932), pp. 185–252; Jonathan Wright, "Demonology and Bacteriology in Medicine," *The Scientific Monthly*, Vol. 4 (1913), pp. 494–508; and L. W. G. Malcolm, "Prehistoric and Primitive Surgery," *Nature*, Vol. 133 (1934), pp. 200–201.

Semang of the Malay Peninsula think that the souls of unborn children reside in birds. When a Semang woman becomes pregnant she visits the nearest tree whose name she bears (all Semang women are named after trees), decorates it with flowers, and waits for a bird to come to the tree. By killing and eating this bird she provides her unborn child with a soul. The belief in prenatal influence is an obvious corollary of such ideas about the origin of souls:

> It is no devious reasoning which convinces the Bakitara of East Africa, for instance, that the pregnant woman must abstain from eating hot food or drinking hot water lest her child's hands be scalded and show white patches. The Kafir (South Africa) mother "avoids eating buck lest her baby should be ugly; she does not eat the under lip of a pig lest her baby should acquire a large underlip." The Ila-speaking people taboo her consumption of goose lest the child develop a long neck and even forbid her sleeping in the day-time lest the child become dull and stupid.[1]

Similar ideas affect the care of growing children. The African Bushmen will not allow a child to eat the heart of a jackal because that animal is a coward. The natives of Bechuanaland tie a beetle to a string around an infant's neck in order to give it long life. The Hopi Indians bind a tough cocoon to the wrist of a girl so that she will be able to grind corn when she grows up. Many primitive peoples believe that strength and wisdom can be given to a boy if a strong and wise man blows into his mouth.

Contemporary primitives often identify the soul with the breath or the shadow, and occasionally with the image that is always visible in the pupil of the eye. During life it is believed to reside in the body, but the place of residence is variously defined—the nape of the neck, the top of the head, the spleen, or the kidney fat. It is widely believed that witches can injure the soul by damaging the organ in which it resides.[2]

From these beliefs it is but a step to the notion that spirits can take the shape of animals and men, also that men and animals can change their forms. An elaboration of this belief, called *metempsychosis*, affirms that at death the souls of men may be reborn as animals, insects, birds, etc.

10. *The Concept of Life Beyond the Grave: "Heaven" and "Hell."* To early man, as to his successors in all ages, came at last death, and for him, as for them, it was the great mystery. Perhaps it was

[1] Nathan Miller, *The Child in Primitive Society* (1928), pp. 20–21. Brentano's, New York.

[2] On the concept "soul" see A. E. Crawley, *The Idea of the Soul* (1909); William Ellis, *The Idea of the Soul in Western Philosophy and Science* (1940); Paul Radin, *Primitive Religion: Its nature and origin* (1937), Chap. XIII, "The Soul: Its Nature and Destination."

the point of departure of man's original reflections upon the meaning of life. As already noted, the earliest evidence of the care of the dead is found in the Mousterian burials, and this evidence supports the view that Neanderthal man believed in the life of the soul after death. That this idea has found thousands of elaborations is well known to all students of mythologies.

According to the Semang, at death the soul crosses by a bridge of trees to a Heaven of Fruit Trees. If the chief of the Heaven of Fruit Trees lets down his big toe the soul gets over the bridge. The souls of old and wise men fly across the boiling lake which the bridge of trees spans. Wicked souls, frightened by a great figure on the bridge, fall into the boiling lake. In the Semang hell storm clouds bearing the spirits of disease always hang low. In the Heaven of Fruit Trees fruit is plentiful all the year round. The Andaman Islanders believe that souls finally reunite with bodies in the bloom of health and live forever on a new earth. The Greenland Eskimos believe that in afterlife they will go to an underground heaven of perpetual summer, where fish, fowl, seal, and reindeer will be found boiling alive in a great kettle. Often the journey to the other world is believed to be so long and difficult that only the bravest warriors get there. Some primitive peoples think that women who die in childbirth go to heaven at once.

Such beliefs about the life of the soul in a "heaven" or a "hell" do not prevent primitive peoples from believing also that the souls of men linger on earth as ghosts. Sometimes man is thought to have two or even several souls, one of which dwells near his place of abode on earth. Ghosts are generally looked upon as powerful and dangerous. Frequently they are believed to guard over the living; in some cases, however, they are thought to be enemies. Occasionally they form a community of ghosts hovering near the living, but more often they reside in a far land whence a few may return from time to time. The ghosts of great ancestors are universally feared.

The Orientation of Behavior in a Daimonic Universe.

Before birth, through life, after death, early man, it may be believed, lived with the spirits—the uncanny things. They were his hope and dread. To them he owed everything. From them he could expect anything. The way of knowledge (and safety) was according to their wills. To discover this way he performed every abomination; to follow it he committed every outrage. But abomination and outrage, when perpetrated under the guidance

of the spirits, were virtuous acts of the highest order. And once fixed, the way persisted, guarded chiefly by controls that were rooted in the hope of a better life or the fear of a worse one.

The complexities of behavior which result from the effort to act in accord with such beliefs are well illustrated by the procedures of the East African Dschagga beekeeper; they also indicate the insignificant part played by factual knowledge in a behavior orientated to the daimonic universe:

The iron to form the axe is carried to the blacksmith with an offering of beer, the native being accompanied by his wives and children. As soon as he arrives he pronounces words of favourable omen, and they all imitate him. "Iron, provide us with oxen and sheep! (to be purchased with the sums the honey yields). Axe, provide us with a hive which will bring prosperity to our children!"

When he is to carry to the blacksmith the iron thus blessed, the man arises before dawn so that he may not meet anybody who could exercise a malign influence on the metal. The blacksmith at once sets to work, and while the bellows are in full blast there are fresh adjurations, in which the native recalls the names of all the beekeepers he knows, in order to attract their bees to his own hive. "Come, bees, come to the hive that I am going to make with my axe!" This axe must not be used for ordinary wood-cutting, and no hand must touch it except that of the beekeeper, above all, never the hand of woman. Meticulous care is employed in fashioning the knife for dividing the honeycomb. This must be shaped like a pruning-knife, and have a handle formed of a piece of wood about sixteen to eighteen inches long. Whilst he is at work upon it, the smith expresses his desires as he strikes the iron: "May this knife serve its master faithfully! . . . May he enter the hive quietly, without disturbing the bees. . . . May his bees not forsake him! . . . May the hive not be shattered, nor the bees swarm elsewhere! When the beekeeper goes along the road with this knife, grant that he may not encounter anything unfavourable," and so on.

When the usual gang of four natives goes to the forest to fell the tree, the trunk of which is to make the hive, the adjurations addressed to it before it is felled and sawn in pieces will vary according to its species. For preference they select the *msedi*, the king of the forest, whose wood is the most durable. The head of the gang applies his axe to the trunk saying, as he swings it four times: "*Msedi*, thou who art so great . . . it is poverty that brings me to thee. I need children. I need goats and oxen. . . . Thou, *Msedi*, if thou hast the chance, cause the bees to come hither!" (He then enumerates the places whence they are to be attracted.)

Another tree, the *mringa*, only to be found in the belt cultivated by the Dschagga, calls for special adjurations when it is to be felled. It is supposed to be the sister of the native who owns it, and he cannot take part

in the felling operations. All that is done to make use of the tree is represented to it as if in preparation for its marriage. The day before it is to be cut down the owner betakes himself to the tree with offerings of milk, beer, honey, and so forth. "My child, about to leave me, I am giving thee to a man who will wed thee, my daughter! . . . Do not think that I am forcing thee to this marriage, but now thou art fully grown. . . . My child, about to leave me, may all go well with thee! . . ." Next day he absents himself that he may not be obliged to be there when the tree is felled, when he who has acquired it shall arrive. In his place there is a master of ceremonies whose task it is to confide the tree, his sister, to those who come for it, just as a fiancee is confided to her husband's friends. When the rites have been accomplished they begin to strike the tree with the axe, and at this moment the head of the gang says: "O child of a man thou art about to leave, we are not hewing thee down, we are giving thee in marriage! Neither is it by force, but with kindness and gentleness." . . . He finishes up with the adjuration to the bees, as in the case of the *msedi*. At length the tree lies on the ground, and while the gang is busy around the fallen giantess, its owner arrives as if by chance. He is amazed at what he sees; he laments, as for a crime that he has come too late to prevent, exclaiming, "You have stolen my sister from me!" These words, and many similar expressions, are designed to persuade the tree of his sorrow. The others do all that they can to calm him. They are ardent in asseverations that all will be for the ultimate good of both his sister and himself, and finally peace is restored.

Whilst the trunk is being hollowed out to make the hives, new adjurations, to the rhythm of the blows, are addressed to the axe itself, to the bees in the hive and the bees of other beekeepers. They are accompanied by maledictions hurled against all who may, through their sorceries and witchcraft, seek to injure these bees and their home.

When the hive is finished it is furnished with a crook to hang it up by. This is made of wood of certain trees, and there are the same ceremonies and adjurations to go through when these trees are felled. Those who cut them down excuse themselves by recalling the example set by their ancestors, who did the same through poverty and because they needed children and cattle.[1]

Religion in Primitive Cultures.

The origin of religion is one of the most controversial questions among students of religion and history.[2]

[1] Lucien Lévy-Bruhl, *The "Soul" of the Primitive* (1928), pp. 21–23. By permission of George Allen & Unwin, Ltd., London.

[2] The classic study of primitive religion is James G. Frazer, *The Golden Bough* (1890); it was reissued between 1907 and 1915 in twelve volumes under several titles, and in 1922 an abridged edition having the original title was published.

Other anthropological discussions of religion are R. R. Marett, *The Threshold of Religion* (1900); Carveth Read, *Man and His Superstitions* (2d ed., 1925); R. H. Lowie,

Almost all contemporary religions embody the doctrine of revelation, which explains their origin as an imparting to man by some spirit of a knowledge of the spirit world. The idea "revelation," it may be held, is a corollary of the concept "daimonic universe." Since the discovery that man has existed on earth many thousands of years, the times and places of revelation have grown uncertain. Some recent writers have postulated an original revelation by "*One True God*" at that point in biological evolution when man emerged from his animal ancestors; it is sometimes argued that at this point the "*soul*" was planted in man. Confronted with the belief in a daimonic universe everywhere prevalent among primitive peoples, these writers explain that the originally revealed pure monotheism underwent a deterioration and became a mythology.[1]

Opposed to this conception of the origin of religion is the idea that it developed as a natural growth of human understanding and as a natural expression of human feeling. The proponents of this idea assert that man invented the concept "spirit" or "daimon" just as he invented technology and arts.

Although there are many definitions of religion it seems safe to assert that there is no religion without gods; in other words, religion had its source in the thought and feeling of men as they lived in the daimonic universe. Its central idea is that the affairs of men are under the control of "powers greater than man"; its dominant emotion, which takes many moods, is the feeling that man is dependent on these powers. Accordingly, throughout social and cultural developments, this idea and this feeling have been from time to time restated in terms of new conceptions of the "powers greater than man." But always man has remained in a world of which he possesses a limited understanding. Thus the

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Primitive Religion (1924); also R. R. Marett, *Faith, Hope, and Charity in Primitive Religion* (1932); Raoul Allier, *Magie et religion* (1935); B. Malinowski, *The Foundation of Faith and Morals* (1937); Paul Radin, *Primitive Religion: Its nature and origin* (1937); A. H. Krappe, *Mythologie universelle* (1930); Lewis Spence, *An Introduction to Mythology* (1931). See also article "Animism" in the *Encyclopaedia of the Social Sciences.*

For general treatments of the development of religion see Crawford H. Toy, *Introduction to the History of Religions* (1913); E. W. Hopkins, *The Origin and Evolution of Religion* (1923); George F. Moore, *The Birth and Growth of Religion* (1923); Carl Clemen, *Religions of the World: Their nature and history* (1931); and Salomon Reinach, *Orpheus: A history of religions* (1933).

E. S. Ames, *Religion* (1929), is a summing up of the case for religion as a social product; the standard treatment of the psychology of religion is William James, *Varieties of Religious Experience* (1902).

[1] See Th. Mainage, *Les Religions de la préhistoire: L'age paléolithique* (1921), p. 418.

"powers greater than man" have changed, but man's dependence upon them has remained. In this manner religion has developed without having lost the primitive idea and feeling that went into it.

The chief religious acts have meaning in terms of this idea and this feeling. In man's effort to maintain relations with the powers greater than he, he worships; and worship consists of three types of acts: (1) prayer, (2) sacrifice, and (3) ritual. Prayer is an effort to communicate with the "higher powers." Among primitive peoples prayer is usually a request or an expression of thankfulness; in any case it expresses the feeling of man's dependence on the higher powers. Sacrifice is an act in which some object is devoted to the higher powers, perhaps as a gift or as means of communion. Sacrifice involves the belief or feeling that, since man is weak and the higher powers are strong, they are impressed with his dedication to them of something he regards as valuable. Ritual is a series of acts performed according to rules in the belief that they please the higher powers. Usually they consist of fixed orders of prayers, sacrifices, and ceremonial supplications and are carried out as group rather than as individual activities. At the center of ritualistic practices is the concept "sacred": the persons who perform them, the ground where they are performed, the objects and vestments with which they are performed, and the language and gestures of the performance are regarded as holy, *i.e.*, set apart from common things. Through rituals the sense of social unity and religious feeling are blended; in the ritual objects, dress, gestures, and sounds, aesthetic qualities are compounded with social and religious feelings, in an overpowering experience. Among primitive peoples rituals—which are performed generally only at times of crisis in the life of the individual or of the group—stir the individuals and groups to deep emotions.

The varieties of prayers, sacrifices, and rituals of primitive worship are far too numerous to describe.

Religion, it is important to realize, is always the profound judgment which men, sensing all experience, make upon life, and they assimilate into this judgment the pervasive emotion which existing conditions of life nurture. Through this assimilation the greatest and the lowest of men in understanding and feeling sense their oneness—and that oneness, however known or felt, is their *God.*

To penetrate to the heart of a civilization we ought to begin with a knowledge of its gods. And in the very end this is what we come back to.

The creation of the gods is the most natural, the most secret, the slowest, the loftiest, of the works of man. It is the supreme achievement of his profound experiences. It is the mysterious fruit of minds in the mass.[1]

Religion is the emotional expression of the human need for security in a universe never fully understood.

THE TENDENCIES OF RELIGIOUS GROWTH IN PRIMITIVE CULTURES.

In the course of the development of hunting, nomadic, and peasant-village cultures man entered into new relations with the environment and shaped new social structures; the emotional reactions to these relations and structures necessarily affected his feeling of dependence on the "higher powers" and, therefore, his worship. Thus, although the fundamental elements of religion were everywhere the same, the organization of those elements in *religions* was conditioned by the various types of cultures.[2]

1. *The Religion of Hunters.* Hunting peoples look upon animals as the givers of life and the masters of men, and their spirits are the objects of belief and worship. The artifacts of the old stone age seem to to testify the early emergence of a religion of this sort. Its central figure was the animal guardian spirit, which is believed to protect and nourish men. Since there are many kinds of animals, different individuals, as well as groups, have different guardian spirits. Some contemporary hunting peoples seek the identity of an individual's guardian spirit in a dream or vision induced by deprivation or ritualistic suggestion. The social aspects of this belief in animal guardian spirits produced *totemism.* The primary concept of totemism is that the members of a clan, a kinship group, are descended from a common animal ancestor. The doctrine of the "totemic ancestor" can be understood as the projection of the conception of kinship into a spirit world whose chief figures were the spirits of animals. Worship consists of propitiating the totemic ancestor in the interest of social well-being. Such worship often takes the form of offering food to the totemic ancestor or of performing rituals of purification and sacrifice before going on the hunt. Worship does not mean that the hunter does not destroy the living representatives of his totem; on the con-

[1] J. Hackin and others, *Asiatic Mythology* (1932), pp. 29–30. By permission of George G. Harrap & Co., Ltd., London.

[2] On the religious beliefs in different types of culture see Christopher Dawson, *The Age of the Gods* (1928); also Paul Radin, *Primitive Religion: Its nature and origin* (1937), Chap. III, "On Its Economic Determinants."

trary, he seeks their multiplication and craves from his totem luck in taking them. Success in the hunt is regarded as a sign of the beneficence of the guardian spirit.

Besides the belief in animal guardian spirits, hunting peoples generally recognize ancestral spirits and a few beings representing the prominent or powerful aspects of nature. Except in a more general way these spirits of nature do not enter into the rule of human affairs. Often two contrasting features of the environment are conceived as spirits—one good, the other evil—and life is believed to embody their struggle; quite as often one great spirit, such as Biliku of the Andaman Islanders or Dengdit of the African Dinka, is believed to have been the creator of the earth. Ancestral spirits, however, hold a strong position in the beliefs of hunting peoples; they are especially significant in preserving the unity of the group. In fact, group life is often conceived as moving under the direction of long dead ancestors whose powers are far greater than the spirits of those who have died recently. Propitiation of ancestors frequently takes the form of offering food and caring for graves.

Although the hunter often seeks for himself the favor of the spirits, the worship of hunting peoples is generally organized socially in great ceremonials, such as dances and initiatory rites. Through such ritualistic performances the group as a unit supplicates the favor of the spirits; its sense of unity provides the emotional drive that gives fervor to worship. There is little place for individuality in the religious thought and practices of hunting peoples.

2. *The Religion of Nomads.* With the development of sociocultural types, such as nomads and peasants, whose normal activities involved relations with nature different from those of hunting life, it was inevitable that the role of the spirits should be reinterpreted in terms of new experiences. Nomads and peasants did not give up the general ideas evolved by their hunting ancestors; nor did they abandon the belief in many of the particularized spirits which these forerunners had conceived. Above all they preserved the beliefs in ancestral spirits and in daimons of disease. On the whole, however, the lesser spirits passed into the background of nomad and peasant thought; the foreground was occupied with abstractions which embodied deeper understanding of the world and man.

The religion of nomads turned about a spiritual being that mirrored life on the grasslands; thus in all parts of the world pastoral peoples have conceived of a *sky-god*, sometimes identified

with the storm but more generally associated with the sun. Those social developments which gave them the patriarchate gave to this sky-god the attributes of leadership and fatherhood; his jealousy, wrath, and arbitrary violence reflected the nomadic temper. Often he rode the plains in the storms, hurling thunderbolts; like the sun, sometimes he held high judgment in the heavens. Sacrifices of the animals which flourished on the grasslands propitiated him.

The idle hours of the herdsman gave ample time for meditations on the relations of gods and men, and so nomads developed a unified body of religious beliefs and literature; drawing images from the expansive grasslands and embodying the simple but strong sentiments which bound together the nomadic group, the beliefs and literature arrived at a universality in sharp contrast with the less well integrated systems of hunters and peasants. The intense emotion inspired by crises dangerous to the herd entered deeply into the religious feelings of nomads and made their faith in a chosen god undeviating. The unstable life of the group allowed such development of religious ideas and emotions in individuals that significant expressions came from persons who spoke their own experience; such individuals were recognized as prophets.

3. *The Religion of Peasants.* Peasants, who naturally concentrated attention and feeling upon the earth and the growing process, generally united them in a belief in an *earth mother.* Just as the religion of the nomad expressed the role of the dominant male, so the religion of the peasant expressed the role of the creative female. This goddess was almost universally identified with the earth, fecundity, sexual passion, the domestic arts, and the plants. Her worship recognized the seasonal aspects of plant growth; undoubtedly its most significant idea, turning about the death of vegetation in the autumn and its renewed growth in the spring, was the concept of the resurrection of the soul. This concept was usually expressed in terms of sexual love between the earth mother and some male being who, having died in the autumn and remained in the world of the dead through the winter, was reunited with her in the spring. Such emphasis upon productivity led to the worship of sexual organs and often to orgiastic ceremonies; the world over, peasant religion embodies beliefs and practices which are regarded by other sociocultural types as obscene.

The need for following the agricultural routine around the year with the seasons led to the growth of complicated rituals which

could be performed only by special persons. Thus agriculture fostered the formation of a priesthood whose members preserved from year to year the knowledge necessary to propitiate the spirits who held the gift of good crops; obviously this priesthood also attended to the practice of the proper agricultural techniques. Its members, therefore, were more the administrators of a divine order than the prophets of new understanding of spirituality; in their view the performance of routine was more pleasing to the gods than outbursts of fervent emotions.

Since tendencies of religious development of the several types of primitive cultures were brought together in different combinations as peasant-village and nomadic cultures spread through southwestern Asia and northern Africa, it is not surprising that at the base of the religions of Mesopotamia and Egypt were beliefs in totemic deities as well as in sky-gods and earth mothers.

KNOWLEDGE AND THE ARTS IN PRIMITIVE CULTURES

Although early man was profoundly ignorant of both himself and his world, through thousands of centures he built up a body of knowledge and developed arts which were significant elements in the general growth of civilization. These achievements of preliterate men are too frequently unrecognized.

The Origin of Science.

The record of early man's advancement of knowledge can be read only in the artifacts of the stone ages. As previously noted, old stone age man learned to select the best materials for the making of stone implements; similarly the diversification of these implements and the discovery of the uses of bone and skins also represented significant advances of knowledge. As hunters old stone age men undoubtedly knew a great deal about the habits and anatomy of animals. The cave paintings testify to a high knowledge of form, and many of them show wounds in vital parts as well as the approximate location of the heart. Old stone age men knew that a blow between the eyes would stun or kill a wild ox; they also knew that to stun or kill a bear with a blow it was necessary to strike the temple. Such differences were highly important to cave-dwelling hunters, but they were learned only in combat. The earliest evidences of mathematical abstraction are notches in groups of five found on certain Gravettian remains.

Contemporary hunting peoples are generally known to have excellent powers of observation. This keenness arises only because they need to know minutely their environment. The Indians of southern California distinguish by name and use for food at least sixty species of animal. The Eskimos have a specialist's knowledge of the fish upon which they live; in their language there is a word for every condition of blubber—fresh, raw, putrid, etc. The adeptness of hunters in using their knowledge is well exemplified by the African Pygmies, who paint stripes on their bodies when they stalk the striped okapi. The manufacture of bows has called out the genius of all hunting peoples. For the material of the bow, the Andaman Islanders select the wood of a naturally bent tree. They shape the bow by planing the wood with a boar's tusk. To increase the spring the bow is bent against the natural curvature of the wood and cured over a fire; the lower portion of the bow is longer and thicker than the upper part. The bowstring is made from the fiber of an especially tough creeper. When not in use the bow is lightly strung; usually several strings are attached to the bow at one end, so that when a string breaks another is immediately at hand. The Eskimo bow is a splendid instrument of bone and sinew. Besides their specialized knowledge of game, hunting peoples frequently know many things about plants. Some primitive peoples have a startling knowledge of poisonous substances and their manufacture. Fisher folk know well the sources of the fibers of which they make nets and lines. Some fishing people make different types of hooks to catch different kinds of fish.

Perhaps the domestic arts of the Andaman Islanders suggest well enough the general type of knowledge which hunting peoples possess. These pygmy people—in camps built away from tall trees likely to be blown down by storms—face their huts to leeward, slope the roofs, and cover them with specially selected cane and palm leaves. The floor is raised above the surface of the ground. When they cook food—meat—they pack it firmly into a bamboo container, cover it tightly with leaves, and then allow it to stand in hot ashes until the meat is done; to secure the food the bamboo joint is cracked open. Tongs of split bamboo are used to handle hot objects. Buckets for water are made from wood with melted beeswax poured over the bottoms to prevent leaking; a bail is made from strips of cane. Seven different plants provide fibers for making nets and bowstrings; other plants, especially rushes, supply materials for lashings, baskets, and mats. To secure poisons, juice is squeezed from certain leaves and buds. Besides the bow,

already described, the chief implements are a hooked pole for picking fruit, a double-pointed digging stick, an adze for cutting wood, bone fishhooks, and arrows.

The rise of cultivation and domestication required an intellectual revolution, as well as the acquisition of a vast amount of information. To recognize that a small pellet planted in the ground at one time of year will grow into a plant producing similar pellets, or even some other material useful to man, at another time of year represented an amazing growth of the human understanding. The attention of hunters upon the immediate aspects of nature gave place among peasants to an understanding of the relation of events through time. Nature was seen as a number of processes which were manifest in phases of plant and animal life. The result of this changed point of view was to make possible the orientation of human behavior in terms of purposes that required the use of information over more or less long periods of time. And in this possibility was the stimulus to the further pursuit of knowledge. Undoubtedly the discoveries leading to the development and elaboration of the crafts were the products of this intellectual revolution which integrated man's life more deeply with the processes of nature. When it is realized that all this knowledge could be won only by trial and error, early man is discovered to have been, although unconsciously so, an audacious experimenter.

The attainment of abstract knowledge was very slow. The simplest counting system may have been, as with some contemporary primitives, *one*, *two*, *many*. Many primitive languages have no words for numbers above *two*. But primitive peoples frequently compute with large numbers by using pebbles; the English word "calculate" is derived from a Latin root that originally meant "pebble." Many counting systems are built up by using different parts of the human body as numerical signs. Thus among certain American Indian tribes the count runs "one, two, three, four, whole hand, whole hand and one," etc. "One Indian" is twenty. Timekeeping and mensuration are equally simple. Generally, primitive peoples count by "nights" rather than by "days."[1] The Andaman Islanders use fifteen terms to designate different times of the day and night. A similar system is used by the African Nandi. For example, 2 A.M. is "The elephants have gone to water"; 5 A.M., "The houses are open"; noon, "The sun has stood upright"; and 4 P.M., "The oxen drink water for the second time." The

[1] Martin P. Nilsson, *Primitive Time-Reckoning: A study in the origins and first development of the art of counting time among the primitive and early culture peoples* (1920).

African Bushmen recognize two seasons, one with thunderstorms and the other without, while the Bahau Dayaks of Borneo distinguish eight seasons according to the planting, cultivation, and harvest of rice. The lunar month is the common unit for keeping account of the longer lapses of time; the year is roughly estimated only in terms of seasons. Except perhaps for a period of a year or two, contemporary primitives have no conception of the past; it is a hazy period in which events are said to have happened "once upon a time" or "a long time ago." Distance is usually measured in terms of a day's journey. Quantitative measurement is unknown except by units such as "a handful," "a heap," and "a basket."

This lack of abstract conceptions which accurately summarized objective experience prevented early man from attaining any precision in his manipulation of the environment: he followed "the rule of thumb."

Within a relatively small area early men, like contemporary primitives, probably had a remarkable knowledge of terrain. Contemporary hunting peoples generally know well the water courses and rivers of their homelands. They are able to follow the paths of migratory animals for long distances; such tracks were, it seems likely, the earliest highways. Sometimes they have names for the prominent physical features of their habitat, which upon occasion they can indicate on maps of their own making. Certain Eskimo tribes make remarkably accurate maps of the lands they frequent. The Andaman Islanders knew almost nothing about the earth beyond an area less than fifty miles across in any direction. Beyond the region intimately known most contemporary primitives have only vague notions of geography. Thus inlanders will speak of "the great water," plains people will know about "a tree country," and tundra dwellers will have heard of "a warm land where buffaloes are." To primitives generally, distant lands are the homes of strange animals and strange men with strange habits.

To know the sun, moon, and stars as physical bodies was beyond the power of the preliterate intellect; as all mythologies affirm, they were spirits. Many contemporary primitives can mark courses on sea and land by the stars, and they also recognize the planets as movable bodies. But this little astronomical knowledge means nothing to their understanding of the physical universe. Like their views of the particular aspects of nature, their conception of the universe as a whole embodies animistic beliefs. According to the Haida, a hunting people of northwestern North America, the earth is flat and circular, consisting of the sea and

two islands, the Mainland Country and the Inland Country. The Inland Country, where the Haida live, floats upon the sea, which is supported by a supernatural being, The-Sacred-One-Standing-and-Moving, who in turn stands upon a box supported in an unexplained manner. Above the earth the solid firmament hangs like an inverted bowl; to its underside are fastened the stars, the sun, the moon, and the clouds. Beyond the firmament are five sky-countries, where several different orders of supernatural beings reside. The Above People inhabit one of these sky-countries; a being called Wigit rules over them and also keeps an account of all the people on earth. When a child is born, Wigit draws a stick from a bundle behind him, and the life of the child is fixed by the length of the stick. Supreme over the sky-countries and the earth is the greater deity, Power-of-the-Shining-Heavens. The Andaman Islanders describe the earth as an island supported by a pine tree.

Early man's knowledge of anatomy, physiology, disease, and medicine was certainly meager. He probably learned at a very early date that he had internal organs like those of animals. But he discovered their functions very slowly. Probably he believed, as contemporary primitives do, that the organs are the seats of certain feelings and qualities of behavior; thus the stomach is sometimes regarded as the organ of memory, the viscera the seat of thinking and the conscience, and the heart the abode of courage and valor. At what time early man discovered the role of the male in procreation will probably never be known; most contemporary primitives possess this knowledge. In the chaotic superstitions of the folk medicine of contemporary primitives is embedded much knowledge of the curative powers of herbs, the good effects of fasting, the benefits of rubbing, and the results obtainable by the application of heat. Undoubtedly this knowledge has been accumulated very slowly by trial-and-error methods. Many primitive peoples treat simple fractures, cuts, and boils skillfully.

The body of factual information which early man built up was the root of *science*. But he, and his literate descendants as well, long failed to understand the role factual information played in life. Both devoted their intellectual activities to the discovery of a fuller knowledge of the daimonic universe. Perhaps no single factor has had a greater influence in the general development of civilization than the very early fixing of attention on the imagined daimonic universe, for by diverting attention from physical nature, emotion was given such free play that thought was mainly fantasy.

Even when thinking became systematic in the mythologies and early philosophies it was still mainly fantasy. Man has always lived by means of the application of factual knowledge in the routines of daily life; the misunderstanding of this fact fixed the depth of his original and long-continued ignorance.[1]

THE BEGINNING OF THE ARTS.

The early development of the arts is amply proved by the old stone age wall paintings, engravings, and figurines. Some contemporary primitives, particularly the African Bushmen, make paintings remarkably like those of the upper old stone age. The forms of early dancing, music, and literature can only be guessed at.[2]

Among contemporary primitives, the arts are not clearly differentiated from economic, religious, and social activities. Every primitive individual is, therefore, in one way or another an artist. Undoubtedly aesthetic feeling finds expression not only in the crafts but also in charms and fetishes. Among the decorative arts body painting and tattooing are highly developed, while the dance is the most complicated of the social arts. Every Andaman Island camp is built around an open space which is used in the evening for dancing. Primitive music is essentially rhythmical, for the simple instruments—drums, rattles, taut strings on bows and basins, and blow pipes—do not permit the rendering of melody. All the arts combine to make great tribal ceremonies, such as the Rain Dance of the Hopi Indians, truly remarkable events. The complete infusion of group emotion in artistic forms is a universal feature of the cultures of primitive peoples.

[1] Alexander A. Goldenweiser, *Robots or Gods: An essay on craft and mind* (1931), p. 13: "The mind reflected in primitive industry is not the mind of the mystic. In vain do we look in this field for evidence of supernaturalism. It is not magic that controls the operations of the craftsman. The care and precision with which the properties and the ways of nature are accepted and followed in the work of industry are evidence enough that nature in her ways and properties had everything to do with the results achieved." By permission of Alfred A. Knopf, Inc., New York. See also Richard Thurnwald, "Varianten und Fruhformen des Denkens und der Gestaltung. Prae-Logik?" *Zeitschrift für Völkerpsychologie und Soziologie*, Vol. 4 (1928), pp. 314–330; T. Brailsford Robertson, "The Historical Continuity of Science," *The Scientific Monthly*, Vol. 3 (1916), pp. 389–398.

On myth as the scientific theory of primitive cultures see B. Malinowski, *Myth in Primitive Psychology* (*ca.* 1926).

[2] On primitive art see Franz Boas, *Primitive Art* (1927); E. Grosse, *The Beginnings of Art* (1897); K. Stumpf, *Die Anfänge der Musik* (1911); Hugo Obermaier and Herbert Kuhn, *Bushman Art: Rock paintings of south-west Africa* (1930); Herbert Kuhn, *Die Kunst der Primitiven; mit zweihundertfünzehn abbildungen* (1923); Julius Lips, *The Savage Hits Back, or the White Man through Native Eyes* (1937).

But the most distinctive feature of primitive art is symbolism. Its forms are summations of emotion and understanding that link behavior with the imaginative environment upon which men's attention is firmly fixed. Such fixations so prevent men from observing nature that much of primitive art embodies aberrations of form and color which are inexplicable, even in aesthetic terms. Unfortunately, although freed from a false naturalism, primitive art is subject to canons having their source in social controls; as symbols, the art forms must conform to the meaning they represent, and those meanings are generally inflexible. Thus although there is an almost unbelievable variety of art forms in the world of primitive peoples, the art of any particular people is relatively poor. And once the art of a primitive people falls into a pattern, it, like every other element of the culture, tends to persist without significant modification. Infinite variety in detail exists in primitive art because technics are so much a matter of guesswork, but the fixed traditions of groups deny to individuals freedom for the creation of new motifs. Primitive art is a true expression of that intellectual synthesis in which emotion vivifies the beliefs that cause man to orientate, under social controls, his experience in an imaginative view of the world.

The typical literary product of primitive man is the *myth;* closely related to it is the *folk tale.*[1] Both share the general qualities of vivid imagery and simple emotionalism. While the myth usually gives an explanation of some fundamental aspect of nature or human relation, the folk tale generally teaches a lesson. The following tale of the contemporary primitives of the Sudan, "The Spider and the Rubber Baby," is a pleasing example of primitive imaginative moralizing:

This is about the Spider. He said to measure him out some ground-nuts. He said,—"Peel and cook (them)." So (they were) peeled and cooked, salt and oil were put in, (and) he said he was going to sow. So he took his hoe, and found a shady, cool place near (the) water. Then he ate (until) he was satisfied, he drank water, he lay down, and went to sleep. When he got up, he took some mud and plastered (it) on his body. Then he came to his wife, and told (her) to bring him water to wash with, he had returned from work. This went on and on until the time of the ground-nut harvest came. Then the wife said she had seen ground-nuts at everyone's house ripening (looking well); (therefore) those which her

[1] On the literature of primitive peoples see A. H. Krappe, The *Science of Folklore* (1930); also Franz Boas, *Kwakiutl Tales* (1935); R. S. Rattray, *Ashanti Proverbs* (1916); and B. Cendrars, *The African Saga* (1927).

husband had sown must be ripe by now. So she said she wanted to go to the farm and grub. Then he said,—"Oh, no, it was not you (who) sowed the ground-nuts for me. I shall go and dig them." In reality he was going to steal from the Half-man. So he went and stole ground-nuts, and brought (them) to his wife. Then the Half-man came, and saw that he had been robbed, and said he would make a trap with a rubber girl and catch (the thief). Then the Spider came and saw a fine girl, with a fine neck (look at the neck), with fine breasts. So he came and touched the breasts, and said,—"Oh, Girl." Then the rubber held him. Then he said,—"Ah, Girl, let me go. Do you want me?" Then he placed one hand (on her) also. Then the hand stuck. Then he said,—"You, Girls, do you like a man enough to hold him? I will kick you." So he kicked with one foot. The rubber held him. Then he got angry, and used an abusive epithet. He kicked also with the other foot. When he had kicked, the rubber caught him all over. He was bent up. Then he said,—"Very well, I am going to butt you." So he butted her, but his head stuck. Just then the Half-man saw (him). Then he said,—"Thanks be to God." He got a switch of the tamarind tree, and put it in the fire. Then he brought some butter and rubbed (it on). Then he came, and fell upon the Spider until (his) back peeled. His whole body was peeled. Then he loosened the Spider from the rubber. He said,—"Here, you Spider," so said the Half-man, "if you come here again, I the Half-man will kill you."[1]

Another typical literary product of primitive peoples is the *proverb*. As a concise summation of social experience, it usually embodies a simple truth. The imagery of proverbs varies according to the environments of their makers, but the ideas are universal. It is not difficult to think of the English parallels of the following primitive proverbs:

Don't make rich cloth for carrying a child before it is born.

The zebra cannot do away with his stripes.

There is no beast that does not roar in its own den.

The puffed mouth is full of wind.

The hilltops are near but the roads to them are long.

I had a number of friends before calamity befell me.

Feed men and they will obey.

One day's beauty, a short-lived pleasure.

Love is a mist; there is no mountain to which it will not cling.

If primitive man was wise in his way, so also was he sentimental. And neither his wisdom nor his sentiment is strange to

[1] *Folklore*, Vol. 21 (1910), pp. 214–215.

contemporary man. Men have generally loved nature and sensed its beauty:

Yellow butterflies
Over the blossoming, virgin corn
With pollen-spotted faces
Chase one another in brilliant throng.

Blue butterflies
Over the blossoming virgin beans
With pollen-painted faces
Chase one another in brilliant throng.

Over the blossoming corn,
Over the virgin corn
Wild bees hum;
Over the blossoming beans,
Over the virgin beans
Wild bees hum.

Over your field of growing corn,
All day shall hang the thunder cloud,
Over your field of growing beans
All day shall come the rushing rain!

Men and women have universally loved one another and quarreled. Men, of course, have not always moaned:

Alas for me! Alas for me! My little wife,
My darling has gone astray!
My little beautiful wayward spouse,
My friend who made my heart brave,
My friend in the storm, has been stolen away.
A wreath of the *fara* tree, a garland of pandanus blossoms
I have gathered for thee,
O Aitofa, and lo, thou art flown!

Nor have women always found consolation so easily:

I had a dream last night:
I dreamt my husband took a second wife;
So I took my little basket and I said before I left,
"There are plenty of men."
Thus I dreamt.

But they have commonly buried their differences in adoration of the baby:

Baby swimming down the river;
Little drift wood legs,
Little rabbit legs.

In one profound sense the unity of history is found in the sameness of the sentiments which men in all ages have felt.[1]

SUMMARY: THE MAIN CONTRIBUTIONS OF PRIMITIVE MEN TO THE DEVELOPMENT OF CIVILIZATION

The enduring contributions of primitive men to the development of civilization were not so much specific customs, folkways, rites, beliefs, and practices as they were general attributes of behavior and an intellectual outlook which became elements in all cultural traditions.[2] They may be briefly summarized as follows:

1. *A Body of Technics.* A body of technics, which, organized in the various occupations, crafts, and arts, constituted the material basis of life. The existence and persistence of this body of technics were taken for granted, for they were embedded in the matter-of-fact activities which everyone was expected to carry on.

2. *The In-group Interest.* The dominance of the in-group over the individual was organized in emotion, so that situations placing individuals in the immediate service of the in-group called forth enthusiasm and fervor; the in-group interest was felt, not understood, and to feel it was sufficient to serve it. The natural attitude toward out-groups was hostility.

3. *In-group Morality.* Within the in-group, respect for the rights of individuals, although the rights were defined in many ways, gave stability and order to social relations. Life, property, and the family, under some circumstances and in some forms, were inviolate.

[1] The verses in this paragraph have been selected from poems in Paul Radin, *Primitive Man as a Philosopher* (1927), p. 222, 137, 121, and 140. By permission of D. Appleton-Century Company, Inc., New York.

[2] Among anthropologists there is no agreement about the fundamental qualities of primitive mentality. Different views are developed in the following works: Wilhelm M. Wundt, *Elements of Folk Psychology: Outlines of a psychological history of the development of mankind* (1916); Lucien Lévy-Bruhl, *Primitive Mentality* (1923); John Murphy, *Primitive Man: His essential quest* (1927); Raoul Allier, *The Mind of the Savage* (1929); Franz Boas, *The Mind of Primitive Man* (rev. ed., 1938).

For discussions of the relation of primitive mentality to contemporary culture see R. H. Lowie, *Are We Civilized? Human culture in perspective* (*ca.* 1929); Charles R. Aldrich, *The Primitive Mind and Modern Civilization* (1931); Franklin H. Giddings, *The Mighty Medicine: Superstition and its antidote* (1929).

4. *The Daimonic Universe.* The universe was a vast complex of intangible and uncanny forces. These forces were spirits which took many forms. The spirits could be dealt with by means of physical manipulations based on factual information.

5. *The Uncertainty of Life.* What happened to man as he went about the affairs of life was beyond both his power to control and his capacity to understand. The uncanny forces, working in unknown ways, determined that "luck" was to be "good" or "bad." An unseen hand guided the destinies of men.

6. *The Helplessness of Man.* In the face of universal uncertainty of life man could do little for himself except show his dependence on the spirits. He could fear or worship or influence them, but never forget them. His attitude toward life was emotional; factual knowledge, regardless of the part it actually played in his activities, was secondary to his relations with the spirits.

7. *The Belief in the Existence of the Soul.* Since man himself had a soul or spirit, which had its origin and final fate in the overworld of spirits, worldly life was just an incident in an existence which was begun before birth and continued after death.

8. *Good and Evil.* The spirits established and enforced rules of behavior which defined good and evil. Actually, however, good and evil were defined in terms of group as opposed to individual interests. Whatever the group sanctioned was good; whatever it condemned was bad.

9. *The Resort to Violence.* Physical violence was a normal element in life; in times of crisis, either for the group or for the individual, its use needed no justification.

10. *Emotionalism.* The primacy of emotion and the immediacy of experience (*i.e.*, specific sensations were keenly felt rather than reflected upon) gave to experience as a whole a poetic mood. Nature and man were alive with meaning which could be best known by feeling. Every fact had an over- or undertone that bound it into a greater world of being and knowledge than that which belonged to it as a fact. The primacy of emotion led to the neglect of the pursuit of factual information that could have a scientific or technological use.

11. *Traditionalism.* Because life was uncertain, those procedures which worked successfully had to be retained and those objectives which have been called good could not be set aside. Whatever was old was right. It was better to endure known evils than to risk the suffering of greater ones that might come if anything was

changed. Social stability must not be disturbed by individual need, desire, or inventiveness.

Since culture is an organization of human activities, beliefs, and feelings shaped and transmitted through social interaction, insofar as the foregoing achievements of early men have endured and even now persist, all cultural traditions have had and even now have primitive elements. There can be no clear understanding of the development of cultural traditions without recognition of this fact.

Several aspects of social development have been significant in perpetuating the primitive orientation of life. In cultures carried by small communities, more or less isolated from one another, in which learning is transmitted in an oral tradition or in the acquisition of skills by the many younger members from the few older members, many primitive materials survived almost without modification. In cultures having clearly defined bodies of belief and lore preserved and transmitted by a specialized learned group, primitive materials remained dominant. In cultures whose masses never acquired a knowledge of writing it is a fair inference that they received and transmitted orally the learning of primitive ancestors. Even in periods of cultural growth primitive materials—stripped of their concrete imagery and reorientated in terms of the innovations—have commonly persisted, sometimes, indeed, with increased rather than decreased significance. Such reorientations of primitive cultural materials have been, it seems, a recurring phase of the development of all cultural traditions. The mere passage of time does not necessarily mean, therefore, that human life has lost its primitive orientation.

To emphasize that primitive materials have been important in all cultural traditions is not to criticize either the materials or the traditions. The epithet "primitive" is not derogatory. Primitive cultural materials have been, in fact, both good and bad. Primitive technical achievements were the basis of subsequent economic and scientific advances. The concept "daimonic universe" and its corollaries entered deeply into intellectual development, not without disadvantage, for they diverted men's attention from the relation of technological and scientific materials to social amelioration and obstructed the accumulation of factual information. The emotional fixations originating in the insecurity of life among early men persisted as the deepest sense possessed by man of his place in the world and profoundly influenced the evolution of religions. Similarly, the subversion of the individual's interest to his in-group's

interest was fixed as the norm of rational behavior and was organized in emotional expressions of a collective nature which gave the individual little opportunity to escape the subordination; this has always been the fundamental factor giving substance to altruism, although it has also justified the use of violence against all enemies of the in-group. The high emotional content of the individual's sense of the interest of his in-group has been a fundamental element in all cultural traditions, providing the individual with an identity transcending his limited activities—it has given him a sense of purpose in terms of a movement of life that has no limitations, either of time or of space. To recognize this fact does not mean, however, that the primitive definition of the in-group has persisted. On the contrary, the redefinition of the in-group interest has been always—and is today—a significant aspect of cultural growth; indeed, moral growth may be said to occur almost entirely in terms of such redefinition. Inasmuch as traditionalism has called individuals to serve a definition of in-group interest shaped in the past, it has been a powerful deterrent to moral growth. For this reason the survival of primitive materials has made social and cultural change difficult: commonly they have defined as immoral those advances by which life could be ameliorated.

Chapter III

THE RISE OF URBAN CULTURES IN THE ANCIENT-ORIENTAL LANDS: MESOPOTAMIA AND INDIA

When a few men do some new thing, whether by intention or by chance, they necessarily disturb other men who have no desire to do a different thing. But as a result of the disturbance these other men are compelled to alter somewhat their way of life. In other words, social changes stimulate cultural developments and vice versa, so that, as previously noted, cultural traditions develop continuously under the influence of their own internal elements. Although the effects of some changes may be so great that the way of life they produce is far different from the one in which they began, there are no real breaks in the development of cultural traditions: new ways of life always actually arise out of old ways.

THE BEGINNINGS OF URBAN CULTURES

The rise of urban cultures was a development of this character, for although it involved far-reaching changes its source was the peasant-village way of life, and although it occurred rapidly in comparison with the cultural growths of the old and new stone ages it moved slowly, taking at least fifteen hundred years—5000–3500 B.C.—to shape a new organization of life.

Environmental Factors in the Rise of Urban Cultures.

In the sixth millennium B.C. the snowfall increased on the ridges and buttressing plateaus of the Eurasian mountain backbone, the forests crept farther into the bordering park lands and plains, and annual floods, carrying the heavy thaws of spring, rushed down the rivers, especially those flowing southward. But the aridity of the southern deserts did not grow less. In fact, as the evidence of the Nile valley indicates, it seems to have increased, so

that the deserts encroached upon the plains and valleys where, up to this time, grass had grown throughout the summers. In the area from Egypt to Iran through which the early peasant-village cultures were spreading, these climatic shifts brought droughts and floods in combinations which, while pressing men toward the well-watered places, set them the problem of saving themselves from destruction by natural disaster.

Such events, it may be believed, pushed neolithic men about throughout the fifth and fourth millenniums B.C. Some of them carried peasant-village culture into the park lands north of the Eurasian mountain backbone in central Asia, across the Iranian Plateau to Baluchistan, and over the Armenian Highland, Asia Minor, and the Aegean Islands. Others settled along the Nile flood plain, in a rain belt across Syria and northern Mesopotamia, and in the lower Tigris-Euphrates valley. In each of these areas some sites which became centers of the development transforming villages into cities may have been occupied as early as 5000 B.C. At any rate this development began in both Mesopotamia and Egypt during the fifth millennium B.C.

The roots of urban culture, it should be remembered, were in the neolithic achievements—cultivation, domestication, and the elaboration of the crafts—which, when transplanted to certain peculiar environments, made possible a growth of wealth. The combination of environmental factors which supported this growth of wealth existed in the great subtropical river valleys of Africa and Asia and on the fairly well watered islands of the Aegean Sea. The Nile floods between May and October, reaching its height in September. The Tigris runs a turbulent course from March to June, and the Euphrates a more even flow from the middle of March to September. The Indus also floods during the summer months. But quite as important for the rise of the early cities as the annually replenished fertility and moisture of these flood plains was the subtropical climate of low rainfall, excessive summer heat, and cool winters. Low rainfall and excessive summer heat brought men together in the watering of their crops; in other words, they were forced to make, through cooperative efforts, a great investment of labor in order to produce wealth. In Egypt and India the excessive summer heat checked the formation of jungles, so that labor spent on the care of crops was more amply rewarded than in regions where wild vegetation thrived the year round. In Mesopotamia irrigation was necessary throughout the year. In Egypt the cool season, after the summer flood, was the time of planting and harvesting; the Nile



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THE TIGRIS FLOOD

The control of flood waters in Mesopotamia was never easy, and settled life there depended far more on an efficient system of irrigation and conservation of water than in Egypt. When men failed to maintain such a system, the land easily became a desert.

peasants called the summer months "the period when we sleep." In the Tigris-Euphrates valley the cool winter stimulated a diversification of activities in a population which had harvested crops grown in the summer. In the Indus valley, although it seems to have received a greater rainfall in ancient times that it does today, settled agriculture was possible only because of a routine of flood and drought similar to that of the Nile and Tigris-Euphrates valleys. In Crete the rains of winter and spring provided sufficient moisture, in spite of the summer drought, to nourish abundant yields of wheat and barley, notably on the fertile Plain of Messara. The grape and the fig grew on the upland ridges of the island, and fish abounded along its coasts. As a result of exploiting these resources, men followed ways of life unknown in the great river valleys—the ways of the sea.

THE TRANSFORMATION OF PEASANT-VILLAGE INTO URBAN CULTURE.

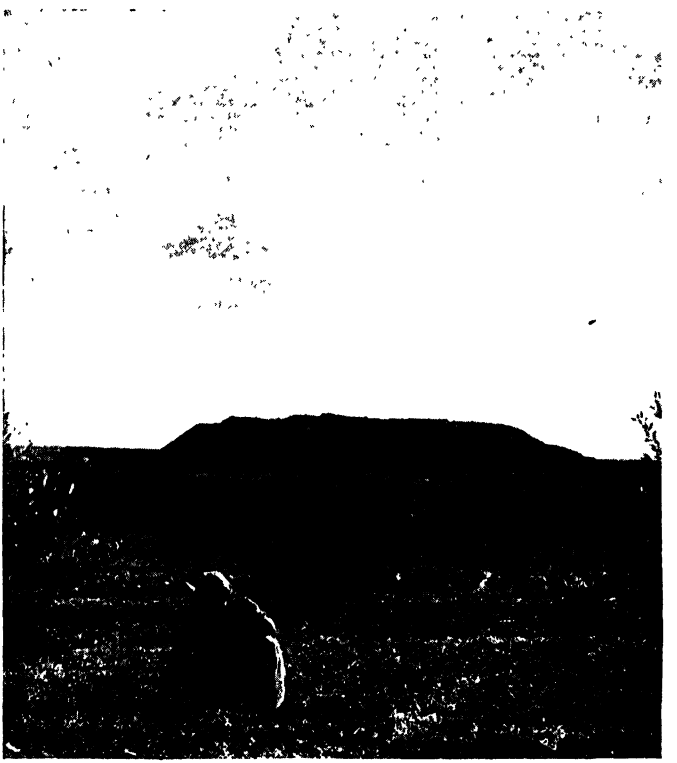
In Mesopotamia and Egypt the first cities probably appeared about the middle of the fourth millennium B.C.; in Crete and India they seem not to have arisen until about 3000 B.C. or a little later. In Mesopotamia they centered about temples. In Egypt they formed about the tombs of divine rulers. As yet no clearly defined centers have been found in the early cities of the Indus valley and Crete, although it has been determined that in the latter country the fully developed cities clustered about a structure that was both a temple and a palace. Commercial, industrial, and residential quarters have been identified in the early Indus valley cities. These early cities, it should be understood, did not merely attract a population; actually they evolved as the means of organizing the communal order which arose as the population was specialized in the new economic and social functions.

The clearest picture of the developments which transformed peasant-village into urban culture is provided by materials from sites recently excavated in the lower and upper Tigris-Euphrates valley. If the developments evidenced by these materials are viewed in perspective, they are seen as parts of a process of cultural interaction in an area which had its southern limits in southwestern Iran and its northern periphery in Syria and Anatolia. At Tepe Gawra, a site in the upper Tigris valley, the most complete sequence of cultural strata known to archaeology—twenty-six occupational levels—testifies to every important phase of this process, whose product was the more or less uniform urban culture that prevailed throughout the lower valley and had strong outposts in the upper valley just before the end of the fourth millennium B.C. Occupational levels at other sites throughout the valley can be correlated with those at Tepe Gawra.

1. *The Neolithic Phase.* The lowest cultural level at Tepe Gawra, which must be dated early in the fifth millennium B.C., is neolithic. The implements were made of flint and obsidian, a glassy volcanic substance. The pottery was painted in the Iranian style, a fact which suggests but does not prove that the original settlers came from the highland to the east or the north. They had beads, stamp seals, and terra-cotta figurines of a goddess of fertility, but no copper.

The settlement was, it appears, not greatly different from others across the upper valley and along its eastern edge—Tell Halaf, Tell Chagar Bazar, Arpachiya, and Samarra.[1] At these sites one or

[1] See map Mesopotamia, p. 134.



By the courtesy of the University of Pennsylvania Museum

TEPE GAWRA

At this site—the "great mound"—on the northeastern edge of Mesopotamia a sequence of cultural strata, dated from some time in the fifth millennium B.C., has given evidence of the transition from a neolithic to a well developed urban culture.

another of the three neolithic cultures of southwestern Asia—Syrian, Anatolian, and Iranian—either alone or in some combination, gave content to peasant-village life. On levels not far above the lowest they are found together at Tepe Gawra.

2. *The Tell Halaf-Samarra Phase.* In this phase of the cultural interaction which gave rise to cities, the peasant-village cultures of Syria and Iran met and mingled in the settlements along the upper and middle Tigris River. The pottery traditions were fused. Probably cultivation and domestication were united in new methods of production. More important, however, was the beginning of the use of copper. If the transition from peasant-village to urban culture is

viewed as a technological development, this use marks the beginning of the supplanting of stone by copper as the chief material for tools, weapons, ornaments, etc. The period of this supplanting is designated *chalcolithic*. Investigations around the Tigris-Euphrates valley have accumulated evidences which warrant the hypothesis that by the opening of the fourth millennium B.C. a copper-using peasant-village culture spread over Iran, Armenia, upper Mesopotamia, Syria, and Anatolia. The metal was beaten, not smelted and cast. At Tepe Gawra, as at other sites, only small amounts of the metal have been found on the levels which testify to the mingling of the Syrian and Iranian pottery traditions. There were no settlements in the lower valley at this early time.

3. *The Tell el'Ubaid Phase.* The oldest settlement in the lower valley now known is Tell el'Ubaid, a site on the western edge of the flood plain; its lowest level rests on virgin soil. The original inhabitants, who are believed to have come from Iran, lived in small huts, with walls of reed matting and flat roofs of mud and pitch. They kept cows, pigs, and goats, and grew barley. They wore clothing of sheepskin and cloth and decorated themselves with tattooed marks and ornaments of bright-colored materials. Although no copper has been found in the lowest stratum at Tell el'Ubaid, it is believed that the inhabitants knew the metal. A heavy stratum of clean clay overlying the lowest deposits suggests that floods were a serious menace.

Evidences of a similar culture, also resting on virgin soil, have been found at Ur and Uruk in the lower valley. It is also known at Susa and Samarra, as well as at Tepe Gawra. Architectural remains at Tell el'Ubaid and Tepe Gawra reveal a well-developed pattern of construction in which were combined piers, columns, and walls.

The embryonic city, as contrasted with the full grown village, appeared in this period.

4. *The Uruk Phase.* At Uruk (the Biblical name is Erech), a site more centrally located in the lower valley than Tell el'Ubaid, the full-fledged urban community is first known. A ziggurat and well-built brick temples towered over the community, which may have covered an area of about two square miles. Writing was known. The monumental structures and the writing, which was used for economic purposes, suggest that social life was becoming organized in new patterns. These developments were stimulated, it seems, by an invasion of peoples from the upper valley. At Tepe Gawra this phase of the transformation of the village into the city brought the height of chalcolithic culture. Besides copper, gold and

electrum (an alloy of gold and silver) were known. The site was crowded with habitations clustering around a rectangular temple. In most respects the culture of Tepe Gawra was independent of that of Uruk, which, however, was an important influence at Ur, Kish, Nineveh, and Susa.

5. *The Jemdet Nasr Phase.* At Jemdet Nasr, farther north on the flood plain, the remains of a temple, a pictograph script consisting of signs having phonetic values, cast copper, and wheeled vehicles testify to the cultural innovations that accompanied the growth of the urban community. These innovations, except the pictographs, are also known at Ur, Uruk, Kish, Ashur, and Susa. The writing points to the existence of an organized administration centered in the temple. At Tepe Gawra the influences of these southern developments appear to have been felt slowly.

The period in which they penetrated the upper valley came to an end with the overthrow and destruction of the chalcolithic settlement at Tepe Gawra. The destroyers are unknown, and, although they settled down, their tenure was short. For soon they were displaced by another people who possessed more of the new cultural materials of the lower valley. Cylinder seals and art motifs from Ur, Uruk, and Kish became common. Trade expanded. And copper was used for making all kinds of implements, tools, weapons, and ornaments. In fact, the disorders evidenced at Tepe Gawra seem to have been part of the general uprooting and moving of peoples which accompanied the perfecting of metallurgy, in the sense of copper's finally displacing stone for almost all industrial and military, as well as many artistic, purposes. In the course of this social upheaval and these migrations, the dynastic period of urban culture in lower Mesopotamia, for which there are written records, began, and with it came certainly the full emergence of urban culture.

The transformation of peasant-village into urban culture was accomplished in a process of fusion and elaboration of a great variety of cultural materials. Indeed, the innovations—metallurgy, writing, orderly commerce and industry, field agriculture, and government—which gave distinctive patterns to urban culture were as much products of the fusion of old materials as they were outright inventions. Social interaction was, of course, the necessary milieu of this cultural development. The Sumerians are given credit for building the earliest cities, but other peoples, especially those of the upper valley, shared the labor with them. The evidence of the various sites in the Tigris-Euphrates valley and on its

fringes, it should be emphasized, establishes that their inhabitants, regardless of racial characteristics, were participating in and contributing to a common cultural advance.[1]

The Role of Cities in the Development of Cultural Traditions.

In cities the social process was given a new form. A far larger number of individuals than ever dwelt in villages lived in continuous association with one another; the city was a vortex of social interaction. Objects and commodities from widely separated regions were brought together, permitting the making of new combinations of materials. Strange men came, bearing not only foreign wares but also bits of new information and unknown beliefs. And old acquaintances met often, to talk over both the old and the new things they saw and heard. This constant interstimulation in the presence of considerable material wealth moved men to produce more of it and also to acquire and hold it; this wealth also made possible the release of energies in enterprises other than those for obtaining subsistence. Thus the city became a center of economic advance, social specialization, artistic creation, and intellectual innovation, and new social relations rooted in these developments worked themselves into new political and economic institutions and ethical judgments.

Above all, it should be understood that the city was a man-made environment that contrasted sharply with the peasant village or nomadic camp, where nature was the ever-present mistress.

In the city the ways of life are legion and the diversities of its man-made scene admit extreme variations of equipment and opportunity. There is no sense of a common and vital dependence on the aspects of the seasons and the vagaries of the weather. There is no sense of a common earth, a common fortune, and a common fate. There are few common tasks, few incidents in which all men share. There are no impressive signs to call out at the same moment those universal comments and reflections which make man feel kin to man—the devastation of the storm, the flow

[1] On the rise of urban cultures in Mesopotamia see V. Gordon Childe, *New Light on the Ancient East* (1934); V. Gordon Childe, *Man Makes Himself* (1936); Henri Frankfort, *Archeology and the Sumerian Problem* (Oriental Institute Studies in Ancient-Oriental Civilization, No. 4, 1932); E. A. Speiser, "The Historical Significance of Tepe Gawra," *Report of the Smithsonian Institution*, 1933, pp. 415–428; E. A. Speiser, "Closing the Gap at Tepe Gawra," *Asia*, Vol. 38 (1938), pp. 536–543; E. A. Speiser, "The Beginnings of Civilization in Mesopotamia," *Supplement to the Journal of the American Oriental Society*, Dec. 1939, pp. 17–31; Walter Andrae, "The Story of Uruk," *Antiquity*, Vol. 10 (1936), pp. 135–145; M. E. L. Mallowan, "The Excavations at Tell Chagar Bazar and an Archaeological Survey of the Habur Region, 1934–5," *Iraq*, Vol. 3 (1936), pp. 1–86.

of the sap, the fall of the leaf. There are no common hours of work and rest, no common occasion of meeting for personal gossip or public discussion. The heterogeneity of city life is enormous.[1]

The city is thus basically a centre of many differentiated activities enriched by the creation within it of items of social expression with a strong flavour of religious ritual. To develop a city, then, there must have been considerable progress in the art of cultivation, the differentiation of labour, the maintenance of learning and order, the laying out and erection of monuments of social expression, a considerable food supply and a supply of varied materials for craftsmen's work and for exchange.[2]

From this heterogeneity flowed cultural innovation, so that the city tended to develop a distinctive tradition which embodied a more complex integration of men in diverse social specializations than was possible in simpler communities. In the city the social factors in cultural development were greatly intensified, and the tradition they shaped was far more a product of interaction among men than of an adjustment between man and nature. With the rise of cities men began a development in which individuality and social interdependence, although apparently often in conflict, actually could not exist without each other; they were, in fact, merely aspects of the social integration which cultural innovations, having origin in the urban social process, constantly refined. In the city both man, as individual, and men, as society, received their character more from the cultural tradition carried in the urban social process than from nature, either biological or physical, and social and cultural changes became more important than environmental factors for further cultural development.

The true difference between primitive men and their contemporary descendants exists chiefly in these new circumstances of social and cultural activity that arose in the early cities of Mesopotamia, Egypt, Crete, and India. Indeed, after the fourth millennium B.C. the history of civilization is to be studied mainly in the development of urban cultural traditions which either sprang from these beginnings or carried elements derived from them.

THE SUMERIAN AND SEMITIC CULTURAL TRADITIONS

Although the urban culture of Mesopotamia was founded by the Sumerians, the enduring tradition into which their achieve-

[1] R. M. MacIver, *Society: Its structure and changes* (1931), p. 360. By permission of R. Long and R. R. Smith & Co., New York.

[2] Herbert J. Fleure, "The Historic City in Western and Central Europe," *Bulletin of the John Rylands Library, Manchester*, Vol. 20 (1936), pp. 312–313.

ments were organized was the work of the Semitic peoples who ultimately absorbed them.

The Sumerians believed they came from a land where the date palm grew and fish were plentiful; their skill at inlaying mother-of-pearl testifies to a familiarity with materials found on seacoasts. But they were also the keepers of cattle. And they built temples rising step by step into high towers. Probably they were originally a highland peasant-village people who, after reaching the eastern shores of the Persian Gulf, learned to navigate reed boats and, while pursuing game, made their way into the marsh lands around the mouths of the rivers; there they soon learned that a little care made a plot of soil yield a large crop of barley and that their cattle could graze the year round on the swamp grass that withstood the summer heat.

The Semitic peoples, it seems, were natives of the sparse grasslands between the Fertile Crescent and the Arabian Desert. Attracted to the lowlands by summer forage for their flocks and herds, they remained to become peasants and the founders of cities. Several groups penetrated the valley before they displaced the Sumerians as its masters.

Archaeological evidence indicates that both Sumerians and Semitic peoples dwelt on the Tigris-Euphrates plain at a very early date, the former in the lower valley known as Sumer and the latter above them in an area later known as Akkad. From the first the cultural contacts between the two peoples were close. Probably the Semitic peoples first began to absorb Sumerian culture under a Sumerian overlordship. The Akkadians and, after them, the Amorites contested the rule of the valley with the Sumerians. Another Semitic people, known from their city, Babylon, as the Babylonians, established an enduring sway over their Semitic predecessors, as well as the Sumerians, and completed the work of assimilating Sumerian and Semitic materials into a single cultural tradition.[1]

[1] After the publication of A. H. Layard's *Nineveh and Its Remains* (2 vols. in one, 1852), the archaeological interest in Mesopotamia expanded rapidly. Recent archaeological work was greatly stimulated by Jacques de Morgan's investigations in Persia and Elam, especially at Susa; they were published in *Mission scientifique en Perse* (5 vols. in seven, 1894–1905) and in *Recherches archéologiques* (5 vols., 1900–1912). James Baikie, *The Glamour of the Near East Excavation . . .* (1927), summarizes the chief archaeological activities before those of the past decade; these, it should be emphasized, have added more to the knowledge of the history of Mesopotamia than any other work since the deciphering of cuneiform writing by Sir Henry C. Rawlinson in the middle of the nineteenth century.

Among the older historical works treating of Mesopotamian lands are George Rawlinson, *The Five Great Monarchies of the Ancient Eastern World . . .* (4 vols., 1862–1867);

Sumerian Cities and Semitic Invaders.

Sumerian tradition taught that the land of Sumer had emerged from watery chaos; actually it had been created by the deposits of the Karun River, as well as of the Tigris and the Euphrates, in the Persian Gulf. Sumerian tradition also taught that the early cities were destroyed by a "flood"; evidence at the several sites suggests that the "deluge" was probably many disasters which at various times overwhelmed one city or another. Until the appearance of full-fledged urban culture, which brought the rivers under the control of dikes and canals, the lower valley was probably a land of mud flats, reed marshes, shallow lagoons, and stretches of dry soil where life, although precarious, was more richly sustained than in less well watered areas. After the "flood," so tradition said, Kish was the first city to rise, but soon other cities appeared—Ur, Uruk, Lagash, Larsa, Umma, Eridu, and Nippur—to claim shares of the land and waters.[1]

1. *The Economic Foundations of Urban Culture in Mesopotamia.* The finds at Tell el'Ubaid, Uruk, Jemdet Nasr, Ur, and other sites show the progressive development of a complex economic life. At its

Robert W. Rogers, *A History of Babylonia and Assyria* (2 vols., 6th ed., 1915); L. W. King, *Sumer and Akkad: An account of the early races of Babylonia from prehistoric times to the foundations of the Babylonian monarchy* (1910); L. W. King, *A History of Babylon from the Foundations of the Monarchy to the Persian Conquest* (1915).

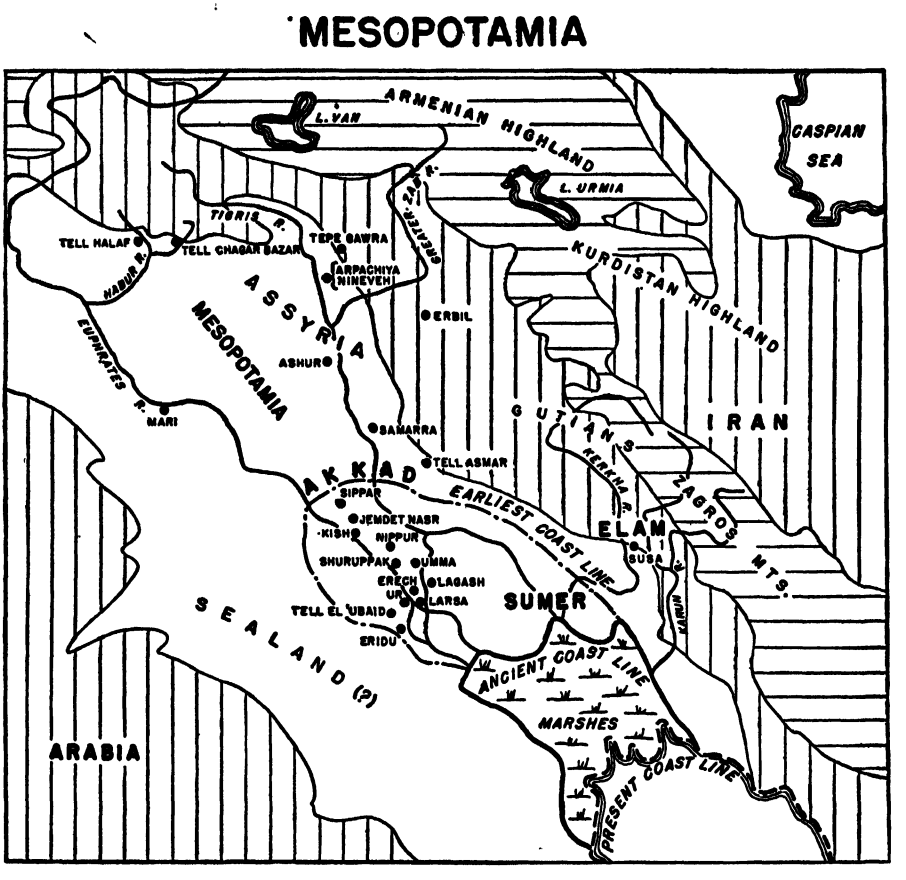
The new knowledge about the history of Mesopotamia has not yet been brought together in an authoritative treatment. Patrick Carlton, *The Earliest Civilizations of the Middle East* (1939), is merely a sketch of the early developments. Seton Lloyd, *Mesopotamia: Excavations on Sumerian sites* (1936), is a brief topical treatment. Other works which contain some of the new material are Bruno Meissner, *Babylonien und Assyrien* (2 vols., 1920–1925); Herman Junker and Louis Delaporte, *Die Völker des antiken Orients* (1933); W. H. Boulton, *Babylonia* (1933); Cyril J. Gadd, *The Early Dynasties of Sumer and Akkad* (1921); G. A. Barton, *The Royal Inscriptions of Sumer and Akkad* (1929).

On the chronology of Mesopotamia see Theodore J. Meek, "The Present State of Mesopotamian Studies," in Elihu Grant, editor, *The Haverford Symposium on Archaeology and the Bible* (1938).

Louis Delaporte, *Mesopotamia: The Babylonian and Assyrian civilization* (1925), is still the best single volume on Mesopotamian social organization, art, literature, and religion. Morris Jastrow, *The Civilization of Babylonia and Assyria: Its remains, language, history, religion, commerce, art, and literature* (1915), is badly out of date. See also Charles F. Jean, *Sumer et Akkad: Contribution à l'histoire de la civilisation dans la Basse-Mésopotamie* (1923).

The dates used in this book have been checked with those given in William L. Langer, *An Encyclopaedia of World History* (1940); in some cases, however, as in this chapter, dates given in the publications of the Oriental Institute, University of Chicago, have been used instead of those of this work.

[1] On the appearance of the Sumerians among the peoples of the ancient Near East see E. A. Speiser, *Mesopotamian Origins: The basic population of the Near East* (1930); on the Sumerians and their cities see C. L. Woolley, *The Sumerians* (1928), and Seton Lloyd, *Mesopotamian Excavations on Sumerian Sites* (1936).



base was the field cultivation of barley and wheat. The plow and the ox were used together for this purpose in the fourth millennium B.C. At first the seed was sown broadcast; late in the third millennium B.C. a drill which deposited the seed in the furrow was attached to the plow. Husbandry was combined with field agriculture very early. Goats and cows were milk animals. Sheep supplied wool, the chief fiber of the textile industry in Mesopotamia. Gardening and horticulture were highly developed. The chief vegetables were beans, peas, garlic, leeks, onions, radishes, lettuce, cucumbers, and melons; the leading fruits were the date, the pomegranate, the fig, the mulberry, the apple, and the pear. Irrigation was necessary the year round, but there were two growing seasons, which of course promoted a diversification of crops. In the course of the third millennium B.C. a general system of dikes and canals seems to have developed in the lower Tigris-Euphrates valley.

The Sumerian cities became the homes of well-developed industries, which were of course mainly elaborations of the neolithic crafts. The implements of the textile crafts remained unchanged; a considerable advance was made in the preparation of dyes. The transition from handmade to wheel-turned pottery is evident in the remains found at the early sites. Although the potter's wheel has long been considered an Egyptian invention, it seems now that it was known in Sumer and Elam as early as in the Nile valley. The common tools—the ax, the adze, the chisel, the knife, the saw, the awl, the drill, the bellows, and the hammer—were in general use throughout the third millennium B.C. At first they were made of stone and bone, then of copper, and finally, sometime after 2800 B.C., of bronze. The shift from stone to metal tools, it should be noted, was not abrupt, and stone tools remained in use long after copper was discovered. At first copper was worked in its natural state by the simple process of pounding. When the quality of fusibility was first discovered and adapted to industrial purposes is not known. Present opinion inclines to the view that this revolutionary innovation was made in the highland area around the headwaters of the Tigris and Euphrates rivers. Copper implements made in open molds have been found at the Jemdet Nasr level; implements made in closed forms were introduced about 3000 B.C. Bronze implements did not become common until the supply of tin increased, about 2500 B.C., when this relatively scarce metal began to reach the ancient-oriental lands from the Danube valley in Europe. Silver was more plentiful than gold in Mesopotamia.

The chief heavy industry in Mesopotamia was building. The earliest structures were made of reeds, mats, and mud. Late in the fourth millennium B.C. a cake-shaped brick was used in temple construction; the sharp-edged oblong brick was introduced about the middle of the third millennium B.C. These bricks were set in clay. A plaster of lime and clay was applied to the walls. Bitumen or asphalt was used for roofs. Fired bricks were never produced in large quantities in Mesopotamia because of the scarcity of fuel. Timber and stone also were used sparingly if at all, because they had to be imported.

The scarcity in Sumer of timber, stone, and—after the invention of smelting—ores stimulated a growth of commerce. At first this commerce, which centered around the temples where agricultural surpluses were stored and craft industries were concentrated, was carried on intermittently, but by the middle of the third millennium B.C. it had become a continuous exchange between

the cities and the neighboring lands. Then Sumer received copper from Oman (reached by sea down the Persian Gulf) and the Armenian Highland, tin from Syria (which imported it from the west) and Persia, silver from Cilicia and Elam, gold from Anatolia, Syria, and Elam, limestone from the upper Euphrates valley, alabaster from Iran and, perhaps, The Pamirs, wool from Syria, Arabia, and Iran, cotton from Arabia and Egypt, oil and wines from Syria, and dyes and spices from India. By the end of the third millennium B.C. caravans of asses moved freely and regularly throughout southwestern Asia, and colonies of Mesopotamian merchants were established in Anatolia and Syria. They traded the manufactured products of the cities—weapons, textiles, tools, pots, perfumes, jewelry, and leather goods—for the raw materials of widely separated regions.

2. *The Sumerian Polity.* From the early royal tombs recently unearthed at Ur comes the evidence that this economy supported the luxury associated everywhere with urban life. With the king were buried soldiers bearing copper-bladed weapons and women dressed in finery and jewels. The women wore garments of a bright red woolen cloth, and bands of gold and silver in their hair. Their jewelry consisted of small but artistically made gold and silver animal heads. Four large and richly embellished harps were found with their bodies. Two four-wheeled vehicles, each drawn by three oxen, were discovered in the king's grave. An inlaid gaming board with pieces for moving over its squares was also found there. The king, it may be guessed, enjoyed gambling and dancing. If the kings of the Sumerian cities lived in a new luxury, their subjects, the tillers of the river flats, possessed a more secure, a more nutritious, and a more diversified diet than any men before them. Perhaps the Sumerians owed the vigor that made them the creators of the earliest urban culture to the diet of wheat, barley, milk, beef, fish, dates, and onions which the flood plain afforded.

According to Sumerian beliefs the king of a city was the "tenant farmer"—the *patesi* in the Sumerian tongue and the *ishakku* in the Akkadian language—of its chief god. Each year at the god's great festival, the "lease" was renewed. With the sanction of the god the ishakku administered the city's government; this duty involved collecting the freewill offerings of the people (mainly peasants and herdsmen), supervising the estates and workshops of the temples, legalizing all business agreements, maintaining fixed weights and measurements, and defending the god's property, *i.e.*, the city. The commerce of the city was also carried on under the ishakku's

watchful eye. Great care was given to the canals and dikes. In theory the god of a city chose his "tenant"; actually the succession was more or less fixed, the "lease" descending from father to son in a single family. Thus the cities produced lines of kings, *i.e.*, dynasties, some of which were contemporary with one another.

3. *The Wars of the Sumerian Cities*, 3000–2500 B.C. About 3000 B.C., when the earliest dynasties arose, warfare among the Sumerian cities became more or less continuous. Each reign was almost certain to begin or end in strife. The cause of this warfare was rooted in the rivalries of the cities for water and land. Changes in the course of the rivers may have sometimes led to conflict. Perhaps the kings of Ur, shortly after 3000 B.C., first won dominance over a number of cities. Later an exhausting struggle broke out between Lagash and Umma. Under Eannatum (fl. *ca.* 2700 B.C.), who, besides defeating Umma, overthrew Uruk and Ur, Lagash won an upper hand. But a revolutionary disturbance ultimately weakened Lagash, and Umma recovered; its greatest king, Lugalzaggizi (fl. *ca.* 2575 B.C.), captured Uruk, which he made his capital, and extended his power through the length and breadth of the valley. These kings also fought the peoples that ringed the valley. In the mountains to the northeast were the Gutians. To the east were the Elamites, the cultural heirs, at least, of the founders of Susa. And to the north, west, and south were Semitic peoples. Indeed, the first king to claim sovereignty over the whole valley was a Semitic lord of Kish. There is reason to believe that the lands of Arabia bordering the Euphrates valley which are now desert were at this time well watered and supported several cities. Recently this area has been identified as a country known in ancient-oriental legend as Sealand. Its cities were also often at war with the cities of the flood plain.[1]

These wars should not be understood as struggles between races or even nations; rather they were conflicts between urban groups, each of which was trying to extend its control over a wider area in order to add to its wealth and power. These wars were, in fact, the expression of the social and economic forces which, in a later phase of urban development, gave rise to military imperialism.[2]

4. *The Rule of Akkad*, *ca.* 2500–2370 B.C. The first Semitic people to rise to power in Mesopotamia were the Akkadians, who,

[1] See R. P. Dougherty, *The Sealand of Ancient Arabia* (1932).

[2] See Thorkild Jacobsen, "The Assumed Conflict between the Sumerians and Semites in Early Mesopotamian History," *Journal of the American Oriental Society*, Vol. 59 (1939), pp. 485–495.

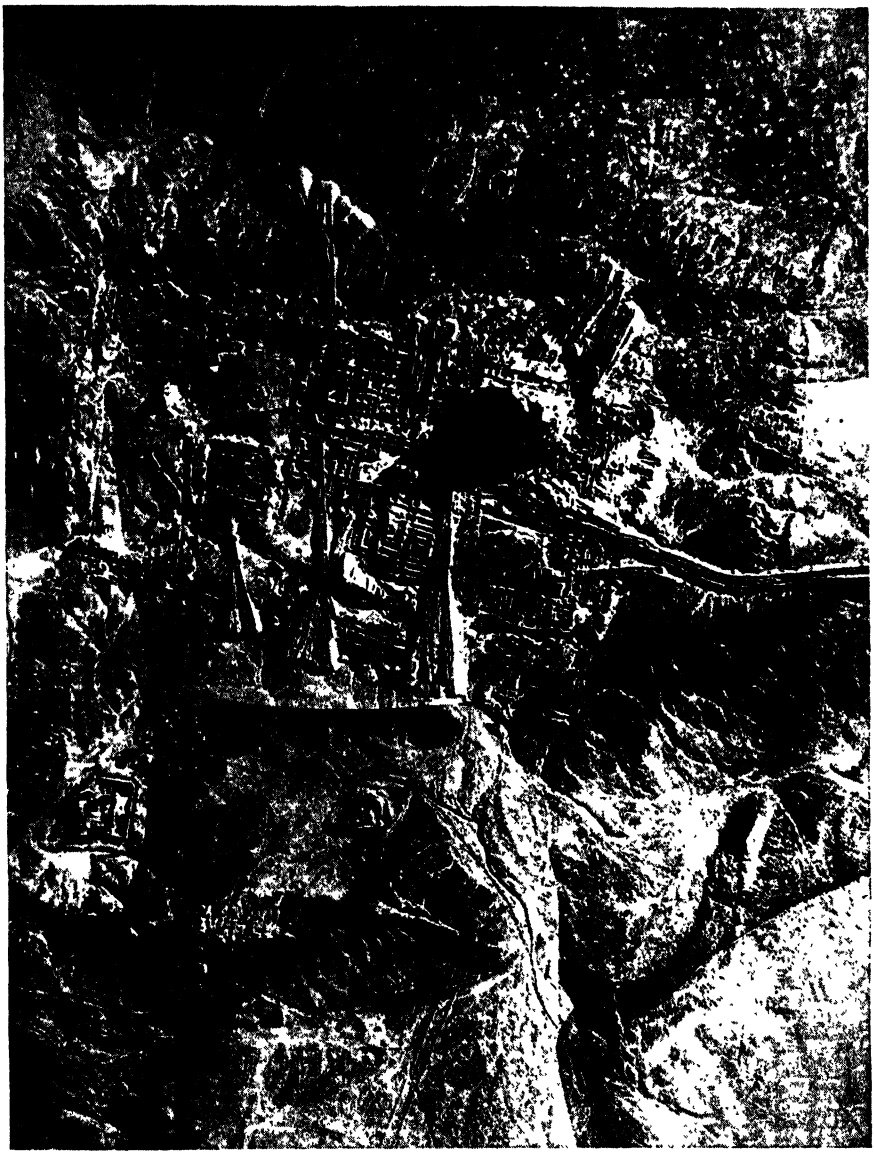
under Sargon I (fl. *ca.* 2500 B.C.), king of Akkad, overthrew a great coalition of Sumerian cities and imposed upon them the payment of tribute. His capital was at Eshnunna, east of the Tigris River. In the southeast he conquered the Elamites. In the northwest his armies halted only at the Mediterranean coast. Apparently he sought to control the sources of copper, stone, and timber which were so necessary to the cities of the lower valley. From the northern lands, to which he carried Sumerian culture, he introduced the fig, the vine, and the rose into the lower valley. His greatest successor, Naram-Sin (fl. *ca.* 2425 B.C.), wielding an even wider power, extended his rule perhaps to Cyprus.

During the two centuries of Akkadian domination Sumerian culture spread over all Mesopotamia and for the first time came into direct contact with the cultures of Egypt and Crete. After 2500 B.C. cultural interaction among the urban centers of the ancient-oriental lands developed rapidly.

The Golden Age of Sumerian Culture.

The Akkadian sway was finally broken by invaders from the northwest and northeast and by revolt in the south. The invaders from the northwest were the Amorites, who won control of the central valley. The invaders from the northeast were the mountain people, the Gutians, who conquered the Sumerian cities and ruled them through native governors. Under one of these governors, Gudea (fl. *ca.* 2300 B.C.), ishakku of Lagash, Sumerian culture revived. He restored many old temples and built several new ones. One of his eighteen surviving statues shows him seated, holding a carpenter's rule on his knees. A coalition of cities under the leadership of Uruk finally expelled the Gutians.

Among the cities restored to independence Ur rose to leadership, and Sumerian culture enjoyed a golden age. Under Ur-Nammu (fl. *ca.* 2250 B.C.) the power of Ur extended throughout the valley. His successors collected tribute from the tribes of the hills as well as from the cities of the flood plain. The magnificence of Ur surpassed that of any preceding city. The city proper was a rough oval, surrounded by a brick wall 75 feet thick and 2½ miles long. Outside this wall suburbs extended from two to three miles in all directions. The streets were narrow and crooked, and the corners of the houses were rounded so that, it is said, those passing would not be injured by projecting bricks. In wet weather the unpaved streets were a morass of mud. The workers of the city lived in suburban hovels of reeds and mud. Middle-class freemen lived in brick dwellings inside



By the courtesy of the British Museum and the University of Pennsylvania Museum

UR

The remains of this great Sumerian city have yielded many evidences of the economic enterprise, the social structure, the political system, the military power, the religious orientation, the artistic and intellectual expression, and the manners which about the beginning of the third millennium B.C. combined in the enduring patterns of ancient-oriental urban culture. The structure casting the great shadow is the remains of the ziggurat that towered over the city during its golden age.

the wall. In the sacred area around the temple resided the rulers—the god, the king, the priests, and the officials. The temple, dedicated to the moon-god, Nannar, crowned the ziggurat. This structure, originally built by Ur-Nammu, was ascended by three stairways; on the various stages were trees and grass. It was known as the "High Place," or the "Hill of Heaven," or the "Mountain of the God." Twin temples, one for Nannar and the other for Nin-Gal, his wife, faced the main stairway. In the court around the ziggurat were chambers for the priestesses who served the moon-god; according to the practices of the time they were sacred prostitutes. Perhaps the population of the city was a quarter of a million.[1]

In this golden age of Sumerian culture the lower Tigris-Euphrates valley was an ordered land of fields, orchards, and gardens, served by a complex system of drainage and irrigation canals. From its prosperous cities, which were the centers of a diversified industrial production, streams of manufactured goods flowed over the constantly used land and sea routes that connected them with surrounding lands. In return these lands sent many materials necessary to the life and industries of the cities. In the temples of the cities were centered ordered governments, carried on by priestly officials who enforced written codes of law, and an intellectual life, also carried on by priests, who, while maintaining good relations with the sovereign deities, did not neglect the practical work of observing nature. During the first half of the third millennium B.C. Sumer gave enduring form to that complex integration of man with nature and the correlative social specializations which are the distinctive attributes of urban culture.

The Semitic Assimilation of Sumerian Culture under Babylon, 2100–1750 B.C.

Ur fell before the Elamites and new Semitic invaders, but their rule was short, for soon a new line of Semitic kings at Babylon expelled the Amorites from the valley and unified the cities. Only in the far south, where refugees from the endless wars of the cities found homes in the new marshlands created by the annual floods, and in the far north, where the hill peoples were unconquered, did any portion of "Eden," as the valley was known to its inhabitants, remain free from the rule of Babylon. Under Hammurabi (fl. *ca.* 1940 B.C.), the greatest of the kings of Babylon, Mesopotamia knew

[1] See C. L. Woolley, *Ur of the Chaldees* (1929); C. L. Woolley, *Abraham: Recent discoveries and Hebrew origins* (1936).

unity and peace.[1] For the old priestly rulers Hammurabi substituted appointive magistrates and judges drawn from a class of men who, holding land by royal grants, owed military service to the king. The law they enforced was embodied in a great code which, based on the earlier codes of the Sumerian cities, gives the first clear picture of the social and economic organization of an early urban culture.

1. *The Code of Hammurabi.* Among the many aspects of life touched upon by the numerous provisions of the code, the most important are: (1) property, (2) wages and fees, (3) slavery, (4) domestic relations, and (5) crime.

The code recognized two types of landed property: (1) land granted by the king in return for military service and (2) land held with the full rights of sale, lease, mortgage, and bequest. Land held in return for military service could not be disposed of by its possessor. The Sumerians and the Babylonians were the first peoples to evolve and fully define the right of private property.

Many provisions of the code dealt with the responsibilities of tenants, professional men, and laborers:

> If a man rent a field for cultivation and do not produce any grain in the field, they shall call him to account, because he has not performed the work required on the field, and he shall give to the owner of the field grain on the basis of the adjacent (fields).
>
> If a man give his orchard to a gardener to manage, the gardener shall give to the owner of the orchard two-thirds of the produce of the orchard, as long as he is in possession of the orchard; he himself shall take one-third.

The fee of a veterinary surgeon who saved the life of an ox was one-sixth of a shekel of silver. The fee of a surgeon who set the bone of a man was five shekels of silver. The hire of a field worker was eight *gur* of barley a year, of a herdsman six *gur*.

The position of slaves was carefully defined. They were branded and required to wear a special dress. They were subject to severe punishment for running away or attacking a freeman. They were entitled to three days' rest in a month. They had the right to acquire and own property and could buy their liberty. Children of a free parent, either father or mother, were free. Slave concubines enjoyed a special protection. Masters did not have the right of life and death over their slaves.

The regulations bearing on domestic relations were numerous and detailed. In the family the rights of the husband and father

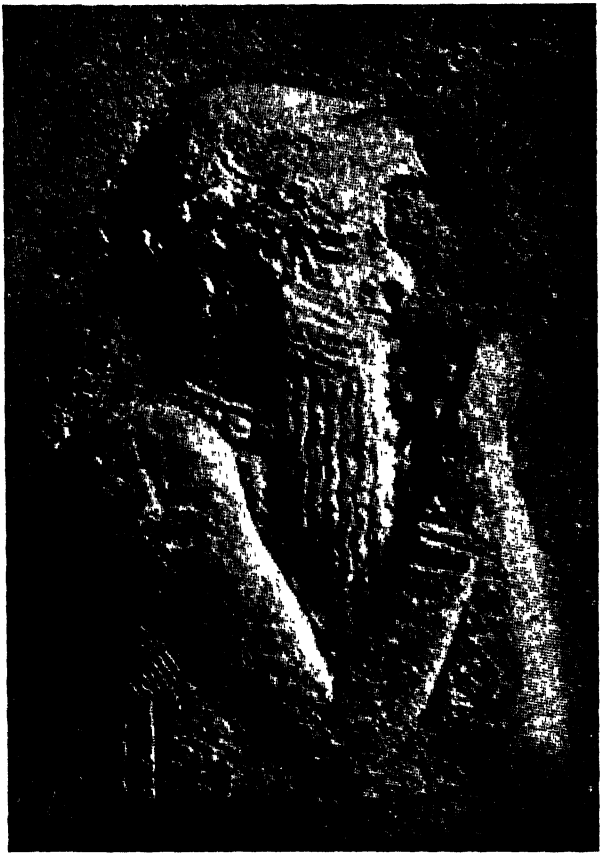
[1] Friedrich Ulmer, *Hammurabi, sein Land und seine Zeit* (1907).

were paramount. Marriages were arranged under contracts. Brides were provided with dowries by their fathers; suitors returned the favor by making gifts to the fathers. In case the wife bore no children the husband might divorce her by giving her property, or he might take a second wife. The wife might even give him a concubine. Adultery was punishable by drowning. The wife who gadded about could be thrown into the river; the wife who conspired to kill her husband in order to marry another man was impaled. A husband could pledge his wife and children for debt; in case the debt was not paid the creditor could claim them as slaves, but only for a period of three years. The invalid wife was protected by a clause which forbade the husband to put her out of his house; at the same time he was permitted to take a concubine.

The criminal sections were based on the *lex talionis:* "If a man destroy the eye of another man they shall destroy his eye; if a man knock out the tooth of a man of his own rank, they shall knock out his tooth." Class lines were clearly marked in the differences in punishment provided for crimes against freemen and priests and princes: "If a man steal an ox or a sheep, ass or pig, or boat—if it be from a god (priest) or a palace (prince) he shall restore it thirtyfold; if it be from a freeman, he shall render it tenfold." Crimes against slaves were lightly punished; crimes by slaves were severely punished. Death by drowning or impaling was the usual punishment for rape, kidnaping, incest, brigandage, burglary, cowardice in battle, and adulterating beer. In cases of witchcraft and false accusation, trial by ordeal was usual: accused persons were thrown into the river—if they sank they were considered guilty, if they swam they were declared innocent. The governors of cities were required to make good to subjects under their jurisdiction losses suffered on account of burglars and brigands. For those injured by "an act of God" there was no recourse.[1]

The administration of the code followed Sumerian practices. Cases were heard in temples, where, although priests gave oaths to witnesses, secular judges made the decisions. Verbal evidence under oath was taken, but great stress was laid on written evidence, particularly in cases involving landed property. Appeals were allowed from lower to higher courts; the king's decisions were final.

[1] On Hammurabi's code see Pierre Cruveilhier, *Introduction au code d'Hammurabi* (1937); Wilhelm Eilers, "Die Gesetzesstele Chammurabis," *Der Alte Orient*, 1932; Edouard Cuq, *Etudes sur le droit babylonien, les lois assyriennes et les lois hittites* (1929); Robert F. Harper, *The Code of Hammurabi . . .* (1904); C. H. W. Johns, *The Oldest Code of Laws in the World . . .* (1903).



From G. R. Tabouis, *Nebuchadnezzar* (1931)

HAMMURABI

Under Hammurabi, king of Babylon, the Sumerian cultural tradition was rendered in Semitic forms. The great code, which bears his name, was based on Sumerian precedents; it affords a very complete view of the institutions of an ancient-oriental urban culture.

2. *The Urban Way of Life in Hammurabi's Babylon.* Like all ancient cities dominated by temples and palaces and surrounded by walls, Babylon was both grand and squalid. Houses of well-to-do merchants and officials were built of sun-baked bricks, with thick walls and flat roofs waterproofed with pitch. Generally a number of rooms were built around an interior court, which was paved and sheltered by an awning of mats. The rooms were furnished with beds, tables, chairs, and chests. Mats covered the brick or packed

earthen floors. A balcony sometimes encircled the court. Underground chambers served as places of refuge from the severest heat, but most people found it comfortable to sleep on the flat roofs during the summer months. At night saucer-shaped oil-burning lamps provided light. Windows, covered with wooden shutters, opened on the courts; usually a single door led from the street into a small room near the kitchen. A drain connected the kitchen with a sewer or a channel that flowed into a canal. Domestic operations were simple. Water, brought from the river, was filtered through large porous jars. A few copper kettles served for cooking. Cups and platters were necessary dishes, and spoons were in everyday use. Cooking was done in ovens or over open hearths; reeds and dried cow dung were the only fuels. Not many clothes were needed. All but the rich went barefoot. Probably the most common garment was a combination shirt and tunic, which was bound around the waist with a strip of leather or cloth or even a braid of reeds. The rich wore fringed skirts and long, shirtlike cloaks. Apparently only the women of the rich wore veils and jewelry; to enhance their beauty they dyed their fingernails and hair with henna. Ointments, perfumes, and oils were common cosmetics. A soap, made from lye and castor or olive oil, was a great aid in the constant warfare that had to be waged against lice. Filth, vermin, and rodents were menaces to all early urban dwellers.

Whatever gayety there was in Babylon centered in the temples and the bazaars. The temples were places of business, where banking was carried on and contracts were registered. They were also centers of amusement, where musicians played drums, lyres, cymbals, and tambourines, where choruses of trained voices sang, where dancers delighted the eye, and where storytellers stirred the emotions with tales of passion and adventure. In the bazaars the babble of conversation and the clatter of craftsmen working over their braziers, looms, and benches were incessant. Here came merchants to buy the products of the craftsmen and to sell foreign wares and imported raw materials. Peasants brought vegetables, fruits, and poultry to the food markets, which probably were located near the gates of the city. Asses stood silently about the markets; when trading was done they bore away whatever their owners had purchased. Torches were used for street lighting during the great festivals that called forth all the people. Religious sentiment was mixed with more mundane emotions in mad revelries and orgiastic rituals. Night brought quiet to the city just as it did to the country; only thieves dared to skulk through the narrow streets.

THE DEVELOPMENT OF LITERATE LEARNING IN MESOPOTAMIA.

The development of Sumerian writing is known from tablets found at Uruk, Jemdet Nasr, Shuruppak (the modern name, commonly used in archaeological discussions, is Fara), and other sites; they show a continuous evolution from an early pictographic script to the completed cuneiform writing system. The inventors of the earliest pictographs are not known; the creators of the cuneiform script were the Sumerians.[1]

1. *The Formation of the Sumerian Writing System.* The development of the Sumerian writing system extended from about 3500 B.C. to the time of the rise of Akkad, when it was first used for recording a Semitic language. Perhaps the development was completed about 2700 B.C. However, long before this time the reed stylus which made the peculiar wedge-shaped marks from which the name "cuneiform" is derived and the clay tablet, the distinctive material of Mesopotamia, had come into general use. The practice of writing in columns divided into compartments, or *cases*, as they are technically called, as well as the practice of writing from left to right, was fixed near the end of the development of the writing system.

The signs on the earliest tablets from Uruk are pictographs. Some of them are obviously pictures of things. Others are clearly conventionalized pictures. And still others are abstract symbols. The last two classes greatly outnumber the first class in the tablets now known. Apparently the pure pictures were used to signify objects not commonly found in the Tigris-Euphrates valley, such, for example, as the lion, the deer, and the mountain goat. Each sign represented a single word. Sometimes two signs were joined to form a single meaning; thus the sign "woman" and the sign "mountain," which meant "foreign country," were combined to signify "slave." The signs, it is interesting to note, were simple and, in spite of variations in handwriting, were written with great uniformity. In fact, those who used them, probably priests in the early temples, seem to have had an aversion to complexity and irregularity. Although the earliest Uruk tablets are believed to represent the original use of writing in the Tigris-Euphrates valley, it is not now possible to credit the Sumerians with the invention, for the tablets have not been translated and, consequently, the language they record is unknown.

[1] On the development of Sumerian writing see A. Falkenstein, *Archaische Texte aus Uruk* (1936).

The Jamdet Nasr tablets, which are written in signs clearly derived from the earliest pictographs, are the oldest translated documents; they record the Sumerian language. Some of the earliest signs were no longer used, but many new ones were introduced. The ultimate effect of this suppression and addition of signs was to decrease the total number. More important than this tendency was the transformation of some of the word signs into syllable signs, which, because they had a sound value, could be used for writing a sound forming part of a spoken word. Thus, for example, the sign "arrow," which represented the word "arrow"—"ti"—came to be used to write the word "live," which was pronounced *ti*. Inasmuch as the Sumerian language possessed many homonyms, *i.e.*, words of like sounding syllables, the multiplication of syllabic signs was relatively easy once such a sign was invented.

In the Jemdet Nasr phase of the development of the Sumerian writing system, the use of writing appears to have been spreading throughout the lower Tigris-Euphrates valley.

The Shuruppak, or Fara, tablets reveal the fully developed Sumerian writing system. Besides word signs, it consisted of syllable signs and determinative signs; altogether they numbered about eight hundred. Perhaps as many as two-thirds of the signs used in the Uruk and Jemdet Nasr periods had been dropped. The syllable signs were used not only for syllables and homonyms but also for grammatical elements. Special signs were used for the vowels—*a*, *e*, *i*, and *u*. With them it was possible to form syllables consisting of consonant *plus* vowel and consonant *plus* vowel *plus* consonant. Although syllables of the first type were common, a complete set was not worked out; syllables of the second type were rare. Syllable signs for grammatical elements were used in writing some verbs and nouns which were difficult to represent in pictures. Determinatives were employed to indicate categories or classes of objects; among them were signs for the classifications "deity," "man," "profession," "wood," "stone," "river," and "copper." A few signs were grouped in the sequence of words and sounds made while talking. This practice, as well as the use of determinatives, was a late development.

In the evolution of the Sumerian script the general tendency was toward a greater clarity and facility of expression, and those ends were attained insofar as the limitations of a script having a pictographic base permitted. The main difficulty to be overcome was the representation of abstract meanings by pictures or modified pictures. Solutions for this problem were found in adapting the

signs to the writing of sounds in syllables and in the use of some signs as determinatives. When the Sumerian script was adopted by the Akkadians, these devices were retained without significant modification or elaboration; at this time also the signs lost their last recognizable pictorial elements.

The Sumerians may be recognized as the creators of the writing system which prevailed in Mesopotamia until the end of ancient-oriental times. In this connection it should be noted that Sumerian survived as a sacred language long after Akkadian had supplanted it as the spoken language of daily life and as the written language of business, government, and literary expression.

2. *The Formation of Mesopotamian Learned Traditions.* Although by far the greater part of the early tablets in the Sumerian script are economic records that had only a temporary significance, certain of the tablets suggest that there was a slow accumulation of literary and scientific materials. One of the early Uruk tablets may be a literary document, and another may be a list of classified objects similar to the compilations which much later became the typical scientific work of Sumerian and Semitic culture. Among the tablets of the Jemdet Nasr period are two lists, one of fish and the other of, perhaps, classes of cattle, such as "cow," "steer," "calf." Among the Fara tablets the so-termed school texts are prominent. They are lists of objects, *i.e.*, classified knowledge; among the objects are fish, birds, domestic animals, herbs, containers, professions, and gods. Since these texts were studied not as a means of learning to write but in order to become familiar with the accumulated experience of the past, there is reason to believe that they represented bodies of learning that had grown slowly from the period when writing was first known by the Sumerians.

These learned traditions, like the writing system, were developed by the priests of the cults of the various cities. Schools for the study of writing were attached to the temples, and in them, it is fair to assume, literature and science developed. The boy who went to a temple school was adopted into the family of the priest who became his teacher. The boy began his education by copying lists of signs and progressed until he was able to write accurately the texts of difficult works. Among the materials surviving from the temple schools are the first chapters of many works written, it is clear from the script, by learners of varying degrees of skill. The highest degree of skill attained by a scribe seems to have been the ability to take dictation. Connected with the temples also were collections of tablets similar to modern libraries; there is evidence to indicate

that works written in one city found their way to other cities. Thus, in spite of the fact that very few persons at any one time possessed a knowledge of literate learning, the knowledge was the common heritage of the priests of the cults of the several cities.[1]

3. *The Semitic Assimilation of Sumerian Literate Learning.* The Semitic assimilation of Sumerian literate learning was a slow process extending over several centuries; apparently it began as a distinctive development when the Sumerian script was adopted by the Akkadians, in the time of Sargon, and attained its climax under Hammurabi of Babylon. The period of conquests and revolts after the overthrow of Akkad, it may be believed, brought a disorganization of the Sumerian learned institutions and traditions. Under Gudea and the kings of Ur these institutions and traditions were reconstituted, and under the Babylonian kings they were given Semitic forms. That this assimilation may have been completed by a burst of literary and scientific development is suggested by the fact that the lists of objects which had appeared before Sargon of Akkad were not known again until Babylonian times. In fact, the cultural significance of the age of Hammurabi rests on the work that gave the Semitic form to Sumerian culture—its customs, arts, legends, science, and script.

The Semitic rendering of Sumerian culture influenced the development of civilization in southwestern Asia during the next twenty-five centuries, quite as Greek culture has influenced the development of Western civilization in a more recent twenty-five centuries.

Literature in the Sumerian and Semitic Cultural Traditions.

Inasmuch as the cuneiform literary remains are very fragmentary, it is impossible to sketch the development of Sumerian and Babylonian literature; it is certain, however, that the Assyrians in the first millennium B.C. copied Babylonian poems and texts which the Sumerians had originally composed in the third millennium B.C.[2]

The most distinctive literary product of Sumerian culture was the epic poem, of which the "Creation Epic" and the "Epic of Gilgamesh" are the most notable examples.

In the Babylonian rendering of the "Creation Epic" the central figure was Marduk, lord of Babylon, who quelled a revolt of the forces of chaos against the gods. From the carcass of Tiamat, the

[1] See E. Chiera, *They Wrote on Clay* (1938).

[2] See Bruno Meissner, *Die Babylonisch-Assyrische Literatur* (1927–1928).

demoness who led the revolt, Marduk created the physical universe, and from the blood of the god who had caused Tiamat to revolt he fashioned mankind in order that the gods might be served. Then Marduk set the gods in their places in the heaven and erected shrines wherein men worshiped them. The poem ends with the acceptance by the gods of the absolute supremacy of Marduk. In this form the legend probably justified the rise of Babylon, as manifest in the role of Marduk, to political domination. In other cities local versions undoubtedly gave special emphasis to the part their gods played in the work of creation.[1]

More interesting even than this legend is the "Epic of Gilgamesh," which set the pattern for all epic poems.

The Epic of Gilgamesh. Gilgamesh, ishakku of Uruk or Erech, who ruled for one hundred and twenty-six years, oppressed his people by forcing them to labor excessively in building the walls of the city. For relief the people appealed to the goddess, Aruru, who answered their plea by creating Enkidu as a rival for the energetic king. Enkidu was a wild, uncouth man of great physical strength, who lived in the woods with the animals. A hunter brought Enkidu and Gilgamesh together, and they became inseparable companions. In order to entice Enkidu into the city, Gilgamesh sent a woman of the temple to the forest. But Enkidu soon regretted having given up the simple life and desired to return to the woods. He was deterred only by the intervention of Shamash, the sun-god. Then he and Gilgamesh decided to visit the goddess Inanna, who lived in a deep forest guarded by a fearful dragon, Khumbaba. When Gilgamesh destroyed Khumbaba, Inanna fell in love with him. But he resisted her charms. Piqued by his slight, Inanna sent a powerful bull to attack Gilgamesh, but Enkidu killed the animal. Upon the return journey to Erech, Enkidu sickened and died, and Gilgamesh, grieved at the death of his friend, set out to find "the restorer of life." After wandering through high mountains filled with lions and scorpion-men, he came finally to "the waters of death" and beyond it to the island upon which men favored by the gods with the gift of immortality lived. Upon coming to this island Gilgamesh met Uta-napishtim, the Sumerian Noah, who told him the story of the "deluge" that Enlil, the god of the sky, had sent upon mankind. Uta-napishtim also told him that a certain plant which grew somewhere around the edges of the Persian Gulf would restore life. After a difficult search Gilgamesh found the plant, but on the return to Erech he was robbed of it by a serpent. Following this disaster Gilgamesh penetrated the underworld, met the shade of Enkidu, and

[1] See *The Babylonian Legends of the Creation and the Fight between Bel and the Dragon* (British Museum, 1921); Alfred Jeremias, "Babylonische Dichtungen, Epen und Legenden," *Der Alte Orient*, 1925.

heard from it the sad fate of the dead. Only the care for the dead by the living, said the shade, made life in the underworld bearable.[1]

In this form the story was undoubtedly the product of a fusion which brought together many Sumerian and Semitic elements. As a whole the epic is a magnificent interpretation of the struggles of men in labor, war, love, and death, for which, indeed, there seems to be no reward except undying friendship.

Besides the epic poem the chief poetic form of Sumerian and Semitic culture was the penitential psalm or hymn, in which a sense of evil in the world and a feeling of man's corruption in the sight of the gods was poured out. These feelings may have been products of the period of social disorganization that followed the overthrow of Akkad. Another composition of this period, expressing similar feelings, was a "Dialogue of Pessimism" in which a master and a slave agreed that nothing in life really matters. Favor at court, revenge, rebellion, forgiveness, love of women, orthodoxy, charity, and the excitement of the nomad's life—all were futile; death, they concluded, was preferable to life.

The Sumerians and Babylonians wrote letters for both private and public purposes. In Hammurabi's time communication by letter was normal between administrative officials. That letters were written for private purposes does not indicate that literacy was widespread; on the contrary, very few persons could write, and the unlettered undoubtedly employed the priestly scribes to write their correspondence.

A variety of writings, of the type known as *wisdom literature*, which became an enduring element of Semitic literature, probably dates from very late Sumerian times.[2] A compilation which, in original form, may have purported to be the instructions of Utanapishtim, *i.e.*, the Sumerian Noah, to mankind after the "deluge" set forth advice which can be succinctly summarized as follows: "Avoid vulgarity and hatred. Do not marry a courtesan. Feed and honor thy parents. Do not hasten to speak in public. Hold your tongue, do not speak your mind at once. Guard well the interest of your superior." Another compilation offered more general observations on life:

[1] See *The Babylonian Story of the Deluge and the Epic of Gilgamish* (British Museum, 1920).

[2] S. H. Langdon, *Babylonian Wisdom: Containing the Poem of the Righteous Sufferer, the Dialogue of Pessimism, the Book of Proverbs, and the Supposed Rules of Monthly Diet* (1924).

The city whose weapons are not mighty—from before its gate the foe will not be repelled.

He is entirely good, yet he is clothed in rags.

There is a disease for which there is no physician; it is to have no food to eat.

The source of such "wisdom" was undoubtedly the experience that befell men in the urban social milieu.

In the main the Sumerian and Babylonian literature seems to have been inextricably bound up with religion.

Religion in the Sumerian and Semitic Cultural Traditions.

The religious beliefs of the Sumerians and Babylonians were rooted in primitive concepts, and the data of experience were interpreted quite as among primitive men. Dreams were believed to be revelations brought by spirits from the lower world. Any natural phenomenon might be regarded as an omen. The air was filled with evil spirits. A dread, even a terror, of them pervaded life. And the whole life of Babylonia expressed such beliefs and feelings.[1]

Six great gods—Anu, the god of heaven; Enlil, the god of air and wind; Ea (or Enki), the god of earth and subterranean fresh water; Nintud, the goddess of fertility; Sin, the god of the moon; and Utu, the god of the sun—were the chief among four thousand deities. These deities were divided into two groups: (1) the Igigi, the gods of the world and the sky, and (2) the Anunnaki, the gods of the lower world, Arallu (or Sheol), where Nergal ruled the dead. When the Semitic peoples assimilated Sumerian culture, they identified the Sumerian deities with their own gods; thus, for example, the Sumerian sun-god was identified with Shamash, the Semitic god of the sun and war, and, as was noted in the account of the Creation Epic, Marduk, lord of Babylon, became the lord of the pantheon. The assimilation of the Sumerian and Semitic pantheons was not completed until about a century after Hammurabi.

Three orders of cults existed in the Sumerian and Semitic religious system: (1) family, (2) urban, and (3) national. Every family

[1] On Mesopotamian religion see Morris Jastrow, *The Religion of Babylonia and Assyria* (1898), now out of date; Lewis Spence, *Myths and Legends of Babylonia & Assyria* (1934); Henri Frankfort, *Cylinder Seals: A documentary essay on the art and religion of the ancient Near East* (1939); Alfred Jeremias, *The Babylonian Conception of Heaven and Hell* (1902); R. C. Campbell, *The Devils and Spirits of Babylonia: Being Babylonian and Assyrian incantations against demons, ghouls, vampires, hobgoblins, ghosts, and kindred evil spirits which attack mankind* (2 vols., 1903–1904); George A. Barton, "Ancient Babylonian Expressions of the Religious Spirit," *Journal of the American Oriental Society*, Vol. 37 (1917), pp. 23–42.



From G. R. Tabouis, *Nebuchadnezzar* (1931)

ISHTAR

Beneath all religions of the ancient Near East were very early peasant beliefs about death and rebirth, which expressed the fundamental fact of the yearly agricultural rhythm—winter and the growing season. These beliefs were universally associated with an Earth Mother Goddess and a male consort, a son or a lover, who died and was resurrected. Among the ancient Mesopotamian peoples Ishtar and Tammuz symbolized these aspects of nature.

had its own deities, symbolized by clay figurines; the father was the priest of these gods. Admission to the worship of the gods of a family was equivalent to admission to the family. The prominence of temple remains at the sites of the ancient Mesopotamian cities testifies to the importance of the urban cults; in fact, as was noted in the discussion of the Sumerian polity, the god of a city was regarded as its real ruler, and its whole life was under his care. In terms of this belief the chief duty of the human ruler of the city was to perform and perpetuate the rituals and ceremonies upon which well-being depended. There were two important national cults. The cult of Enlil of Nippur seems to have had political significance, for every king who aspired to national domination sought the approval of his priests. In fine, Nippur was the sacred city of Mesopotamia and its god the guardian of every great dynasty. The universal popular cult was a nature worship that turned about the routine of peasant life under the changing seasons. Its deity was Inanna or, in the Semitic form, Ishtar, the Mother Goddess, who was originally a goddess of vineyards and flocks. A clay figurine, representing a mother and a suckling child, found frequently among the artifacts of the earliest sites, indicates that Inanna was a very ancient fertility goddess; her sign—a bundle of reeds—has been recognized among the earliest pictographs at Uruk.

When fully developed, the worship of the Mother Goddess, although not limited to them, centered in the rituals of the myth of Tammuz.

The Myth of Tammuz. Ishtar was the great goddess who gave and destroyed life. She was the goddess of plant and animal growth, sexual love, wedlock, and maternity. She was a trusted counselor, a bestower of blessings, a keeper of good will among men, and a protectress against disease and calamities. At the same time she was the goddess of jealousy, sexual abnormalities, storms, and war. In her temples men sacrificed their virility and maidens gave up their virginity in order that she might continue to bless mankind with the fruits of the earth.

Every year Tammuz, a youthful god of fields and flocks, died—the death occurring when the sun was hottest—and descended into Arallu, the land of no return, where Ereshigal, sister of Ishtar, ruled. To recover her lover, for Tammuz was her sweetheart, the maiden Ishtar went into the underworld where her jealous sister attacked her with numerous diseases. While Ishtar suffered in the underworld all reproductive activities on earth stopped, and mourning women filled her temples. This wailing occurred in July and August. Finally Ea, god of fresh water and wisdom, out of pity for suffering mankind, dispatched a messenger to bring Tammuz back to earth. The messenger sprinkled him with the water of life, he and Ishtar returned, and the earth was again filled with love making and rejoicing.

The cult of Ishtar, which had temples everywhere, expressed the dependence of urban culture on agriculture and husbandry, which thrived only through the constant renewal of life. The peasants' usual offerings were jars of water with green palm branches; they symbolized the plant life whose growth was dependent on the favor of the goddess.[1]

The belief in evil daimons pervaded both Sumerian and Semitic culture. The Sumerians recognized three classes of evil spirits—disembodied human souls that knew no rest, gruesome half-human-half-beasts, and fiends and devils. These fiends and devils, who rode on noxious winds, brought storms and pestilences. Ruins were the favorite dwelling places of all classes of evil spirits. The demon of fever lurked at crossroads. Seven great evil spirits, messengers of Anu, the god of sky and storm, were exceptionally fierce:

> Knowing no care, they grind the land like corn,
> Knowing no mercy, they rage against mankind,
> They spill their blood like rain,
> Devouring their flesh and rending their veins.

[1] See S. H. Langdon, *Tammuz and Ishtar: A monograph upon Babylonian religion and theology* (1914).

All religious worship was a means of defense against the torments that the evil spirits, big and little alike, brought to men.

But suffering came to men also because they were wicked. The distinctive contribution of the Sumerians and the Babylonians to the growth of religious ideas was the concept "sin." This idea was the burden of the penitential psalms previously mentioned:

> The sins I have sinned, I do not know;
> The offense I have committed, I do not know;
> The uncleanness in which I have trodden, I do not know.
> Wash me clean, God, for the sins I do not know,
> Though my sins be seventy times seven.

When men continued to suffer, although they sought to please the gods, they endured distresses patiently and did not lose faith that finally the gods would be merciful:

> I sought for help and none took my hand;
> I wept and none stood at my side;
> I cried aloud and there was none that heard me;
> I am in trouble and in hiding; I dare not look up;
> To my god, my merciful one, I turn myself,
> I utter my prayer.

In the "Poem of the Righteous Sufferer," which originated perhaps at Nippur, the promise of mercy was held forth, although complete escape from suffering was not offered. In this poem the hero, who protested to the god of justice about his sufferings, received in a dream the god's answer to his complaint; it was that the god was not to blame for the evils that afflicted men.

The concept "sin" was an element in a view of life which described men as having originally lived in a state of bliss but, because they neglected their religious duties, as having fallen into sin from which there was no escape without the aid of the gods. As punishment for this fall the human race, all but one man, was destroyed, and to his descendants, generation after generation, was transmitted the curse of sin. In the Babylonian version of the "Poem of the Righteous Sufferer" Marduk, after having been appeased by confession, prayer, and the performance of rituals, restored men to health and peace. Only the mercy of the Lord of the Universe could save men from the punishment justly theirs on account of their sins.

ART IN SUMERIAN AND SEMITIC CULTURAL TRADITIONS.

The continuous development of the arts in Mesopotamia can be traced from the earliest known settlements to the old Babylonian period; throughout these many centuries, although techniques improved, styles and motifs changed little.

1. *Mesopotamian Architecture.* The architectural tradition of the Tigris-Euphrates valley sprang from the mud-and-reed construction exemplified by the earliest remains at Tell el'Ubaid. Walls were built of reeds bound together in bundles. Two such bundles, bent and tied together at the top, formed an arch. A single bundle, plastered with mud, smoothed, and probably painted, became a column. There is evidence to indicate that the Sumerian column was modeled on the palm tree. Between columns set in walls appeared the recesses so typical of later Mesopotamian construction. Besides mud and reeds, the early Sumerians used unbaked bricks and fired cones. The former were employed mainly in foundations; the latter were set into columns both as a protection to the surface and as a decoration. Doors were swung on pivots that turned on a stone base. Buildings were set on raised earthen platforms.[1]

At Uruk and Jemdet Nasr, where the early cultures of the lower and upper valley were fused, the architectural forms and methods that characterized later construction entered into enduring patterns. The ziggurat, or step temple, is represented by a simple structure of mud and bricks. In other temples limestone foundations, brick walls, half columns decorated with colored cone mosaics, buttresses, and pavements were combined in the design of rectangular rooms, courtyards, and connecting stairs which later centuries elaborated but did not fundamentally alter. Plano-convex bricks and rubble came into general use in this period.

The homogeneous culture which spread through Sumer and Akkad in the early dynastic age was evidenced especially in architecture. Probably at this time an observer on a ziggurat could see the ziggurats of several other cities. In the south the ziggurat was a structure of courts and antechambers about a central rectangular shrine; in the north the shrine was a long rectangular room. The true arch and the dome were known. The temple to the Mother Goddess at Tell el'Ubaid is probably the best-preserved structure

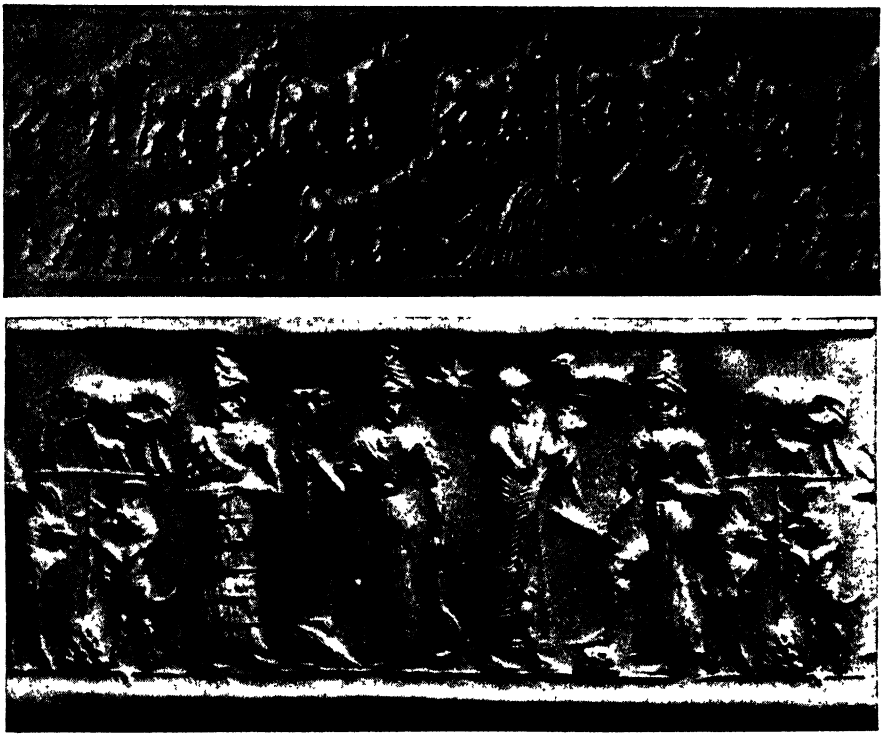
[1] On Sumerian art see C. L. Woolley, *The Development of Sumerian Art* (1935), especially p. 43, for a discussion of the roots of the architectural tradition; also Simon Harcourt-Smith, *Babylonian Art* (1928).

of the period. It was set on an elevated brick platform. A stone stairway led up to a porch whose wooden columns were overlaid with a mosaic in mother-of-pearl, black shale, and red limestone. On either side of the door were life-sized copper lion heads with inlaid eyes and teeth, and over the door a great copper relief showing an eagle god, grasping two antlered stags by the tails. The outside walls were adorned with copper statues of bulls, modeled in the round, a copper frieze of bulls in relief, and two friezes of inlaid white stone or shell on a black shale background showing dairy scenes—cows and calves grazing in flowering fields, and men milking. The walls were built of the plano-convex bricks typical of the age; at the end of the age the sharp-cornered rectangular brick displaced the plano-convex style.

During the last half of the third millennium B.C. buildings grew more massive and more ornate until they reached a climax in the golden age of Ur and in Hammurabi's Babylon. But their designs and the methods of their construction followed the patterns of earlier times.

2. *Mesopotamian Sculpture.* Among the finds at the earliest Tell el 'Ubaid sites are clay figurines of animals and human beings. Details of the animal forms were accented with bits of color. The human models were carefully if not expertly done. The earliest known example of Mesopotamian sculpturing in the round is a figure of a boar found at Jemdet Nasr. Sculpturing in relief is represented by three bands of figures on a vase that measures about five feet high. In the early dynastic period sculpturing developed slowly; in the Sargonic and post-Sargonic periods it took enduring form. The reliefs, always low, became pictorial. The "Stele of the Vultures" depicts a phalanx of heavily armed soldiers; the "Stele of Naram-Sin," king of Akkad, shows him at the head of his army in the moment of victory. Sculptured figures were rendered with fixed conventions. They were always squat and square-shouldered; with hands folded across the breast and the head slightly raised, they depicted mainly the poses of worship. Portrait statuary is exemplified by the Gudea figures which the great ishakku placed in the temples of Lagash. His son is shown wearing a turbanlike hat and a robe draped over the left shoulder. Women of his time, also represented in statuary, wore garments decorated with elaborate woven bands and close-fitting necklaces.

The cutting of seals was the most distinctive art of Sumerian culture. Originally the seals were stamp-shaped; later they were given a cylindrical form. The earliest designs were geometrical, but later designs were composed mainly of animal and human figures.



By the courtesy of Dr. John A. Wilson, *Director, the Oriental Institute, University of Chicago*

CYLINDER SEALS

The cylinder seal was the typical art product of Mesopotamian culture. In the upper seal, from the Jemdet Nasr period of Sumerian culture, the "Sacred Herd," *i.e.*, the herd of a god, is represented; on the lower one, from the period of Semitic assimilation of Sumerian culture, the adoration of Ishtar, the Mother Goddess, and Shamash, the Sun-God, is depicted.

Scenes from the "Epic of Gilgamesh" showing the heroes in combat with mythical monsters, lions, and bulls were especially popular. After the rise of Akkad, motifs from the legends of Marduk, as well as many other subjects, were frequently rendered. Cut in low relief, the seals had the fine qualities that only the most expert carving could give; many of them were jewel-like in the perfection of their workmanship. Because of their number and variety the seals form a detailed record of the development not only of Sumerian art but also of Sumerian culture.[1]

[1] See Henri Frankfort, *Cylinder Seals: A documented essay on the art and religion of the ancient Near East* (1939).

3. *Mesopotamian Minor Arts.* Pottery making and metalworking were the chief minor arts of Mesopotamia. The earliest pottery, as previously noted, was connected with the early painted ware of Iran. At Tell el'Ubaid it was either handmade or turned on a slow wheel. The chief decorative motifs were geometrical designs. Handles and spouts were the distinctive features. With the fusion of the lower and upper valley cultures at Uruk and Jemdet Nasr the fine decorative tradition of the northern area was united with the techniques of the southern area, but the beginning of metalworking diverted attention, as it was to do in many other culture areas, from pottery. The earliest examples of worked metal are gold beads from Tepe Gawra in the upper Tigris valley; they constitute the first evidence of value placed on gold. The tombs of the royal cemetery at Ur have provided the finest specimens of the Sumerian metalworking arts. Tools and weapons, the latter richly embellished, were made of precious metal. Small animal figures—cows, bulls, and asses—were cast with exquisite detail and fine realism. A gold bowl and a gold vase, both fluted, show a fine sensitivity to graceful lines. In some objects lapis lazuli was combined with gold with brilliant effects in contrast and design. A golden helmet that shows the hair in waves, curls, a long braid wound around the head, and a plaited "bun" at the back is a superb piece of workmanship. A recently discovered head from Nineveh shows the same excellent work. Carving and inlaying were combined with metalworking to produce rich pieces of domestic furniture, such as harps and gaming boards. The small animal figurines were a common form of jewelry; other forms of ornaments were bright stone earrings, metal beads, and richly engraved bracelets. One of the finest specimens of Sumerian art is a silver vase from Lagash; besides beautiful lines its attractive features are a wide engraved band showing an eagle holding in check two lions and a supporting base of cast lions.

The Sumerian and Semitic artists were weakest in the use of stone; they were strongest in handling the precious metals. Their architectural achievements realized fully the structural and aesthetic possibilities of the building materials which their environment provided. Their most distinctive motifs were animals in procession and monsters combining parts of several animals and birds; they did not develop the human form as a significant motif.

Science in the Sumerian and Semitic Cultural Traditions.

The accumulation of wealth which supported all early urban cultures was the result, in the last analysis, of a general increase of

the knowledge of nature. But since this knowledge was embodied chiefly in technology and the arts, the priestly masters of literate learning, like their preliterate forerunners, failed to recognize its significance. Their chief intellectual interest was the attainment of a fuller knowledge of the daimonic universe. However, because new social and economic circumstances thrust upon them the care of material wealth, they devised intellectual procedures which were truly significant contributions to the growth of science. The earliest mathematical documents in Sumer, for example, are accounts of sheep, jugs of beer, and measures of barley.[1]

1. *Mesopotamian Mensuration.* "Science," says a modern authority, "begins in measurement." If this statement is true, the Sumerians and Babylonians may be said to be the real founders of science, for they developed the first systems of measuring time, distance, area, and quantity. In this connection it should be noted that the other founders of urban cultures also devised means of measurement, but they were not as complete as those of the Mesopotamian peoples.

The Babylonian methods of measuring time were more detailed than accurate. The year, computed at 360 days, was based on the movement of the sun. The month was based on the movement of the moon. Since the months as computed by the movement of the moon did not coincide with the solar year, the priests introduced extra days into the calendar as they saw fit. The Babylonian week of seven days was the result of associating a day with each of the gods identified with the seven movable heavenly bodies. The seventh day of the week—*Sabbatu*—was fixed as a day of rest at a very early date. The lesser units of time measurement, hours and minutes, were probably derived from the Sumerian numerical system, which had a basic unit of 60. The Babylonians spoke of 12 double hours as constituting a day and a night. The hour of constant length, although introduced in Babylon, was not generally adopted until the invention of modern mechanical clocks. The kings of Akkad introduced the practice of naming years after important events. Hammurabi seems to have given the cities a common calendar.

The basic unit of linear measurement was the *finger*, about ⅔ inch, or 165 millimeters. The mason's *hand* was 10 *fingers*, about

[1] On Sumerian and Babylonian science see L. Delaporte, *Mesopotamia: The Babylonian and Assyrian civilization* (1929); Bruno Meissner, *Die Babylonisch-Assyrische Literatur* (1927–1928); Abel Rey, *La Science orientale avant les Grecs* (1930); J. R. Partington, *Origins and Development of Applied Chemistry* (1935); V. Gordon Childe, *Man Makes Himself* (1936); Raymond Clare Archibald, *Outline of the History of Mathematics* (4th ed., 1939).

6½ inches; the *open hand* was 15 *fingers*, about 9¾ inches; the *foot* was 20 *fingers*, between 12 and 13 inches; and the *cubit* was 30 *fingers*, about 19½ inches. Six *cubits* equaled a *reed;* 12 *cubits* a *pole;* and 120 *cubits* a *surveyor's cord.* The league was 180 *cords*, or 6.65 miles. The unit of weight was the *mina*, $\frac{1}{240}$ cubic *cubit* of water; it was divided into 60 *gin* or, in Akkadian, *shekels.* A *talent* equaled 60 *minae.* The *mina* weighed about 16⅛ ounces, or slightly more than a pound avoirdupois. Its standard weight was fixed in the golden age of Ur. Small weights were made by dividing the shekel into halves, thirds, quarters, fifths, etc. Short weights seem to have been in common use in buying and selling. The general use of metals brought the development of the smaller units of weight. The unit of area was known in Babylonia as "bed," or *sar*—a little over 35⅕ square meters. A "field," or *gan*, consisted of 100 *sar.* Eighteen fields formed a "hole," or *bur.* The unit of volume was the *sila*—slightly more than ⅕ of a liter. A *gur* was 300 *sila.*

In developing these means of measurement the Sumerians and Babylonians gave man the opportunity to deal precisely with some aspects of the physical world and made possible the creation of the ideal "accuracy." Furthermore, in the daily use of these means of measurement they built up a body of data from which general physical laws might be induced. Sumerian and Babylonian mensuration opened the way for man's escape from the daimonic universe, which could be dealt with only by prayer, incantation, and magic, into a universe whose processes could be recognized, at least in some respects, as orderly and exact.

2. *Mesopotamian Mathematics.* Sumerian and Babylonian mathematics was practical, not theoretical; only methods of reckoning, problems, and solutions are discussed on the surviving mathematical tablets. The oldest of these tablets, found at Uruk and Jemdet Nasr, are dated about 3300 B.C.; they show the existence of both a decimal and a sexagesimal system of notation. These systems were combined throughout Sumerian and Babylonian times; the chief units were:

gesh	1
u	10
gesh	60
gesh-u	600 (60 10)
sar	3,600 (60^2)
sar-u	36,000 (60^2 10)
sar-gal	216,000 (60^2 60)

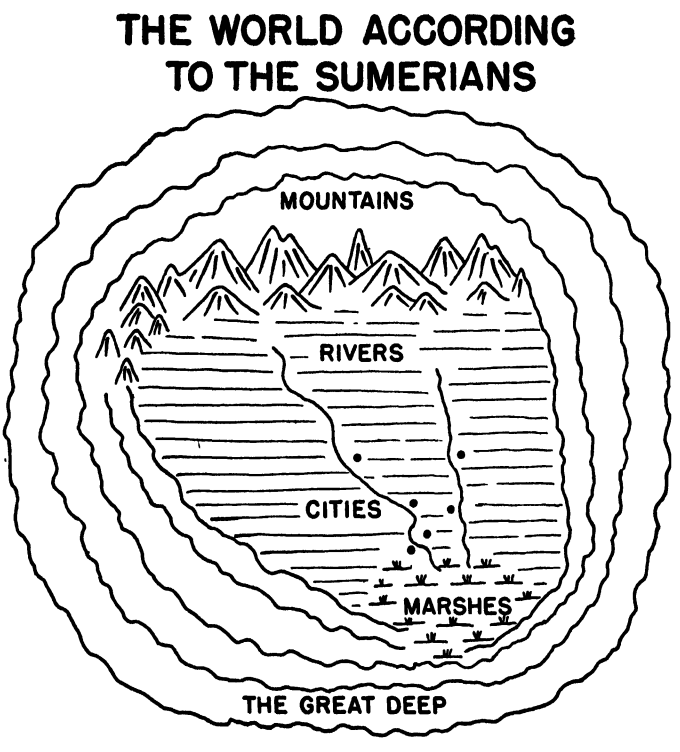
Sixty was written with the same sign as 1, except that it was much larger. Sixty-four was written 1 4— *i.e.*, one unit plus 4. The number 4,096 was written 1 8 16—*i.e.*, (1 60^2) + (8 60) + 16. In the decimal system this number is written (4 10^3) + (9 10) + 6. This system of place notation was developed by the Sumerians. They had no sign for zero, but they sometimes left the spaces in a number blank. Thus the number 10 . . 7 was 36,007. A sign for minus was frequently used in writing numbers; for example, 7 was often written 10 − 3. Ten was a regularly used unit between 1 and 60; the Babylonians had no symbol for 100 or 1,000. The Sumerians used special symbols for ½, ⅓, and ⅔.[1]

The Sumerians handled addition and subtraction without difficulty; by 2000 B.C. the Babylonians were as competent in multiplication as modern men. They had a complete mastery not only of large numbers but also of fractional quantities. Tables with multipliers for all integers up to 20 and above 20 by decades were drawn up. Tables of reciprocals between 1 and 60 were also common. Such tables were as useful for division as for multiplication.

The Babylonians were not competent in geometry. The circumference of a circle was computed by multiplying the diameter by 3; in other words, π equaled 3. The area of a rectangle was found by multiplying together two adjacent sides. The area of a triangle was equal to the altitude multiplied by one-half of the base. The area of a right-angled triangle was one-half of the product of the two sides adjacent to the right angle. The volume of a cylinder was computed by multiplying the area of the base by the altitude. Two solutions, neither quite accurate, were known for the problem of the Pythagorean theorem. A perpendicular line dropped from the apex of an isosceles triangle, it was known, would bisect the base. A way to calculate the height of an arc was also known.

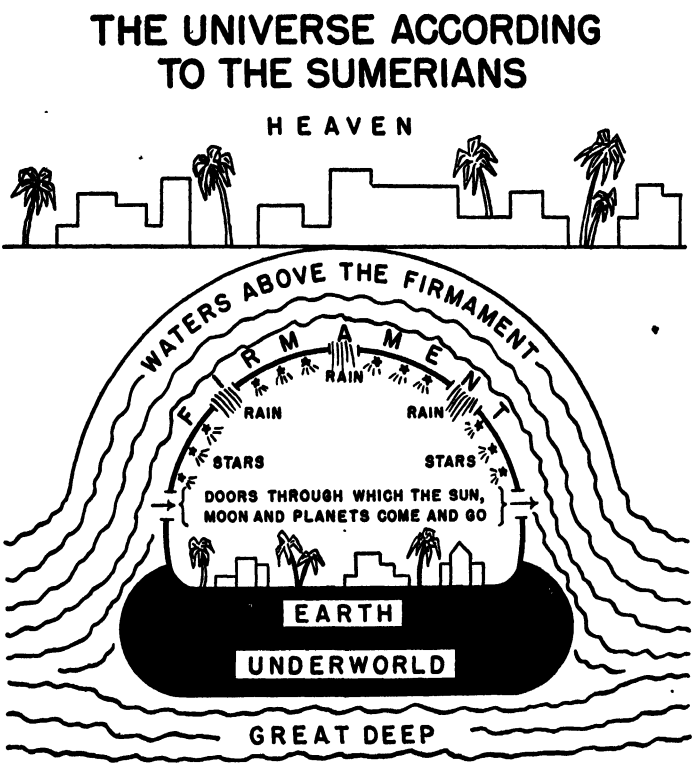
The mathematics of the Babylonians developed almost entirely as a result of efforts to improve methods of reckoning. Their achievements, however, especially in astronomical speculations and investigations, approached nearer to abstract mathematics than the work of any of their contemporaries. These achievements have been called the "nursery of algebra." The surviving tablets suggest that the mathematicians, undoubtedly priests in the temple schools, commonly set problems for one another to solve. That they did not develop mathematical rules does not seem a great failure when it is realized that they had to invent the vocabu-

[1] See T. Thureau-Dangin "Sketch History of the Sexagesimal System" *Osiris*. Vol. 7 (1939), pp. 95–141.



lary of mathematical discussion as they went. Each new mathematical concept involved the invention of new words or symbols, if not both. After the Semitic language displaced the Sumerian, words survived as mathematical ideograms. The terminology of Mesopotamian mathematics, it should be noted, grew constantly more precise.

3. *Mesopotamian Medicine.* Sumerian and Babylonian medicine was always entangled in primitive conceptions. The daimonic theory of disease was greatly elaborated. Contagion was explained as seizure by daimons. Specific diseases were caused, it was believed, by specifically named daimons. The chief method of diagnosis was the consultation of omens. Exorcism was a part of almost every treatment. Special priests performed different types of exorcisms, depending on the disease. Over a hundred different substances were used in concoctions to drive out daimons. Such concoctions were believed to be particularly efficacious if taken on an empty stomach. Preventive medicine consisted of incantations and spells. They were uttered against mosquitoes, scorpions,



and worms believed to cause toothache. To ward off the fever daimon that lurked at crossroads, lambs were killed there.

Although no Sumerian medical text has survived, it is clear that a complex medical literature existed before 2000 B.C.[1] Apparently there were two main types of medical works. One type described diseases. These were localized for the different parts of the body. For example, mental troubles, infections, baldness, and ailments of the eyes, ears, and temples were distinguished as diseases of the head. Pathological conditions were described in detail. The signs of death or of recovery from some diseases were well known. Liver divination and all other forms of taking omens led to the accumulation of considerable information about the organs and secretions. Although Babylonian representations of the liver were more accurate than any other before modern times, anatomical knowledge as a whole was scant and inexact. Dissection was prohibited. The other type of medical work was a short com-

[1] Oswald Temkin, "Recent Publications on Egyptian and Babylonian Medicine," *Bulletin of the Institute of the History of Medicine*, Vol. 4 (1936), pp. 341–347.

pilation of diseases and cures, used by the ordinary physicians. It consisted of three columns. In the first the cure was named, in the second the disease, and in the third the method of applying the cure. There were recipes for all kinds of ailments. For toothache sunflower seeds were laid on the tooth. For stomach trouble milk was given. A shampoo of oil and beer was a favorite remedy for baldness. Innumerable substances, mineral, animal, and especially plant, were combined in these remedies. The Babylonians had great confidence in herbs. The value of the enema was understood. Gymnastic exercises were prescribed in some cases. No Sumerian or Babylonian surgical work is known, but surgery was practiced, for the prices of operations are mentioned in Hammurabi's code. Broken bones were set, tendons tied together, abscesses opened, and artificial fingers substituted for lost members. Cities were cleaned, apparently for sanitary reasons. The oldest known sewage system was built by the Sumerians.

4. *Mesopotamian Astronomy and Geography.* Chiefly as a result of the extension of commerce the Sumerians and Babylonians arrived at a fairly clear picture of their homeland and its surroundings.

A map surviving from the seventh century B.C. shows the world as it could have been depicted as early as Sargon of Akkad. The map shows a river flowing from mountains "where the sun is not seen" into marshy land; along the river are several cities. Around the whole region is the "Great Deep." A map which survives from Sumerian times seems to have been made in order to locate an estate. Its top is east, the bottom west, the left side north, and the right side south. It shows three cities, two rivers or canals, and ranges of mountains.

Geographical and astronomical learning was, of course, bound up with mythology. Gods dwelt on mountains. Somewhere at the edge of the world was an island where minor gods and men granted immortality lived. The earth was believed to rest upon the waters of the Great Deep, into which all rivers and seas flowed. Over the earth was the solid firmament, like an inverted bowl; to its inside surface were attached the fixed stars. The movable heavenly bodies crossed the firmament, coming in and going out through apertures on the east and west sides of the earth; other apertures in the firmament, around which flowed the waters of the Great Deep, allowed for rains and floods. Above the firmament were the heavenly regions; below the surface of the earth was the underworld, where the dead were confined. There is no evidence that

the Sumerians and Babylonians ever recognized any heavenly body as a physical object, but their observations of the sun, moon, stars, planets, and comets led to the accumulation of an enormous body of data, which later became the foundation of scientific astronomy. Such observations were made so accurately that today they are used in determining the chronological order of events. The Sumerians and Babylonians never developed an astronomical, as contrasted with an astrological, view of the universe.

The World Outlook of the Sumerians and Babylonians: Astrology.

Perhaps as early as the opening of the third millennium B.C. the Sumerian priests discovered that certain of the heavenly bodies (which they knew only as gods) had motions that could be followed and took positions that could be predicted; about these facts they quickly reorientated the primitive conception of the daimonic universe. The principle of this orientation was the most profound philosophical achievement of early urban cultures, namely, the principle of universal causation; and its chief intellectual elaboration was astrology. Manifest in the movement of the heavenly bodies, it was believed, was the will of the gods, the universal cause of all happenings; by a knowledge of the movements of the heavenly bodies, therefore, man could ascertain the will of the gods and act accordingly. In terms of this view of the daimonic universe the Sumerian and Babylonian priests quickly amalgamated long-established practices of divination in the pseudo-sciences of astrology and liver divination and laid the basis of the later conceptions "macrocosm" and "microcosm." These conceptions which held that the human being—the microcosm—is a small replica of the universe—the macrocosm—were developed because the physical marks on the liver were believed to be a transcription of the cosmic scene. Thus the will of the gods was to be known by a study of the liver as well as by a reading of the stars.

Although Babylonian liver divination gave rise to the most complex body of learning built up in an early urban culture, a brief discussion of astrology, since it survives even today, is more pertinent to present interests. Astrology rested on the observable fact that human life is influenced by the physical environment, notably by such phenomena as heat, rain, and floods—well known to Sumerians and Babylonians—which appear to have their origin in the heavens. When the seven movable heavenly bodies were identified with the seven great deities of the Babylonian

pantheon (the sun with Shamash, the giver of light; the moon with Sin, the bestower of plenty; Mars with Nergal, the god of turbulence; Mercury with Nebo, the lord of wisdom, cunning, and crafty design; Saturn with Ninurta, the hoary-headed begetter of evil; Venus with Ishtar, the Mother Goddess; and Jupiter with Marduk, the ruler of men and gods), the priests conceived that events among men occurred according to combinations of influences into which these deities entered. To aid in the description of these combinations they invented the zodiac, a representation of the heavens above and below the earth in twelve areas, or "houses," alternately favorable (1-3-5-7-9-11) and unfavorable (2-4-6-8-10-12). The task of the priests was then to discover the will of the gods as indicated by the position of the heavenly bodies in these several houses.

The meanings assigned to combinations were based upon nothing more substantial than coincidence of events and association of ideas. The appearance of a new moon in a cloudy sky before a military victory established new moons in cloudy skies as favorable signs. The circles which sometimes appear about the moon were associated with the round caps worn by kings and became, therefore, a favorable sign. Houses eight and six of the zodiac, coming just before and after nightfall, were particularly evil because it was observed that fevers get worse at night. By such correlations a vast body of interpretations of heavenly phenomena was built up. Their character can be judged from the following examples:

If the west wind is blowing when the new moon is first seen, there is likely to be an unusual amount of illness during that month.

If Venus approaches the constellation of Cancer there will be respect for law and property in the land; those who are ill will recover, and pregnant women will have easy confinement.

If Jupiter and the other planets stand opposite one to another, some calamity will overtake the land.

Originally the heavens were read only to foretell public events.

The intellectual outlook of which astrology was the product is in fundamental opposition to a scientific conception of the universe. Astrology assumes that the universe is an array of supernatural forces contending with one another and that man's life, both public and private, is controlled by them. Astrology also assumes that the significant facts of nature are incidental variations from general and typical occurrences, for these variations

reveal the peculiar combinations of forces determining human affairs. Science, on the contrary, rests on the assumption that nature is orderly and that man's best guides to action are principles induced from a knowledge of general and typical occurrences. Astrology, however, represented an advance in interpreting natural phenomena, for it brought the supernatural forces into some relation with the observed regularity of natural events. Thus the Sumerian and Babylonian priests took a step away from daimonism, although actually they only gave its assumptions a new orientation.

Several implications of this world outlook were important. In the first place it meant that there was a divine order in the universe, not merely a vicious caprice. In the second place it permitted men to feel that right knowledge could make possible a righteous behavior, *i.e.*, one that conformed to the divine order. In the third place it gave unity to human life and universal phenomena, for the two moved together, good and evil alike occurring under divine foreknowledge and causation. And in the fourth place it sublimated the daimonic forces, raising them to the supreme position of causes in a universal order, and ennobled man by allowing him to believe that he could live in harmony with such forces. At the same time, of course, by this sublimation and ennoblement, it intensified the problem of wrongdoing, for moral lapses were obviously more to be condemned as breaches of a divine order and as failures to follow revealed knowledge than they were as derelictions inspired by capricious daimons. The specific expression of this more serious view of evil and wrongdoing was the concept "sin," which, as previously noted, was the most important element in Babylonian religious thought. Finally, it can be seen, this world outlook nurtured a somberness of heart, a gloominess of mind, a profound patience in the face of troubles believed to be unavoidable, and also an effort at moral achievement which, although possibly doomed from the beginning to defeat, was worth making. The Babylonians believed that they knew the way of the lord of the universe and wished to walk in it. In this belief and wish they were no different from any other people, then or now; the difference rests chiefly in the conception of the way.[1]

[1] See Alfred Jeremias, "Die Weltanschauung der Sumer," *Der Alte Orient*, 1929.

It is important to understand the astrological concepts of the universe and of human life as reorientations of the primitive belief about daimonic forces. See A. E. Thierens, *Astrology in Mesopotamian Culture* (E. J. Brill, Leiden, 1935), p. 5: "A pantheon with the accompanying speculations on the qualities and principles of gods and goddesses is to be found within almost every great civilization. In this respect they all might be called more or less cosmological. The astrological type, however, appears only there where these cosmic

THE INDUS VALLEY CULTURAL TRADITION

Recently discovered archaeological evidence, although slight, indicates that the Indus valley cities were rich and prosperous during the late dynastic period of the Sumerian cities, *i.e.*, about 2500 B.C. The evidence also points to their founding, about half a millennium earlier, by a people who had contact with the culture which the Sumerians carried into Mesopotamia. Whoever the founders were, they seem to have known how to work copper from the earliest time they occupied the Indus flood plain. It is likely that a neolithic people was already established there when they arrived.[1]

The Indus Valley Cities.

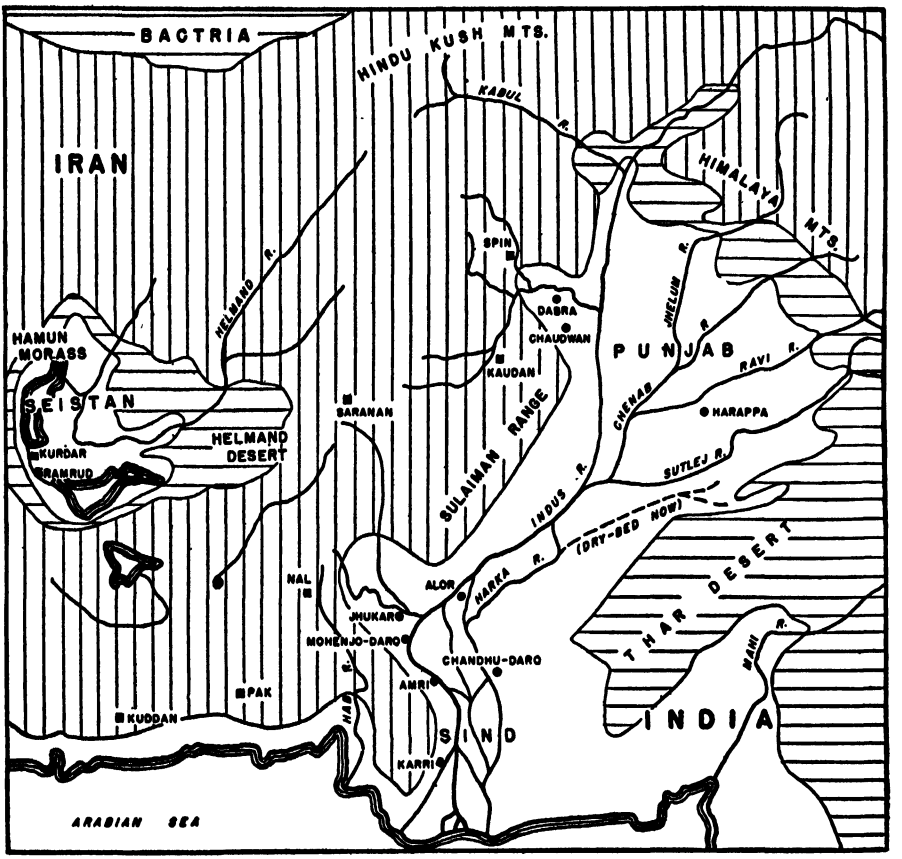
The history of the Indus valley cities, which spread from Amri to Taxila—an area larger than either Mesopotamia or Egypt, cannot be read in the evidence now at hand. A sequence of cultural strata discovered at Chandhu-Daro, the most recently excavated site, exhibits four phases. In the earliest phase, pottery was well made, but buildings were poorly constructed and metal was unknown. The second phase is the period of the urban culture previously known at Harappa and Mohenjo-Daro. The third phase witnessed a decline of architecture and important changes in pottery and art. The fourth phase brought decline in every aspect of the culture. No explanation of this course of development is now possible.

However, as new evidence accumulates it is becoming clear that the contacts between the Sind and the Punjab—as the lower and upper Indus valley, respectively, are known—and Mesopotamia were continuous over a long period of time. In the earliest phase affinities with the cultures of Tepe Gawra and Tell el'Ubaid have

forces or principles are supposed to be the qualities of certain constellations, surrounding our solar system, and of the Sun, the Moon and the planets belonging to the latter. They appear in such a case as motoric forces ruling the life on earth. Constellations as well as Sun, Moon and planets are then regarded as the houses, embodiments or vehicles of cosmic force mentioned; their ruling and governing of the life on earth appears in every instance as the work of a divine world."

[1] See Ernest Mackay, *The Indus Valley Civilization* (1935); Ernest Mackay, "Bead Making in Ancient Sind," *Journal of the American Oriental Society*, Vol. 57 (1937), pp. 1–15; Sir John H. Marshall, *Mohenjo-Daro and the Indus Civilization* (1931); N. G. Majundar, *Explorations in Sind* (Memoirs of the Archaeological Survey of India, No. 48, 1934); W. Norman Brown, "The Beginnings of Civilization in India," *Supplement to the Journal of the American Oriental Society*, Dec. 1939, pp. 32–44; Simone Corbiau, "New Finds in the Indus Valley," *Iraq*, Vol. 4 (1937), Part I, pp. 1–10; and Dorothy Mackay, "Finds at Chandhu-daro," *Asia*, Vol. 37 (1937), pp. 501–504.

THE INDUS VALLEY AND EASTERN IRAN



been discovered; a hairpin with a double spiral head, found at Chandhu-Daro, is similar to pins found on islands of the Aegean Sea and in early Central Asiatic settlements, especially Anau (see p. 734). Finds at Eshnunna, dated in the time of Sargon of Akkad, indicate that cultural materials moved westward as well as eastward. These evidences support the conclusion that the Indus valley urban culture was a distant product of the same interaction which contributed to the rise of the urban culture of Mesopotamia.

Mohenjo-Daro, Harrapa, and Chandhu-Daro were well-built cities, laid out on a checkerboard plan. Mohenjo-Daro covered an area of somewhat more than a square mile; its main street, over 30 feet wide, has been traced for over half a mile. The side streets were only about half as wide. These streets are the earliest evi-

dences of town planning. The plan may be considered as evidence that the city was well governed. The chief structure, a great bath, 90 by 170 feet, was probably a sacred place connected with the public religion.

The chief Indus valley building material was kiln-baked bricks. Timber and stone were used sparingly. The larger houses, which like the smaller ones were without windows, were equipped with baths. Wells, lined with wedge-shaped brick, were numerous. Each house was connected with drainage channels laid in the streets. Sewage and rain water seeped through cesspools and sumps before entering the main channels. Entrance to the houses, which were several stories high, was usually by way of doors in narrow passages opening into the streets. Steep stairs with narrow treads led from floor to floor. The roofs were flat, and special arrangements were made to drain them. The larger houses had courtyards as well as baths. Booths and stalls seem to have lined the main street, which was unpaved.

The plan of the towns and their structures indicates that the Indus valley people were mainly peasants, craftsmen, and traders; the lack of a temple or a palace suggests but does not prove that priests and princes were not as important among them as among their contemporaries in Mesopotamia and Egypt. The basic industry was agriculture, carried on mainly, it seems, with wooden implements, for only a few of the stone and metal artifacts yet discovered can be identified as agricultural tools. The main crops were wheat, dates, melons, and cotton; there is a bare possibility that rice was cultivated. The domestic animals were cattle, buffaloes, sheep, goats, pigs, and elephants. The domesticated fowl was also kept. The arts and crafts were as advanced as in the other early urban areas. A fine wheel-turned pottery, both decorated and plain, was common. Numerous spindle whorls testify to the importance of the textile industry, which was based on cotton. The working with copper, tin, lead, gold, and silver was carried on skillfully. The secret of making bronze was known. Tools were cast in closed molds and finished by hammering and grinding. Figurines were cast by the cire-perdu process. A notable find is a bronze saw that once had a wooden handle. Pieces of copper and bronze were fastened together by rivets. Gold and silver were soldered. The metals were smelted in brick furnaces. Boatbuilding was a well-established industry. Two types of boats, one for river traffic and the other for sea navigation, were known. A trade in agricultural products, as well as in timber and metals, probably passed up and down the river.



By courtesy of the Museum of Fine Arts, Boston

CHANDHU-DARO

At Chandhu-Daro, the latest site excavated in the Indus valley, the sequence of early urban development in India was considerably clarified. The culture found at Mohenjo-Daro and Harappa once occupied a very wide area.

The seagoing trade, which seems to have connected Sumer with the Indus valley, may have been in the hands of the Indus valley traders and sailors. The extent of this trade is, of course, not known.

The Artistic and Intellectual Aspects of the Indus Valley Urban Culture.

The art remains of the Indus valley urban culture are less startling than those of the other early urban cultures. Ornamentation for its own sake does not seem to have been known. If houses were decorated at all, it was with woodwork, which has completely disappeared. Polychrome-painted pottery is rare. Among the distinctive designs decorating pots are concentric circles and a tree pattern. The human form appears only on a few shards found at Harappa. Stamp seals, decorated with animal motifs, are the finest

artistic work yet discovered at Indus valley sites; among the motifs are "unicorns," bulls, buffaloes, tigers, rhinoceroses, goats, and elephants. Pottery and metal figurines are also prominent in the art remains. A bronze figurine of a dancing girl is an especially fine piece. Only a few sculptures in the round are known. Among them the most notable are two male figures, one clad in a richly decorated cloak and the other nude. Pottery figurines of deities, which because of their number are believed to have been popular gods, were as crudely made as were similar objects in the other urban centers. The difference between these crudely made art objects and the skillfully worked seals and figurines is the clearest evidence of a class structure yet found at the Indus valley sites. The lack of a monumental art is the most notable difference between the Indus valley culture and the other early urban cultures; further archaeological investigation may, of course, discover such an art.

Little is known of the intellectual elements of the Indus valley culture. Its script, represented by a few short inscriptions on seals, has not been deciphered; it consisted of about 250 symbols, counting the many variants. Marks that may be numerals have been found on a few metal tools. Besides this unread script, the chief evidence of an intellectual development similar to that of other urban cultures consists of cubical stones believed to be weights; the variations in their size indicate that there was a well-developed system of measurement. The figurines and the seals point to religious beliefs which centered about a three-faced male deity, a Mother Goddess, and several animal gods. A god, represented by a fusion of animals—the ram, the elephant, the tiger, and the bull, among others—seems to have had special prominence. The great numbers of amulets suggest a widespread belief in evil spirits. The existence of a learned priest class can only be inferred from the script and these religious objects. Perhaps the dice, which were numbered differently from those found at Sumerian cities, and the gaming boards should also be counted as evidences of the intellectual development normal in urban cultures.

The Unknown Fate of the Indus Valley Urban Culture.

The fate of the Indus valley urban culture is unknown. Recently discovered forts to the west of the Indus River suggest that its centers may have been under a more or less constant threat of attack by highland peoples, and skeletons unearthed at Mohenjo-Daro testify, perhaps, to the success of such an attack. On the

whole, however, the artifacts indicate that the peoples of the cities lived peaceably. A much more serious danger than attack from the highlands, it can be believed, was the flood of the Indus. Evidence at Mohenjo-Daro, Chandhu-Daro, and Harappa points to recurrent disasters by flooding, and probably the cities were finally abandoned because of this menace.

But what became of the people and their culture? There is no evidence that the early Indo-European invaders of India either met or absorbed them. But many objects found in the debris of the cities, such as the bejeweled female with a nursing infant and the many-faced male deity seated on a stool, seem to have significance in terms of later Hindu religious beliefs. Such slight evidence only warrants the guess that the Indus valley people transmitted at least a part of their culture to the peoples with whom the Indo-Europeans finally fused to form the population of India of historical times. It is not unreasonable to believe that the peasant-village pattern which today shapes the life of the Indian masses was evolved by the unknown builders of India's first cities; perhaps it originally existed in the agricultural areas from which these cities drew the wealth that supported them.

Chapter IV

THE RISE OF URBAN CULTURES IN THE ANCIENT-ORIENTAL LANDS: EGYPT AND CRETE

Tradition has long supported the view that the earliest urban culture developed in Egypt. But contemporary scholars disagree on the problem. One group claims that the recently discovered sequence of cultures in the Nile valley, extending from paleolithic times to the early cities, supports the traditional view. Another group cites the discoveries on the Tigris-Euphrates flood plain as evidence for the priority of Mesopotamia. Especially, it seems, copper was known earlier in the Tigris-Euphrates valley than in Egypt; moreover, it is probable that the rapid cultural advance late in the fourth millennium B.C. was stimulated by an Asiatic invasion. Certainly Egyptian art motifs, such as monsters, processions of animals, and lions, were Asiatic in origin, and Osiris, the god of the Egyptian cult of the dead, resembles the typical Asiatic agricultural god.

Perhaps this contention over the priority of Mesopotamia or Egypt as the original center of urban culture ought to be dismissed as misleading, for, as previously noted, the evidence now at hand indicates that the urban cultures of both countries, as well as those of Crete and the Indus valley, sprang from the peasant-village cultures which, about 5000 B.C., were spread over the intercontinental land bridge from the Nile valley to the Caspian Basin and the Iranian Plateau.[1]

THE EGYPTIAN CULTURAL TRADITION

The development of the Egyptian cultural tradition was slow but continuous from the neolithic age to late Roman times, and although Asiatic elements were vital factors in this growth, the

[1] J. H. Breasted, *The Oriental Institute* (1933), pp. 6–8.

product, even at the beginning of literate times, was a unified whole. During its entire history Egyptian culture preserved its fundamental elements, wrought in the most enduring materials—stone and religion.[1]

Egypt is the Nile River and the sun—a land of perpetual summer. The steady flow of the Nile, whose waters are diminished by evaporation as they move northward, has origin in the tropical rainfall of the African lake region; its annual flood is fed by the seasonal precipitation on the Abyssinian Highland. From the first tributary to the mouth is a distance of 1,600 miles; through this distance, except for the 100 miles of the Delta, the river flows in a narrow valley between cliffs, behind which desert highlands stretch away. Dry water courses provide entrance from the valley into these areas. To the west of the lower river and the Delta is a series of oases; Lake Faiyum also lies on the western side of the lower river. On the eastern side of the lower river, where it enters the Delta, routes lead away toward Sinai and Palestine. Farther up the river, routes following the dry water courses go to the Red Sea. The Delta, affected by proximity to the sea, is cooled by evaporation and sometimes covered by mists. From the Delta to the first cataract is a distance of just over 600 miles; the second cataract is 214 miles farther south. The Nile shares with the sun the sovereignty over Egyptian life.

The narrow bands of arable land from the second cataract to the Delta and the broader stretches of the delta constituted ancient Egypt. Below Lake Faiyum desert conditions probably did not prevail until about the end of neolithic times. The Delta was brought under cultivation slowly; for centuries, except at the edges, it was a frontier land, often flooded and generally uninhabited, given over to hunting and grazing. It provided a great land

[1] The classic treatment of the history of Egypt is Sir G. C. C. Maspero, *The Dawn of Civilization in Egypt and Chaldea* (latest ed., 1922).

The most complete survey of Egyptian archaeology has been made by William H. Flinders Petrie; his latest statement of findings is *The Making of Egypt* (1939). Most Egyptologists now regard his dates as too early. A brief description of the more important remains of the Nile valley is James Baikie, *Egyptian Antiquities in the Nile Valley: A descriptive handbook* (1932).

The best-known general discussion of Egyptian history is J. H. Breasted, *A History of Egypt from the Earliest Times to the Persian Conquest* (2d rev. ed., 1912). See also J. H. Breasted, *Ancient Records of Egypt: Historical documents from the earliest times to the Persian Conquest* (5 vols., 1906–1907); Alexander Moret, *The Nile and Egyptian Civilization* (1927); James Baikie, *A History of Egypt from the Earliest Times to the End of the XVIII Dynasty* (2 vols., 1939); Hermann Kees, *Aegypten* (Walter Otto's *Kulturgeschichte des Alten Orients*, Erster Abschnitt, 1933); Adolf Erman, *Die Welt am Nil* (1936); and *Précis de l'histoire d'égypte par divers historiens et archéologues* (2 vols., 1932).



Acme Photograph

THE NILE VALLEY

The wars of the gods Seth and Osiris symbolized the conflict of the river and the desert for the mastery of the narrow land that is Egypt; as a matter of fact, however, from at least the fourth millennium B.C., it was men's labor and ingenuity that made the annual flood of the Nile the support of settled life. In this infrared photograph, taken above Cairo, the distance from the closest point in the foreground to the most distant point in the background is about ninety miles. The white areas along the river are the parts of the valley covered with vegetation.

reserve which enterprise could make arable. Upper Egypt was without timber at the opening of historical times; the chief trees were the date palm, the sycamore, the acacia, and the tamarisk. Most of Egypt's plants and animals, at least since the beginnings of urban culture, have been domesticated varieties.[1]

[1] On the climatic changes in Egypt see K. S. Sandford and W. J. Arkell, *Paleolithic Man and the Nile-Faiyum Divide: A study of the region during Pliocene and Pleistocene times*

Two factors in the Egyptian environment tended to give stability to culture: (1) the regularity of the climatic routine and (2) the relatively complete isolation of the valley from other culture areas. River and sun gave a fruitful but unchanging world; sea and desert so closed this world that outside influences were never sufficiently powerful to disrupt the native culture.

The Rise of Urban Culture in Egypt.

Just as in Mesopotamia, recent archaeological investigation in Egypt has revealed the rise of urban culture from a neolithic base; the course of the development is, however, not so clear as in the Tigris-Euphrates valley.[1]

1. *The Neolithic Base of Egyptian Urban Culture.* On the shores of Lake Faiyum, on the east bank of the Nile in Middle Egypt, and at the edge of the desert on the western side of the Delta, sites have been unearthed which indicate that, during the period when the valley was still marshy, a sparse population maintained itself by a combination of hunting and tilling. Apparently its members moved their habitations easily. Near Lake Faiyum, probably the oldest site of settled life now known in Egypt, they cultivated emmer and barley, kept cattle, pigs, and sheep or goats, made pottery, and wove a coarse linen. At Deir Tasa perforated seashells indicate that contact with the Red Sea coasts had been made. At Merimde, on the western side of the Delta, the settlers made shelters of mud and matting supported by posts. Although the relations among these sites are not clear, it is likely that they present different aspects of a single culture, which was linked perhaps to the Capsian culture of late paleolithic times. Recent investigations in the central Saharan area have brought to light materials which suggest that some elements of the Egyptian artistic tradition may have been derived from peoples who once lived in this region.[2]

Drought and drifting sand, especially in Middle and Upper Egypt, probably dispersed the peoples who founded neolithic cul-

(Oriental Institute Publications, Vol. 10, 1929); also Hermann Kees, *Aegypten* (1933), pp. 7–8.

[1] On the beginnings of Egyptian culture see V. Gordon Childe, *New Light on the Ancient East* (1934); Guy Brunton *The Badarian Civilization and Predynastic Remains near Badari* (1928); Guy Brunton, *Mostgedda and the Tasian Culture* (1937); and Herman Ranke, "The Beginning of Civilization in Egypt," *Supplement to the Journal of the American Oriental Society*, Dec. 1939, pp. 3–16. For a speculative view of the origins of Egyptian culture see Kurt Sethe, *Urgeschichte und Aelteste Religion der Aegypter* (1930).

[2] See Comte F. de Chasseloup Labat, "Saharan Influence on Early Egyptian Art?" *The Illustrated London News*, Jan. 14, 1939.

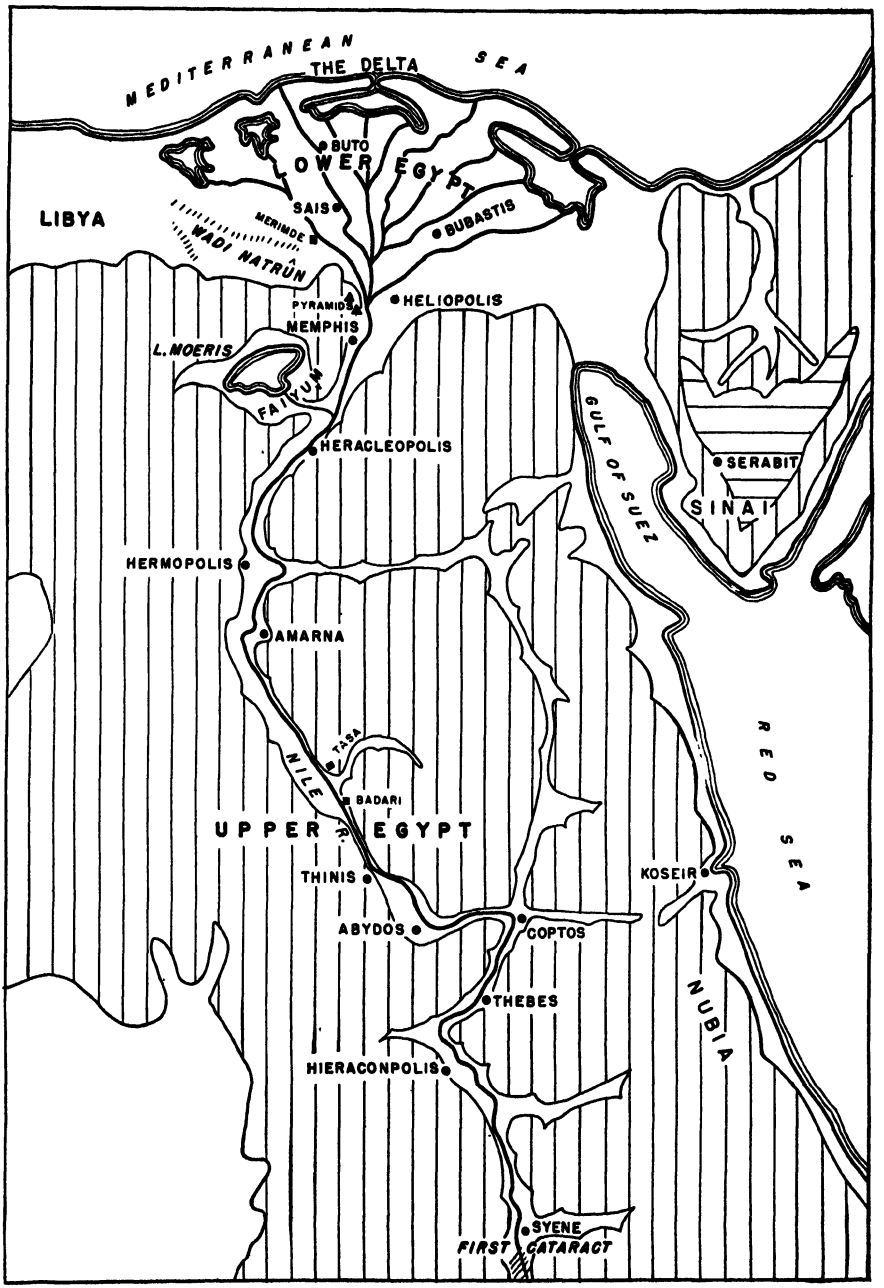
ture in the Nile valley; their achievements were perpetuated by a people known as the Badarians, named for the site El Badari, who were the ancestors of the later inhabitants of Upper Egypt. They lived in huts of screen matting, which they moved frequently. They cultivated wheat and barley and raised cattle and sheep. The pig seems to have disappeared. They made an exceptionally fine pottery and knew copper. In addition to shells from the Red Sea, they imported malachite, used for painting their eyes, from Sinai and cedar and juniper wood from Syria. Increasing desert conditions forced them to undertake the task of managing the marshy lands of the valley.

In upper Egypt the Badarian culture was succeeded by the Amratian; the designation comes from the name of a cemetery near Abydos. Villages of round huts were built. Pottery in at least three styles, one of which is the earliest painted pottery in Egypt, was made. Among the decorative motifs were the branches of trees and animals—the dog, the elephant, and the hippopotamus. The dead were buried in flat round or oval pits, the head to the south and the face to the west; they were covered with a sheepskin or a mat before the grave was filled. Many ivory objects, undoubtedly used as jewelry, are found in the graves. Although hunting and fishing were still usual occupations, agriculture and husbandry were well developed. Perhaps the Amratians had begun to navigate the Nile, and they may have used a rude script. Foreign influences have not been identified at Amratian sites.

2. *The Transition to Urban Culture in Egypt.* Apparently the developments which gave rise to Egyptian urban culture began in the Delta and spread southward, first about the head of the Delta, where they were fertilized by foreign materials, and then to the upper valley. The penetration of the upper valley was so slow that it created no break between the Amratian and the succeeding urban culture.

The best-known phase of this development in Middle and Upper Egypt is the Gerizean culture. Agriculture had finally displaced hunting and fishing as the general support of life. Flint working and stone boring were carried on with high skill. Copper was still rarely used. Habitations were solidly built reed-and-mud huts, and some of the villages rose to the status of towns. Although no shrine or temple has been identified, grave materials suggest the differentiation of social classes. Changes in the shapes of maces, knives, household utensils, the introduction of new forms of dress and toilet, and the adoption of amulets, usually in the form of

EGYPT


MEDITERRANEAN SEA
THE DELTA
BUTO
LOWER EGYPT
SAIS
BUBASTIS
LIBYA
MERIMDE
WADI NATRÛN
PYRAMIDS
HELIOPOLIS
MEMPHIS
L. MOERIS
FAIYUM
HERACLEOPOLIS
GULF OF SUEZ
SERABIT
SINAI
HERMOPOLIS
AMARNA
TASA
NILE R.
BADARI
UPPER EGYPT
RED SEA
THINIS
KOSEIR
ABYDOS
COPTOS
THEBES
NUBIA
HIERACONPOLIS
SYENE
FIRST CATARACT

animals, in the place of figurines, indicate that new influences played an important part in the development of this culture.

The source of these foreign influences was, it seems, a growing trade. Probably the earliest towns to become cities were those favorably located for trade—Heliopolis, for trade with Asia by way of the Isthmus of Suez; Coptos, with the Red Sea; and Abydos, with the Libyan oases. Perhaps Buto, Saïs, and other early cities in the Delta had contacts with the Aegean Islands and eastern Mediterranean coasts. Influences from the Mesopotamian culture area undoubtedly reached Egypt in the Jemdet Nasr period, and before the close of the fourth millennium B.C. the two areas were in continuous, although indirect, contact. The point of this contact was probably Syria, where both Egypt and Sumer found the timber they lacked; perhaps another point of contact was southern Arabia, to which the ships of both countries may have gone. A known effect of contacts with Asiatic peoples was the introduction of many Semitic words into the Egyptian language. Among the elements in Egyptian culture which may have had a Mesopotamian origin were spouted jugs and animal-shaped vases, the practice of placing a dark on a light color and the motif of animals in procession in art, and Osiris, an Asiatic fertility god, in religion. Toward the end of the fourth millennium B.C. the Egyptians were casting copper in open molds after the Asiatic manner.

The political development of early Egyptian cities is highly obscure. Apparently local centers, which served as both shrine and fortress, grew up in relatively small areas marked out by the main configurations of the Nile valley; later these centers and their areas became territorial districts for administrative purposes. The standards, mainly animals and birds, of these *nomes*, as the districts are called, indicate that their populations were originally organized in clans and tribes. With the development of the nomes as administrative areas, this tribal organization was replaced by a territorial rule, probably carried on by priest-chiefs. Perhaps this development originally took place in the towns of the Delta where trade created a mixed population; in the upper valley the basis of territorial political rule was the cooperation forced upon the inhabitants by the need to control the Nile waters if continuous agricultural production was to be maintained. The government of each nome, it may be conjectured, was carried on in connection with the worship of gods who were regarded as the real rulers. As indicated by the symbols of Egyptian writing, the towns were walled enclosures located at road crossings. Besides the reed-and-mud huts of the

peasants, they contained a sacred structure—"Mansion of the God," where priests dwelt—storehouses, workshops, and, perhaps, prisons.

Among the nomes struggles for advantage undoubtedly occurred, and from time to time the districts entered into different combinations. A factor in the development of their relations was the commercial traffic, which, in an ever-increasing amount, flowed up and down the Nile. Early towns of the Delta may have planted trading colonies along the upper river, and the larger towns, as time went on, may have settled parts of their inhabitants on lands which were reclaimed from swamps. Among the towns which headed early confederations were Saïs, Busiris, and Buto. At Buto the old tribal regime, surviving as the rule of aristocratic families, probably gave way to a monarchial form of government. Such coalitions, of course, fought one another for power over the whole land, and unification was sometimes achieved, only to be broken again by the enduring rivalry of the Delta and the upper valley. Inasmuch as Egyptian political organization preserved a religious orientation throughout literate times, these political events were undoubtedly believed to be the actions of gods.

Although trade was a factor in the rise of Egyptian urban culture, even the greatest of the Egyptian cities always looked toward the land. They were religious centers from which the gods ruled agricultural production; they were the centers of consumption to which agricultural wealth flowed. The cereals—wheat and barley—were the chief crops. In the Delta flax was a staple crop, but husbandry, hunting, and fishing, rather than agriculture, were the leading occupations. The vine was grown very early in Egypt; the date was the most important fruit. Vegetable gardening, but not horticulture, was generally combined with field agriculture and husbandry; the common food of the people was legumes grown on the banks of the dikes. Craft industry, which skillfully produced a diversity of products, was organized in connection with households and temples. Shipping expanded on the Nile and around the eastern Mediterranean and Red Sea coasts. In comparison with Sumer, Egypt possessed less an industrial and trading economy than a rural and household economy.[1]

Although unification was achieved in the course of the adaptation of copper implements to general uses, the great work performed

[1] On the economic aspects of Egyptian culture see W. M. Flinders Petrie, *Social Life in Ancient Egypt* (1923); Alfred Lucas, *Ancient Egyptian Materials & Industries* (2d rev. ed., 1934); G. Dykmans, *Histoire économique et sociale de l'ancienne Egypte* (2 vols., 1936).

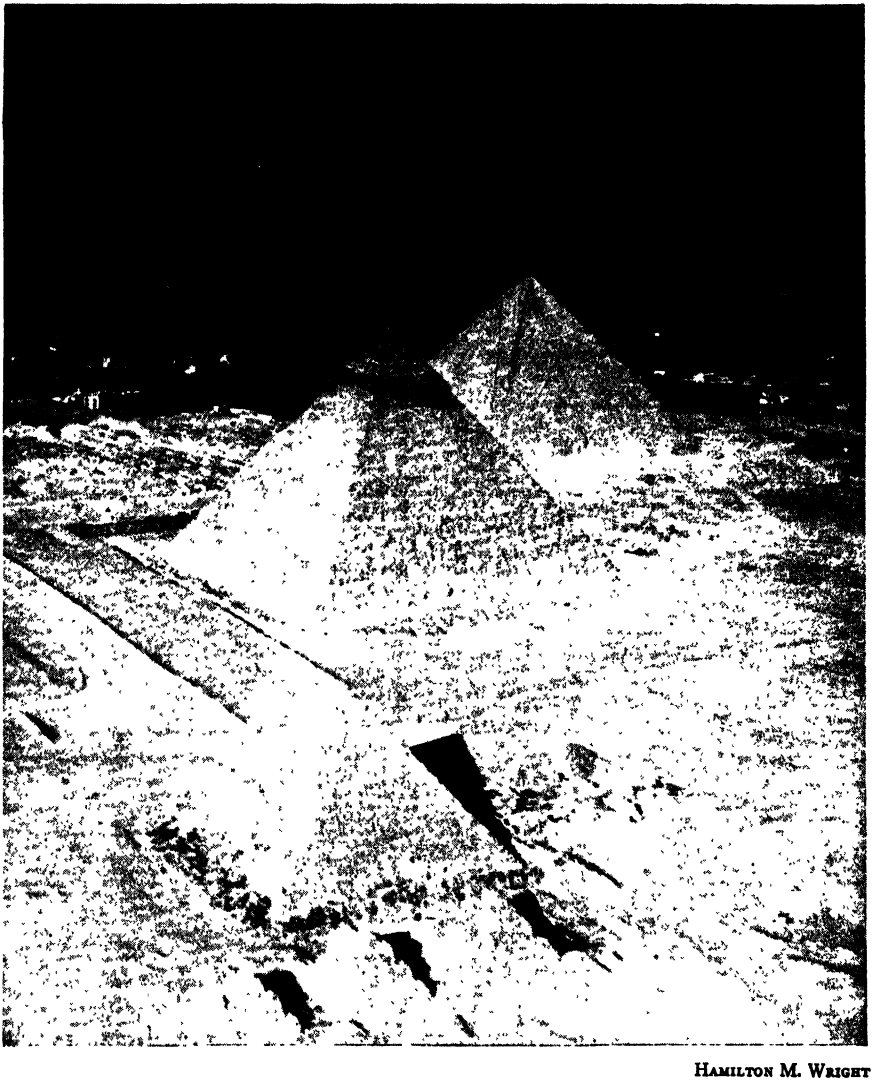
by the founders of urban culture in Egypt, as in Mesopotamia, was, it should always be remembered, the transformation of a flood plain into a cultivated countryside. The governmental regime, always orientated in religious terms, developed as the rising cities created new social needs and, consequently, new modes of cooperation.

The Egyptian Old Kingdom.

From the struggles of the nomes and kingdoms finally emerged the rulers of a new united monarchy—the kings of the First Dynasty (3200–3000 B.C.). Menes, the traditional founder of the First Dynasty, is probably a composite figure representing several kings. With him began so-termed dynastic times, which lasted from about 3200 B.C.—through thirty-one dynasties—to 332 B.C. No other country has had so long a continuous political history.[1]

1. *The Egyptian Polity.* The Egyptians believed that their king, *i.e.*, the *pharaoh*, was a divine being, the falcon god, Horus. He was also the son of Re, the sun-god, and in addition the chief priest of every other god. As these high priests, the pharaoh performed the rituals upon which the Egyptians believed their lives and well-being depended. At the same time, as political ruler he defended the villages against invaders and headed an administrative system, which maintained order among the nomes. Actually, of course, the pharaoh was a human being subject to the demands of his class, family, and harem. But as an educated ruler, able to read and write, whose main duty was the supervision of the national water supply, he probably had little time for idle luxury. His chief administrative assistant was the vizier, known as the *man* in contrast to the pharaoh, the *god.* He served as prime minister, chief justice, and chief architect and engineer. The monarchy had a dual organization, reflecting the upper and lower parts of the valley. In the nomes the administrative representatives of the pharaoh supervised every phase of local government. They formed in the nomes a closely knit body which everywhere made the pharaoh's power felt, but in the villages custom seems to have ruled as from time immemorial, for there was no well developed national judicial system. Agricultural production was organized under a system of estates, mainly royal, which were worked by serfs attached to the soil. A yearly contribution was paid by each worker to the pharaoh; very early these obligations were registered in a national census of fields and cattle.

[1] On Egypt under the Old Kingdom see Jacques Pirenne, *Histoire des institutions et du droit privé de l'ancienne Égypte* (3 vols., 1932–1935).



HAMILTON M. WRIGHT

THE PYRAMIDS

The pyramids symbolize well the ancient Egyptian polity with its divine kingship resting on the broad base of the peasant population. Indeed they symbolize well the concentration of power and wealth which characterized all ancient-oriental urban cultures. Institutions which assured the continuous production and concentration of wealth were fundamental elements in these cultures, and the group whose members administered these institutions held power.

2. *The Pyramid Age.* The First Dynasty originated in Upper Egypt. The Second Dynasty (3000–2780 B.C.) was at least sympathetic with Lower Egypt, while the Third Dynasty (2780–2720 B.C.) again represented the preponderance of the narrow valley. Probably these changes of dynasties came about as different cities rose to power. With the Third Dynasty Memphis, a new city located near the junction of the valley and the Delta, became the seat of government, and there, under the Third, Fourth (2720–2560 B.C.), and Fifth (2560–2420 B.C.) Dynasties (*ca.* 2780–2420 B.C.), pharaonic leadership carried Egypt to a height of prosperity and cultural development until then not reached in any other country. The period, named after the tombs of the pharaohs, is known as the Pyramid Age.

Later Egypt saw in Imhotep, the vizier of the pharaoh Zoser of the Third Dynasty, a legendary figure who summated the age. He was credited with having dealt with famine, invented square-stone masonry, and written treatises on medicine and astronomy. So famous became his work as a physician that he was recognized as the god of medicine. Behind this crust of legend is undoubtedly hidden a great man—the first, in fact, to be remembered for distinctly peaceful works.[1]

However this may be, the Pyramid Age does afford in broad outline the first clear view of urban culture. Agriculture, served by a well-managed system of irrigation, produced the wealth that supported the pharaoh and his associates. Highly skilled craftsmen, chiefly engaged in making jewelry, furniture, and funerary objects, provided the accessories necessary for a luxurious life. The masters of square-stone construction achieved an unprecedented architectural grandeur. Sailors, navigating the Nile River and the Red and Mediterranean seas, brought highly desired foreign products. The rulers, in turn, maintained internal order and external peace. Nubia, to the south, supplied gold, and Sinai, in Asia, copper. Gold and copper rings of fixed weights were used as a medium of exchange, but most trade was carried on by barter. The priests regulated every phase of life, which was organized under ritual rather than law. The scribes wrote ancient liturgies on the walls of the pyramids, creating thereby the oldest known religious literature, while observers—"seers"—of heavenly and earthly phenomena first systematized the inchoate mass of primitive beliefs into a body of religious speculations. The ritualistic performances of the pharaoh, it was believed, alone gave prosperity and peace.

[1] J. B. Hurry, *Imhotep, the Vizier and Physician of King Zoser* (1926).

3. *The Decline of the Old Monarchy under the Sixth Dynasty.* From the social point of view the pyramids may be seen as monuments to an absolute monarch, in whose hands all the power and most of the wealth were concentrated. Sharing power, wealth, and religious rights with him were the members of the royal *gens*, numbering about five hundred individuals at most. Outside the favored circle rights and privileges were possessed only by royal grant. The masses, of course, worked under this centralized overlordship, producing the wealth which the very few enjoyed. Although there is little reason to believe that peasants and craftsmen were cruelly exploited, it should be emphasized that they were subject to arbitrary rule. But there was a germ of weakness in this centralized regime. Officials and priests, who were given grants of land and immunity from royal jurisdiction, were free to administer their estates and to conduct their own religious services. Such grants also liberated the workers on the land or about the temples from obligations to the pharaoh; these workers served only their official or priestly lords. In this manner there arose local authorities governing in their own right and bodies of workers not subject to the arbitrary exactions of the king, and, as a result, under the Sixth Dynasty (*ca.* 2420–2270 B.C.) Egyptian society became a decentralized feudal order, ruled by an oligarchy of priests and nobles.

The Egyptian Middle Kingdom.

The rise of feudalism did not displace the pharaoh; he remained at the head of the state, but power went with property, and he was forced to recognize its hereditary transmission. In many instances the local magnate was both noble and priest. After the Sixth Dynasty the social classes became closed orders, and except in rare cases the status of the father determined the status of the son. Outside the Delta, where it appears there was resistance to the feudalization of social relations, almost the entire population probably passed under the rule of local princes and priests. If any part of the population escaped the general feudalization, it consisted of the workers who had been drawn into the state workshops and building projects. In what manner they were affected by the weakening of the pharaoh's power is not known.

1. *A Social Revolution, ca.* 2200 B.C. After about two centuries the outcome of the foregoing developments was a social revolution:

> The hearts of men are violent; the plague over runs the land; there is blood everywhere; death is never idle.

The nobles are in mourning; the common people exult; every city says, "Come let us down the mighty among us."

The causes of this popular revolt, the first known in literate times, are hidden from the view of the historian, but there can be no doubt as to its character. Men went to the fields armed. Harvests rotted, ungathered. Thieves infested the roads, invaded the temples, and broke into the tombs. The state granaries were raided. The monuments of the ancient pharaohs were overthrown and smashed. Poor men sat in the Halls of Justice and, even more revolutionary, made themselves shoes and sat in the shade. Nobles were killed. Their children were dashed against walls and their women violated. White clothes—the raiment of the rich—disappeared from the land. Laughter died. Grief was unending. And pious ones hoped for a divine prince who would deliver the land.[1]

Obviously the documents in which these complaints are recorded were written from the point of view of the nobles and priests who were the victims of the popular wrath.

2. *The Revival of the Central Power.* As the result of this disorganization, local princes rose to power in various parts of the country and fought one another for the throne. For a time Heracleopolis was the seat of the regime that restored order, but it fell finally before southern princes, who founded the Eleventh Dynasty (*ca.* 2160–2000 B.C) at Thebes. Their successors of the Twelfth Dynasty (*ca.* 2000–1788 B.C.), also Theban, re-established the royal power, and under their leadership Egypt enjoyed, so it has been said, a "golden age."

The Middle Kingdom had become finally a military autocracy, whose members were the supporters of the princes of Thebes. The nobles and the priests were allowed to retain their properties, positions, and honors, but effective power passed to the pharaoh. Those nobles whom the king could trust found places in a new bureaucracy, and in time the local priesthoods, through the identification of local gods with the new dynastic god, Amon-Re, were also attached to the monarchy. The military support of the regime rested in the young men of the official classes and the mercenary troops—mainly, it seems, negroes. Perhaps the success of the southern princes was due in part to their access to the gold of Nubia.

The pharaoh governed through a well-organized bureaucracy recruited from many different sources; the rule of the pharaoh was

[1] See Hermann Kees, *Aegypten* (1933), p. 199; J. H. Breasted, *The Dawn of Conscience* (1933); and Alexander Moret, *The Nile and Egyptian Civilization* (1927), pp. 220–231.

to employ men according to their abilities, not according to their station. In time these men became a new official middle class, standing between the people and the nobles, many of whom looked back to ancestors under the Old Kingdom. At the head of the central administration was the vizier, who kept the census (which served as a very complete tax register) supervised the local officials, and administered justice. The vizier received instructions directly from the pharaoh; in turn he gave orders to the treasurer and the royal agents in the local districts. Revenues were drawn largely in payments in kind from peasants and craftsmen. Gold mines in Nubia and copper mines in Sinai were sources of a continuous supply of metals. Probably the trade with Crete supplied the tin which made possible the full development of the bronze industry. Dues levied on the trade across the Isthmus of Suez and down the Red Sea also yielded income to the state. Of course the economic support of national life was, as ever, the labor of the peasants. But now their obligations were no longer arbitrary; they were fixed by law. Perhaps the cause of the revolutionary outbreak had been the usurpation by the nobles and the priests of the pharaoh's original irresponsible power over the workers. The common people were still regarded as fit only for labor. The dependence of the pharaoh upon the loyalty of the administrative officials led to the careful training of the young men of their families; ultimately these formed a distinct body of military retainers, who found employment not only in the army but also in managing mines, quarries, building operations, and irrigation projects.

The revolution carried Egypt a long way toward the organization of a secular monarchy similar to that established in Mesopotamia by Hammurabi. The pharaoh ruled less as a priest and more as a magistrate. Little is known about the Egyptian legal system. The right of property was regulated under many provisions. Land could be sold, rented, and bequeathed, subject to the rights of the state in its produce. The criminal law, which seems to have prohibited arbitrary punishments, was severe. Mutilation, impaling, beheading, and burning at the stake were ordinary penalties. Torture was used to obtain evidence. Although magistrates heard cases, trials were commonly conducted before oracles, *i.e.*, priests. The law recognized the distinction between a man as an individual and as an official.

3. *An Egyptian Golden Age.* Under the Twelfth Dynasty Egypt reached a new level of prosperity. Sinai and Nubia were conquered, and Syria and Ethiopia invaded. Foreign trade, carried

on under government control, expanded, and those who were rich chiefly by trade and industry increased in number. Slaves, most of whom were captives of war, also multiplied. Thebes became a metropolis, and much capital and a prodigious amount of labor was invested in national improvements. Amenemhat III (*ca.* 1850–1800 B.C.) built a great embankment, twenty miles long, at the mouth of the Faiyum depression, which made possible the storage of an enormous quantity of water when the Nile was at flood, as well as the transformation of the depression into a fertile area. When the stored water was released into the river during its lowest months, the flow was about doubled. With this improvement Egypt achieved a full exploitation of her bountiful river. Much of the traditional learning was put in new forms, and the ideals of the nation were restated in ways that, even now, indicate a sincere effort was being made to realize them.

The tombs, temples, and dwellings that survive from the age of the Twelfth Dynasty testify to the prosperity of the land. Tombs were built by officials and merchants, as well as by the pharaohs. Temples succeeded the pyramids as the chief type of royal construction. Towns were laid out on a rectangular plan, sometimes with walls separating the workers' quarters from the residential section of the officials. The ordinary house consisted of a large oblong room having a high roof supported by pillars; light was let in by windows high up in the walls. Cooking and sleeping quarters were placed in small cubicles along a side or at one end. Workers' houses were similar in plan but less pretentious than the houses of officials. Men wore short skirts or kilts, women long skirts extending from the breasts to the ankles. Except on festive occasions, when wigs were in order, men wore their hair close-cut. Women parted their hair, allowing it to hang in two long tresses. Children dressed quite like their parents. Beer was the common drink, but wine was also popular. Beer and bread were the staples of life. The well-to-do ate many vegetables and fruits but sparsely of meat. Olive oil, an imported commodity, was a luxury. Fowl were plentiful. The usual amusements were outdoor games. Wrestling at catch-as-catch-can and acrobatics seem to have been popular. Boating on canals, lagoons, and the Nile was a favorite pastime of all classes. The Egyptians—never a violent people either in likes or in dislikes—were as even-tempered as the quiet Nile which nourished them.

Prosperity at home and peace abroad, although achieved by the Twelfth Dynasty, were short-lived, for soon the disorganizing ele-

ments in feudalism—pretenders, adventurers, and foreign invaders —brought disorder, which in turn, by causing the deterioration of the irrigation system, decreased the national wealth.

THE RISE OF EGYPTIAN LITERATE LEARNING.

Although Asiatic factors may have had a slight influence at some early point in the development of the Egyptian writing system, it was distinctly a native achievement, adapted fully to the expression of the native language and thought. If the Egyptian writing system did not originate as early as the Sumerian system, it matured more quickly, for its main elements were in use under the First Dynasty, and by the Fourth Dynasty they were fixed as they were to remain until the system disintegrated in late Roman times.[1]

1. *The Egyptian Writing System.* It seems clear that the symbols of the Egyptian writing system were derived from early drawings of animals, birds, and plants, for when finally fixed they were mainly stylized natural objects. Every sign that can be identified clearly depicts a native plant, animal, implement, utensil, or other object. From the first the signs represented mainly words, not ideas, and very soon some of them came to represent sounds. In this connection it should be remembered that the signs for sound values expressed only consonants. The general principle of the writing system was that of the rebus or the charade.

When completely developed the signs had three different uses: (1) as word signs, (2) as phonograms, *i.e.*, as syllables or letters, and (3) as determinatives. The word signs represented the objects they depicted or some quality or action associated with the object. Thus the picture of a face meant face. A drawing of a stooped man with a staff meant old age; an upright man with a staff signified an official. The quality "cool" was represented by a vase flowing with water. The abstract concept "conciliation" was written with the sign "mat" with a cake on it, the concept "people" with figures of a man and a woman. The direction "south" was expressed by the picture of a lily. Special signs were developed for pure words, such as prepositions, and also for suffixes and prefixes. The phonograms

[1] On the Egyptian writing system see article "Hieroglyphs" in the *Encyclopaedia Britannica* (14th ed.). See also V. Gordon Childe, *Man Makes Himself* (1936); Alan H. Gardiner, "The Nature and Development of the Egyptian Hieroglyphic Writing," *Journal of Egyptian Archaeology*, Vol. 2 (1915), pp. 61–74; A. Falkenstein, *Archaische Texte aus Uruk* (1936), pp. 65 *ff.*; Hans Jensen, *Die Schrift in Vergangenheit und Gegenwart* (1935), pp. 35 *ff.*

were derived from the word signs by giving them sound values; for example, the sign "face" expressed the sound of the word "face"—*hr*. The twenty-four consonant signs were derived originally from syllables that consisted of a consonant and a vowel.[1] About fifty double consonant signs were derived from syllables consisting of consonant *plus* vowel *plus* consonant. At least one sign representing three consonants was in common use. Altogether between seventy and eighty phonograms were employed in good writing. The prevalence of homonyms in the Egyptian language facilitated the development of signs having sound values. The determinatives were used with other signs to give them special meaning; among them were symbols indicating "motion," "force," "building," "inhabited place," and "foreign land." Phonograms were seldom used as determinatives. In ordinary hieroglyphic writing the determinative followed the phonetic symbols.

All types of signs remained in continuous use in Egyptian writing. The consonant signs were never differentiated from the other signs to become the basis of an alphabetical script. In fine, the fundamental pictorial element in the system was never given up.

The Egyptian writing system developed three varieties of script: (1) the hieroglyphic, or sacred carvings, (2) the hieratic, or cursive, and (3) the demotic, a cursive script characterized by numerous abbreviations. The hieroglyphic script originated in priestly circles and was preserved there until it disappeared in the third century A.D. It was used for religious texts and monumental inscriptions, which, of course, were religious in character. Ordinarily it was written from left to right, but on monuments it was sometimes written from right to left for considerations of symmetry. The hieratic script was a cursive form of the hieroglyphic script. Traces of it are found in the First Dynasty materials; it was well developed by the Sixth Dynasty. Apparently the priestly monopoly of the hieroglyphic script led the scribes to develop the hieratic script for secular uses; at any rate it was used chiefly for accounts, memoranda, contracts, treatises, and literal transcriptions of religious texts. The signs were characterized by abbreviations and rounded corners, which reduced their pictorial element. Syllables, abbreviations, and simplified sounds not expressed in the older hieroglyphs found common use in this cursive script. After the middle of the second millennium B.C. it underwent a great change. The demotic script, even more simplified than the hieratic,

[1] See Alan H. Gardiner, *Egyptian Grammar: Being an introduction to the study of hieroglyphs* (1927).

appeared first in merchant circles, probably in the seventh century B.C.; in late Egyptian times it was used for all ordinary purposes.

After the second century B.C., when the Egyptian language began to be written in the Greek alphabet, the traditional writing system, along with the ancient language, began to decay. The last demotic inscription seems to have been made in the final quarter of the fifth Christian century. The Coptic language, which displaced the ancient tongue, was written in an alphabet formed of the Greek letters and seven additional consonant signs.

2. *The Formation of Learned Traditions.* The oldest Egyptian documents are merely names and titles on vases or very short records; they date from early dynastic times. Under the early dynasties writing came to be used for both religious and secular purposes. The religious writings on the walls of five pyramids, dating from the period *ca.* 2625–2475 B.C., are now known as the Pyramid Texts. Made exclusively for the pharaohs, they summarized at least a thousand years of historical and religious experience. Under the Old Kingdom various fields of learning, such as mathematics, medicine, craft lore, and astronomy, were differentiated and written accounts of them made. From the Middle Kingdom have survived didactic works, such as the "Instructions of Ptahhotep" and other documents, which are the oldest known literature dealing with social ideals and problems. These materials show that, except in rare instances, the Egyptians valued the *old* for its own sake, with the result that the early bodies of belief and knowledge, once recorded, exercised an enduring influence on intellectual development.

Among the remains of Egyptian literate learning, economic records are far less prominent than among Mesopotamian materials. The Egyptian scientific works, although compilations, show a greater effort at systematic discussion than is to be found in the Babylonian tables. The Egyptians, however, are not known to have produced anything similar to Hammurabi's code.

As suggested by the designation "sacred carvings," the knowledge of writing was originally confined to a small circle of learned priests, and it was always reserved to "a tradition-loving caste of scribes." Some of these scribes served the pharaohs and others the local authorities. Religious doctrine explained that writing, in fact all forms of intellectual activity, were the creations of the god Thoth. The temples were, therefore, the centers of literate learning. Remains of the tablets of schoolboys survive from very early times; judging from the admonitions of the teachers, the boys were not

always diligent in their tasks. The method of instruction was to copy from texts given by the instructors. Besides writing, the temple schools taught religious subjects, divination, magic, and medicine.

Literature in Egyptian Culture.

The largest, if not the most interesting, part of Egyptian literature consisted of religious writings. From the Pyramid Texts, which, as previously noted, were made exclusively for the pharaohs, were derived two other bodies of writings, now known as the Coffin Texts and the "Book of the Dead."[1] The Coffin Texts, consisting mainly of spells, were written in ink on the inside of the wooden coffins of the nobility of the period from the twenty-third to the eighteenth century B.C. They indicate a vivid interest in the other world. The "Book of the Dead"—actually there is no such book—is the name applied to papyrus rolls upon which were written the spells and incantations placed in the tombs of ordinary people after the sixteenth century B.C. Their contents were drawn partly from the coffin texts and partly from older material. Other religious works describe the ritual of the royal or divine cult and the topography of the underworld.

If the first literary interest of the Egyptians was the life beyond the grave, their second was the worldly power and glory of the pharaohs. The following quotation from a hymn embedded in the Pyramid Texts, which described how a dead king hunted, slew, and devoured the gods, suggests the source of the pharaoh's magic and its relation to earthly well-being:

> He flourishes, for their magic is in his belly,
> The dignities of Unas [the dead king] cannot be taken from him.
> He has swallowed the intelligence of every god.
>
> * * * * *
>
> The doers of evil deeds have no power to hack up the earth.
> The favorite place of Unas is among those who dwell on this earth
> for ever and ever.

A Sixth Dynasty fragment celebrated a victorious campaign among the Asiatic sand-dwellers, whose fortresses were destroyed and

[1] On Egyptian literature see T. Eric Peet, *A Comparative Study of the Literatures of Egypt, Palestine, and Mesopotamia* (1931); Max Pieper, *Die Ägyptische Literatur* (1927); Adolf Erman, *The Literature of the Ancient Egyptians* (1927); Josephine Mayer and Tom Prideaux, *Never To Die: The Egyptians in their own words* (1938).

vines and fig trees cut down, while a Twelfth Dynasty song honored the pharaoh who gave peace to his people:

> The tongue of his majesty controls Nubia,
> His words put to flight the Asiatics,
> Sole One of youthful vigor, who fights for his frontier,
> Who suffers not his subjects to grow weary,
> But causes the folk to sleep through till dawn.

The secular tendency in Egyptian literature, which appeared in the period of the Old Kingdom, bore rich fruit under the Middle Kingdom in prose, verse, and fiction.

Besides the scientific treatises, which will be noted later, the distinctive prose work of the period was the book of instructions or maxims in which was set forth worldly wisdom. The earliest of these didactic works, the "Instructions of Ptahhotep," is the oldest known formulation of principles of right conduct. The author, a sagacious vizier under the Fifth Dynasty, dealt with superiors, inferiors, other men's women, and his wife in ways that leave a modern man in no doubt that he knew how to get ahead in an urban world. For wealth he was thankful but he was not proud, because he realized that he had been favored by the god. As guides to success he offered the way of hard work, twice-considered words, and loyalty to superiors. To those proud with knowledge, he suggested that one can always learn more, perhaps even from the ignorant:

> Be not arrogant because of thy knowledge, and be not puffed up for that thou art a learned man. Take counsel with the ignorant as with the learned, for the limits of arts cannot be reached, and no artist is perfect in his excellence. Goodly discourse is more hidden than the precious green stone, and yet it is found with slave girls over the mill-stone.

"The Maxims of Kagemni" and the "Maxims of Duaf" follow the pattern set by Ptahhotep's teachings.

Works of social criticism, originally a product of the revolutionary age, continued to be produced throughout the feudal period and under the Middle Kingdom. "The Admonitions of Ipuwer" described in bitter words—"woe is me for the misery in this time"—the conditions of the early feudal age. "The Eloquent Peasant" is a story upon which is hung a series of orations on justice. In these speeches, which came to the ears of the pharaoh, the despoiled peasant decried the callousness, trickery, and selfishness of the

official classes. Sharp as were the words of these prose works, they were surpassed in poignancy by the poems which expressed a pessimistic spirit. "The Song of the Harp-Player," an Eleventh Dynasty poem, argued that, since all things pass away, it is wise to fashion one's earthly affairs after one's own desires:

> Lo, no man taketh his goods with him,
> Yea, none returneth again, that is gone thither.

The Twelfth Dynasty verses to which Egyptologists have given the title "The Dialogue of a Man Weary of Life and His Soul" bear comparison for feeling and imagery with the utterances of the world's greatest poets:

> Death is in my eyes today
> As when a sick man becomes whole,
> As when walking abroad after illness.
>
> Death is in my eyes today
> Like the scent of myrrh,
> Like sitting beneath the boat's sail on a breezy day.
>
> Death is in my eyes today
> Like the smell of water-lilies,
> Like sitting on the bank of drunkenness.
>
> Death is in my eyes today
> Like a well-trodden road,
> As when men return home from a foreign campaign.
>
> Death is in my eyes today
> Like the unveiling of the heaven,
> As when a man attains there to that which he knew not.
>
> Death is in my eyes today
> Like the desire of a man to see his home
> When he has passed many years in captivity.

The postrevolutionary age created the short story, told for the telling's sake. The tale of "The Shipwrecked Sailor" narrated the kind of events which the *Odyssey*, *Robinson Crusoe*, and *Treasure Island* have made familiar in the literary tradition of the Western world; its hero, lost on a voyage out of a Red Sea port, had as companion on his lonely island only a talking snake. "The Tale of Sinuhe" mixed politics and adventure. Sinuhe, on an expedition to

Nubia, having heard of the death of the pharaoh, fled to Syria; his motive seems to have been fear of the new king. The crossing of the boundary from Egypt into Syria is told with a fine feeling of suspense:

> I reached the Wall of the Ruler, built to repel the Syrian and to keep in subjection the Beduin of the desert. I crouched low in a thicket lest the sentry on duty on the wall should see me. . . . The attack of thirst overtook me. I was parched, my throat burned, and I said, This is the taste of death. Yet I lifted up my heart and girded up my loins. Then I heard the lowing of cattle and beheld men of Syria.

Once in Syria, where his reputation as a soldier had preceded him, he was well received; there he took a wife and won honors in many campaigns. But his heart was filled with longing for his native land. Finally the pharaoh, having heard of Sinuhe's distress, recalled him to a post in the royal court. Loaded with honors and riches, the old warrior ended his days happily in his native land.

Although Egypt produced no epic—at least, none to compare with the Babylonian epics is now known—and inferior hymns, her literary achievement was no less great than that of Babylonia, for her authors created literature, *i.e.*, the art of expression for its own sake. In their treatment of both heroic and ordinary events they had an eye for realistic situations and vivid details, captured significant emotions, found place for a sense of humor, and prized elegance in expression. Indeed, their love of words led them quickly into artificiality and bombast. But they gave Egypt the first true literature in history. The secular interest which ran through this literature was, of course, only a tiny thread in a vast snarl of religious writings.

Religion in Egyptian Culture.

If a single fact about Egyptian culture deserves special emphasis, it is the complete orientation of life in the daimonic universe. The primitive character of this orientation is clearly evident in a religion which never developed a formal pantheon or a systematic theology. Beliefs about the gods and ritualistic practices, which pervaded every phase of life, were always inconsistent and contradictory. A coherent explanation of an incoherent religion can hardly be made.[1]

[1] On Egyptian religion see Adolf Erman, *Die Religion der Ägypter* (1934); J. H. Breasted, *Religion and Thought in Ancient Egypt* (1912); Sir. E. A. Wallis Budge, *From Fetish to God in Ancient Egypt* (1934); Sir E. A. Wallis Budge, *Osiris and the Egyptian Resurrection* (1911).

1. *The Gods of Egypt.* Apparently the early Egyptians believed in *ka*, an all-pervading force like *mana*, which, as time went on, was diversified into an array of deities. The deities first recognizable to the historians are the gods of the nomes, perhaps originally tribal totems. In upper Egypt the gazelle, the hare, the jackal, and the lioness were worshiped; in the Delta the bull, the cow, the ram, the fish, and the ibis. Crocodiles were associated with islands. Besides these tribal deities, there was at a very early date a number of cosmic gods—Re, the sun-god, Shu, the wind-god, Nut, the sky-goddess, and Geb, the earth-god. Hopi was the god of the Nile. Local communities also had gods. Thus Thoth was god of Hermopolis, Atum of Heliopolis, and Amon of Thebes. The representation of some gods with animal heads and some with human heads undoubtedly recorded a fusion of two conceptions of deities. The human-headed form may have come from Asia.

The Egyptian pantheon, like that of Mesopotamia, developed under the influence of political factors. In the predynastic period, when the priests of Heliopolis were powerful, Atum, the god of their city, was identified with the sun. Horus, the falcon god, who became identified with the divine kingship, was originally the god of Damanhur in the Delta; when the predynastic kingdoms appeared he was transferred to Buto in the Delta and Hieraconpolis in Upper Egypt, the two capitals. When disunion recurred, Horus of Damanhur was opposed by Seth of Ombos in Upper Egypt. With reunion, Horus, at last ruler of the whole country, had his seat at Heliopolis, where Atum, as supreme god, was identified with Re, the sun-god. Another recurrence of disunion found one group of "Followers of Horus" ruling at Buto and another group holding power at Hieraconpolis. After the establishment of the First Dynasty the power of Heliopolis again advanced, with the result that Horus and Atum-Re were in the ascendant. The Re cult became officially the state cult with the founding of the Fifth Dynasty. When Thebes rose to prominence under the Twelfth Dynasty, its god Amon was united with Re as the great ruler of the gods, and many of the local gods were associated with Amon-Re. Much later, when the priesthoods of Thebes, Heliopolis, and Memphis finally took control of the state, celestial honors and functions were organized in Amon, Re, and Ptah. Amon was regarded as the supreme god, at least in Thebes. The enduring influence of Re was merely a reflection of the fact that the priests of Heliopolis succeeded in holding a position of power in changing political circumstances. While the great gods moved their places in the

pantheon, the nome and city gods did not change either their attributes or their rituals.

2. *The Belief in Immortality.* The distinctive religious development of Egyptian culture was a cult of "everlasting life," *i.e.*, immortality. The care given to the dead in very early graves indicates that a belief in life after death was most ancient. Perhaps the basis of the belief was not so much the conviction that there is a life after death as a stubborn refusal to surrender life. The treatment of the dead suggests that they were provided more with the means of warding off death in the grave than with the means of life in the other world. A belief in life after death necessarily involved a conception of the soul. The body was *khat;* its double, which survived, was *ka.* The physical representation of the *ka* by a statue was regarded as the greatest aid to life after death. The *bai* was the soul proper, often represented as a bird; the *ikh* was the spirit, also represented as a bird. The *khaibit* was the shadow. The exact functions of these souls are not known. The grave was regarded as the house of the *ka.* It was believed sometimes that the *ka* lived in the grave, sometimes that it flew up to heaven—Pet—with the falcon god, sometimes that it went from place to place on earth—Ta, and sometimes that it went to the underworld—Tuat. Every Egyptian city was believed to have its own place in the underworld which was conceived as a long narrow valley surrounded by high mountains. The entrance to Tuat was in the west where the sun sets.

This variety of beliefs suggests that the concept "immortality" was never worked into a coherent body of doctrine. Originally, as previously noted, only the pharaoh and those to whom he granted the boon attained immortality. But the social revolution at the end of the third millennium B.C. destroyed this exclusive doctrine and opened the gates to everlasting life to every Egyptian. Thus the cult of Osiris, who was identified with several local gods of the dead, became a popular religion. The kings of the Thirteenth Dynasty established feasts and public rituals at the expense of the state for the worship of Osiris. The so-called "Book of the Dead" served as a sort of sacred book for the cult, and Abydos as a holy city, to which pilgrims thronged after the manner of the Christians to Jerusalem and the Mohammedans to Mecca in much later times. The cult of Osiris had a longer life than that yet attained by Christianity, let alone by Mohammedanism.

The following statement of the legends connected with the cult of Osiris does not indicate at all either the slow growth of the cult or

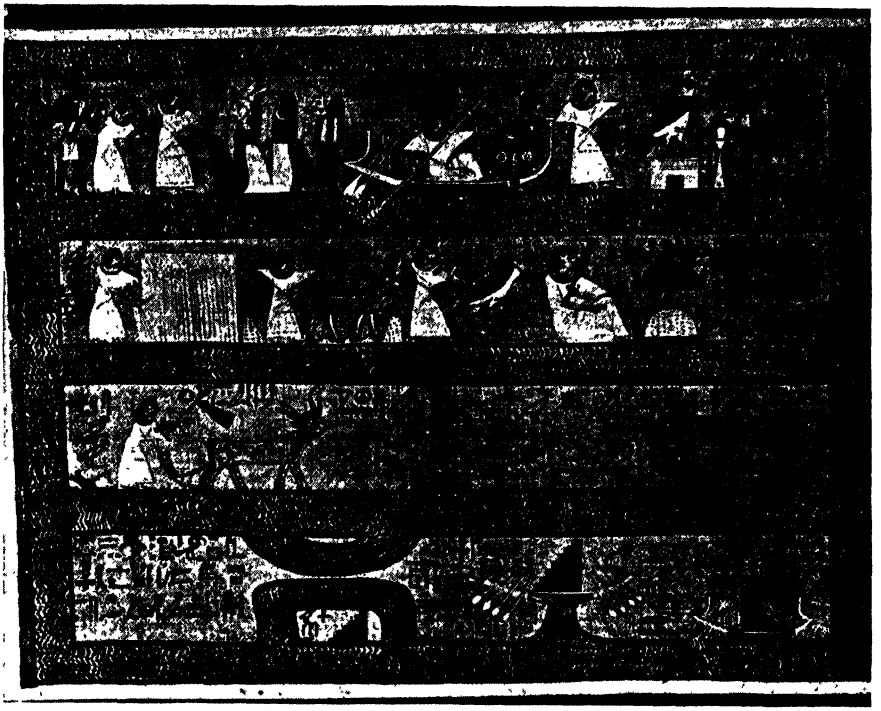
the incoherence of the beliefs clustering about it. There never was a clear-cut body of beliefs, such as the following paragraphs describe, for obviously it is impossible to summarize a development three thousand years long so that its diversity will remain always clear. The significant fact is that the Egyptian belief in immortality, however rendered, was popularly expressed in the cult of Osiris:

The Legends of Osiris. Osiris was the god of the "shining Nile"; Isis, his consort and sister, was the goddess of "the fertile earth," in fact, the Egyptian Ishtar. Osiris invented the plow, taught men how to cultivate the soil and make bread, beer, and wine; he also patronized mining and metal working, the occupations arising from materials of the earth. He was called "the lord of the flowering vine" and "the water of renewal." Isis, a great sorceress, aided Osiris in his works for the welfare of men; the Nile flood was her tears.

In the twenty-eighth year of life Osiris was killed by his brother and rival, Seth, who was identified with the desert and the hot winds. Seth tricked Osiris into entering a chest which floated down the Nile; the chest finally drifted ashore in Syria, where Isis found the body and brought it back to life. Seth then destroyed Osiris again, this time cutting the body into fourteen pieces, which he distributed among his accomplices. The death of Osiris symbolized the sinking of the Nile flood, the withering of vegetation, and the rise of the desert winds. After the dismemberment of Osiris, Isis searched for the pieces of his body and succeeded in finding all of them but the genital organs, which had been eaten by a fish. Isis and her friends then made of the body the first mummy. Later Isis, impregnated by supernatural means, gave birth to Horus the Younger, who with the aid of many Egyptians defeated Seth. Seth brought suit in the court of the gods against the legitimacy of his conqueror, but the gods decided against him. Horus then became the ruler of Egypt forever, the sacred chief of the Delta and Upper Egypt.

After death Osiris went to the underworld, where he presided over the final judgment of souls in the Hall of Double Justice. Before him was a balance for weighing the heart; at his side were aids—Anubis, the jackal-headed god, who placated the jackals, the disturbers of graves, and Thoth, the inventor of writing and the decorative arts—and about the hall were the forty-two deities of the nomes. On the journey across Tuat—which was infested with devils, fiends, demons, and spirits, as well as serpents, monsters, and vermin—the soul recited spells and incantations; when it stood before Osiris in the Hall of Double Justice, it recited the now famous "negative confession":

"I have not done evil. I have committed no violence. I have not stolen, I have not caused any man to be killed treacherously, I have not diminished the offerings (of the gods), I have not lied, I have made no one



From the Papyrus of Ani. By the courtesy of the British Museum

THE EGYPTIAN HEAVEN

Originally the kingdom of Osiris was a small part of the Egyptian underworld, but ultimately it came to include the Tuat of every nome. This expansion was, of course, merely an aspect of the rise of Osiris to the position of the supreme god of immortality. The beatified, symbolized by the white clothing they wore, spent their time growing the celestial food of the gods—wheat. Osiris was both the personification of truth and the god of wheat, and the beatified ate daily of his substance—the bread of everlastingness. As the dutiful and the clean—the sinless—they had dominion over the cool waters of Heaven. The Egyptians, more than any other early urban people, developed the conception of immortality that endured in the Western cultural tradition.

weep, I have not been impure, I have not killed the sacred beasts, I have not damaged cultivated land, I have not spoken calumniously, I have not shown anger, I have not committed adultery, I have not refused to hear the words of truth, I have not done witchcraft against the King or my father. I have not polluted water, I have not caused a slave to be ill treated by his master, I have not sworn (falsely), I have not tampered with the plumb-line of the balance, I have not taken milk from the mouth of sucklings, I have not netted the birds of the Gods, I have not cut a water-channel (or dike ?) in its course, I have not quenched fire in its

hour, I have not despised God in my heart. I am pure, I am pure, I am pure!"

If the heart weighted rightly in the balance the soul went on to the Fields of Iora, where the barley grew seven cubits high and the soul sat in the evening under the sycamore trees and played checkers with friends. In case the heart was found wanting in the balance, it was thrown to the Devouress, which had the mouth of a crocodile, the body of a hippopotamus and the mane and claws of a lion.

Those who died faithful to Osiris went to the grave believing in the promise, "You see your name in all local districts, your soul in the sky, your body in the underworld, your statue in the temple; you live in eternity and are always young."

The cult of Osiris like the cult of Ishtar had roots in the popular emotional reactions that accompanied the seasonal routine of agricultural life.

The practice of mummification, which became universal under the influence of the Osiris cult, was grounded in the belief that the soul needs the body in order to enjoy life beyond the grave. This belief also led to the practice of interring with the kings models of the workmen, entertainers, and officials of their courts. Common workmen were content to have clay figurines of the domestic animals buried with their mummies.

In later times, when Amon-Re rose to the headship of the pantheon, he became a competitor of Osiris in bestowing life everlasting. According to a new theological literature, probably produced under the Eighteenth Dynasty (see p. 228), Amon-Re went through the underworlds of all the Egyptian cities, bestowing light and giving life; only those who were granted seats in his "Boat of a Million Years" escaped from the underworld. This elaboration of the doctrine of immortality was favored by the members of the royal court and the nobility: the people, it seems, remained faithful to Osiris.

3. *The Religiosity of Egyptian Culture.* The Egyptian cults embodied the belief that men prosper as they win the favor of gods or ward off the power of evil spirits. Government, art, literature, and science each reflected this fundamental conviction, and economic activities were carried on only under the cloak of protecting rituals and magic. In a sense government was a universal social magic; in everyday life procedures no better than mumbo jumbo were constantly followed. The Egyptians, it must be understood, were thoroughly utilitarian and practical in all this. They sought life—satisfying, comfortable, pleasant life, both in this world and

in the next—not a mystical union with reality or an ascent to a highest spiritual realm. The correct way of life was to perform the acts which the priests said gained favor or warded off evil; every Egyptian, from the humblest peasant to the divine pharaoh, acted on this principle. The Egyptians, it is safe to say, never got beyond the primitive belief in the daimonic universe.[1]

The social fact which necessarily arose to express such beliefs was a priest class, whose contacts with all phases of life and whose power over many phases made it the most significant social group in the nation. That quality in a culture which exists because of such beliefs, and because of the content they give to the daily life of all classes and the special position they establish for priests, is commonly designated *religiosity*. Egyptian culture probably possessed this quality to a higher degree than any other urban culture.

Art in Egyptian Culture.

The massive pyramids symbolize well the enduring unity which characterized Egyptian art; in fact, it is now clear that the use of stone only petrified an art whose elements had originated in the age of wood or clay. Of course the several phases of Egyptian cultural evolution brought new treatments of these elements, but the artistic tradition was never broken. Undoubtedly this unity had origin in the fact that the main function of art was religious. Indeed it would not be a serious mistake to see all Egyptian art as a magical apparatus to protect against death the life which the Egyptians prized so highly.[2]

1. *Egyptian Architecture.* Just as the Egyptians built with materials other than stone—mud, reeds, timber, and sun-dried brick—so also they raised structures—huts, houses temples, tombs, and palaces—other than pyramids. In fact, these other

[1] On the survival of primitive beliefs and religious practices in modern Egypt, see W. S. Blackman, *The Fellahin of Upper Egypt* (1927), especially Chap. XVIII, "Ancient Egyptian Analogies."

[2] E. Baldwin Smith, *Egyptian Architecture as a Cultural Expression* (1938), p. 11: " . . . Much of the fascination of Egyptian art, quite apart from its force and productivity, is its magnificent perpetuation and embodiment of primitive beliefs." By permission of D. Appleton-Century Company, Inc., New York.

For discussions of Egyptian art see E. Denison Ross, *The Art of Egypt through the Ages* (1931); Jean Capart, *Lectures on Egyptian Art* (1928); Alexander Scharff, *Ägypten* (Reprint from Walter Otto, editor, *Handbuch der Archäologie);* William Worringer, *Egyptian Art* (1928).

For a pictorial record of Egyptian art see *The Art of Ancient Egypt* (The Phaidon Press, Vienna, 1936); Georg Steindorff, *Die Kunst der Ägypter* (1928); and the recent German edition of J. H. Breasted's well-known book, *Geschichte Aegyptens* (1936).

materials and structures long antedated the use of stone and the pyramid design, for they have been traced back into predynastic times, and, of course, they were used continuously after construction with stone was begun. Many of the decorative patterns worked out in stone were merely the result of attempting to duplicate wooden buildings in the new material.

However, the decisive development in Egyptian architecture was the invention of square-block masonry and the pyramid design, for together they gave Egypt its unique place in the evolution of world architecture. Although experiments in cutting stone were made under the First Dynasty, its use as a building material was not achieved until under the Third Dynasty, when Zoser, the first or second king, and his vizier, Imhotep, raised the pyramid of Sakkara. This structure and the surrounding buildings—halls, temples, and courts—duplicated in stone the royal residence at Memphis. The stone, it should be noted, was cut in small blocks. Megalithic stones were first used in the Great Pyramid of Khufu of the Fourth Dynasty. The pyramid of Sakkara, built by Zoser of the Third Dynasty, which consisted of a number of setback structures, throws light on the origin of the pyramid design. It was developed from the older tomb—the mastaba, an oblong building with slightly sloping sides; by superimposing such structures one on top of another and covering them until the whole structure had sloping sides, the pyramid was arrived at. Snefru of the Third Dynasty built the first true pyramid on a square base. In this development the fetish of Atum-Re at Heliopolis, a pyramidal stone known as *ben-ben*, undoubtedly exerted a strong influence. The pyramid was, in fact, an imitation of this fetish, and its purpose was to obtain for the divine body of the pharaoh the protection of the sun-god. In the course of adapting the mastaba construction to the pyramid design, the internal arrangement of rooms and passages was changed, but the grave was still placed at the bottom of a shaft underneath the structure. Special passages were built in some of the pyramids so that the soul could go and come. Vaulting and arching were used in constructing these internal chambers and passages. The pyramid design, it should be noted, was used continuously in Egyptian architecture until the Egyptian cultural tradition finally disintegrated.[1]

The advance of skill in stone cutting under the Third Dynasty gave the pharaohs of the Fourth Dynasty—Khufu, Khafre, and

[1] See Noel F. Wheeler, "Pyramids and Their Purpose," *Antiquity*, Vol. 9 (1935), pp. 15–21; pp. 161–188. These articles list the pyramids and give the measurements of the most important ones.

Menkaure—the opportunity to render the pyramid design with supreme mastery; their achievement can still be seen in the pyramids of Gizeh.[1] Khufu planned that his pyramid should be the greatest structure ever to be erected by man: it is known as the Great Pyramid. Standing on solid rock, it measures 767 feet square at the base and rises 479 feet into the air. Between the north and the south sides there is a difference of 7.9 inches; between the east and the west sides there is only 0.3 inch of difference. About 2,300,000 stones, weighing on the average 2½ tons, went into its construction; a few blocks weighing up to 30 tons were used to roof the chambers. The completed pyramid was encased in polished limestone. The pyramid of Khafre, partly covered with hard stone, was 471 feet high. The pyramid of Menkaure was only 218 feet high.

The methods by which the stone was cut, shaped, and set in the pyramids are not known. Recent investigators have found evidence which indicates that the cutting was done sometimes with chisels, sometimes with wedges, and sometimes with saws. The chief material—limestone—was not difficult to quarry and shape by these methods. It has been suggested that the Egyptians were able to give copper an extra hardness; this seems doubtful. The surface of the stone was commonly fitted to the wall after the stone was set, although the masons were fully able to give stone a predetermined shape. Only the simplest methods were used in placing stones. Small stones were carried by hand; stones too large to carry were moved either on sledges or along sleepers with levers. Ramps were built around the sides of the pyramids for this purpose. There is little evidence that the Egyptians used either the roller or the wheel in their construction work. They used rope but not the pulley. The plans which were made before work on a building began were frequently changed in the course of its construction. Except in special cases the joints between stones were not accurately made. After the Fourth Dynasty there was little advance in technical methods of construction; indeed, except for an almost incredible refinement in the use of the simplest methods, Egyptian architecture rested more upon the efficient organization of masses of laborers than upon technical knowledge and skills.[2]

The artistic qualities of the pyramid design are simplicity and massiveness, which, combining durability with grandeur, have

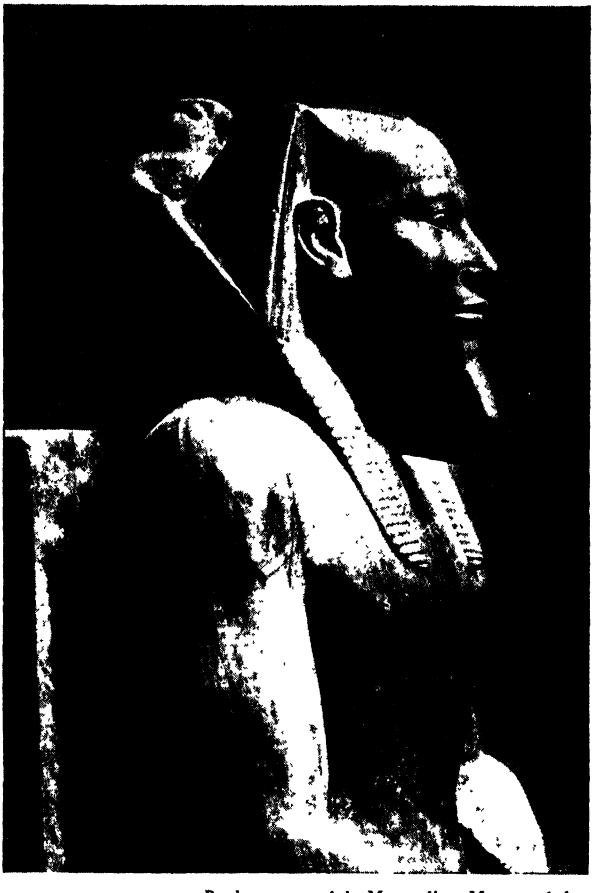
[1] For an air view of the pyramids of Gizeh see illustration on p. 183.

[2] On Egyptian methods of construction see Somers Clarke and Reginald Engelbach, *Ancient Egyptian Masonry: The building craft* (1930).

impressed all ages; in fact, they well symbolize the everlasting life which their builders hoped to win by their construction. For this reason they may be regarded as an almost perfect material rendering of an idea. In this connection it may be noted that the endless attempts to find prophetic or mystical meanings in the orientation or measurements of the pyramids are that kind of nonsense which primitive mentalities can make out of anything which, by its own nature, attracts and holds attention. As monumental structures the pyramids have never been surpassed.

After the Pyramid Age the construction of tombs and temples was undertaken by members of the feudal class, who, because they lacked the resources of the pharaohs, built on a much smaller scale. Few of their structures achieved distinction. In time the pyramid design, rendered on a small scale, was integrated with other types of buildings in a harmonious design. Under the Twelfth Dynasty rock-cut tombs, faced with great pillars, displaced the pyramid as the royal burial structure, and Thebes began the development which made it Egypt's greatest monumental city. Palaces and temples were more important than tombs in this development.

2. *Egyptian Sculpture.* The plastic arts began in Egypt in preliterate times with the making of clay figurines and amulets. Carving in wood probably preceded carving in stone. Small carved figurines in stone and ivory are known from preliterate times. Two fine animal figures, a baboon in alabaster and a lion in granite, survive from the period of the First Dynasty; they show the simple but accurate rendering of external form which characterized the great statuary of the early Pyramid Age. The portrait statue, the greatest Egyptian achievement in the plastic arts, had origin in the religious belief that the *ka* requires a physical representation of the body in order to live satisfactorily after death; under the sway of this idea the artists, especially of the Fourth Dynasty, concentrated attention on the rendering of the face and achieved remarkable results in symmetry and expression if not in minute detail. Although the proportions of the body as a whole were well rendered, only the face was treated with distinction. Design rather than realistic detail, as evidenced in the great head of Khafre under the protecting wings of the falcon god, Horus, constitutes the true artistic quality of these portraits; this quality, however, was not obtained at the expense of human feeling. The famous seated figure, known as the "Portrait of a Scribe," surviving from the Fifth Dynasty, exemplifies well the Egyptian sculptor's ability to render even mental alertness. Some statues were made in wood, and all of



By the courtesy of the Metropolitan Museum of Art

KHAFRE

Behind man is mystery; for the great pharaohs it was symbolized by the falcon god Horus. Religions change as men develop their understanding, but the mystery remains. Unfortunately men often mistake the decay of symbols for a loss of faith, when actually the decay only means that rebirth of faith which again gives confidence in the presence of mystery.

them may have been painted in natural colors, so great was the Egyptian's thirst for life. In a number of cases where two or more statues of the same individual have survived, it is clear that the likeness could not have been exact. The portrait statues of the Twelfth Dynasty, although retaining the human qualities of their great predecessors, do not reveal the same harmony of design; moreover, they express not the certain feeling of eternal life but the

more earthly feeling of having won by struggle. This note is struck sharply in a red granite figure of Senusret III.

Much of the distinction of Egyptian statuary undoubtedly had origin in the artist's realization that in the relation between tool and material there were limits which defined closely his modes of treating the subject. From this realization probably flowed the simplicity of line, the vivid rendering of surface, and the unity of design which are the distinctive technical qualities of his best performance.[1]

3. *Egyptian Wall Decorations.* Wall decorations were an indispensable element in Egyptian architecture; after Zoser's time almost every surface, external or internal, was decorated with reliefs, incisions, or paintings. The most common form of decoration was the hieroglyphic inscription; the Egyptians were fully conscious of the decorative qualities of their writing. But low reliefs quickly became popular, especially under the Fourth and Fifth Dynasties, and were executed with a fine sense of design and fair accuracy of detail. The motifs were generally drawn from hunting, river activities, and country life. The rendering of animals, such as the ox, the donkey, the calf, the gazelle, and the hippopotamus, as well as of birds and fish, inclined toward the naturalistic; the treatment of plants was more casual. Under the Twelfth Dynasty some excellent farm scenes were executed. These reliefs constitute one of the main records of Egyptian domestic life. An adept use of color was developed in the feudal age.

Egyptian drawing followed strict conventions, which, as indicated by the "Palette of Narmer," were developed in the time of the First Dynasty. On this slate monument, which records the triumph of the southern king over his enemies, the drawings are arranged in rows one above the other, the relative importance of the figures being indicated by their size. The chief figures are shown with a front view of the shoulders and a profile view of the head and limbs, and lesser individuals are rendered completely in profile. Interesting among the motifs are two legendary animals with intertwined necks.

4. *The Egyptian Minor Arts.* The exceptional skills of the early Egyptians in working stone and wood were perpetuated in crafts that nurtured the minor arts. Most distinctive among these arts was the making of amulets, bowls, and jewelry from a material known as faience. This material was a blue-colored glaze applied to a core of firmly powdered quartz; its manufacture, not clearly understood today, was without a doubt the forerunner of the art of

[1] See Ludwig Bachhofer, *Early Egyptian Sculpture* (1929).

making glass. Exceptionally fine faience pieces were made under the Twelfth and Thirteenth Dynasties. The making of jewelry probably reached its height at that time, when metalworking, inlaying, engraving, and glazing were combined to produce jewel cases, personal decorations such as rings, headdresses, necklaces, and bracelets, and religious objects such as seals and amulets. The scarab, a symbol of the sun-god, was given a particularly lavish treatment in colors and metals. Throughout Egyptian history the minor arts found their chief expression in funerary furniture. Carpentry and painting were combined to produce coffins. Carving, modeling, and painting were united in the making of small figurines that were placed in the graves in large numbers under the Middle Kingdom. Fine wood- and metalworking, along with most of the crafts of the jeweler, were necessary for the production of the furniture placed in the great tombs; nothing to excel the craftsmanship and artistic excellence of these objects has survived from the third millennium B.C. The skillful use of gold, which was more plentiful than silver, was a remarkable feature of the Egyptian minor arts.

Science in Egyptian Culture.

The development of science followed somewhat different lines among the Egyptians from those it followed among the Babylonians, but in the main the achievements of the two peoples were alike.[1]

1. *Egyptian Mensuration.* Egyptian timekeeping was based on observations of the fundamental movements of the sun, moon, and stars. Much evidence indicates that the "sun-seers" of Heliopolis introduced a calendar based on the solar year as early as 4226 B.C. The year was computed at 360 days, plus 5 days, which were added by the priests between the end of the twelfth month and the first day of the new year. The year of twelve months was divided into thirty-six decads, *i.e.*, three ten-day periods in a month. The day and night had twelve hours which varied in length with the seasons. The hour was divided into fractional parts, such as ½, ¼, ⅛. The Egyptians used both water clocks and sundials. The seasons were marked by the three periods of the agricultural year—the inundation, the growing period, and the hot months.

The unit of measurement was the *cubit* in two forms, the ordinary cubit of 18½ inches and the royal cubit of 20½ inches. Units such as the *hand*, *finger*, and *foot* were in common usage. The unit of

[1] For general discussions of Egyptian science see Abel Rey, *La Science orientale avant les Grecs* (1930); also J. R. Partington, *Origins and Development of Applied Chemistry* (1935).

liquid measure was the *henu*, slightly more than a pint; the unit of dry measure was the *hekat*—5.05 quarts. The unit of weight was the *deben*, about 91 grams avoirdupois; the *deben* was one-tenth of the *kite*. Precious metal was measured in terms of a weight known as a *shat*. The art of weighing was known very early; the balance appeared in the Fifth Dynasty.

Originally large units were independent of small ones.[1]

2. *Egyptian Mathematics*. The Egyptian numbering system was based on the unit 10, with separate signs for such multiples as 20, 100, 1,000, 100,000, and 1,000,000. The sign for 1 was 1, for 2, 11, etc. The sign for 10 was an inverted U (∩); the symbol for 20 was two such signs (∩∩). The sign for 100,000 was a tadpole; for 1,000,000 a man with his hands raised to the sky. To write 879 required twenty-seven different symbols. The Egyptian system of notation was far more clumsy than the Babylonian.[2]

As indicated by the mathematical papyri, all of which are survivals from compilations made under the Twelfth Dynasty, the Egyptian mathematicians were intensely practical. They were concerned with solving problems, never with general principles or logical methods. In the Rhind Papyrus, the greatest of the mathematical papyri, the problems deal with such matters as the distribution of bread and beer in both equal and unequal quantities among different numbers of persons, receipts of storehouses, numbers of livestock, areas of fields of various shapes, volumes of various containers, and the slope of a cone or a pyramid. Methods of reckoning were crude. Multiplication was performed by addition, division by subtraction. In fact, the Egyptians never learned to multiply directly by any number except 2. Squaring and the taking of square root were unknown, and arithmetical and geometrical progressions were handled in a limited manner. The Egyptians never mastered fractions. They wrote fractions, except ⅔, which was written with a special sign, only with the numerator 1—*i.e.*, to write ¾, they would set down ¼ ¼ ¼. They had no way of writing mixed fractions. For computing with fractions they used prepared tables, which were accurate; the method of preparing them is unknown.

[1] See F. L. Griffith, "Notes on Egyptian Weights and Measures," *Proceedings of the Society for Biblical Archaeology*, June, 1892, pp. 403–450; W. M. Flinders Petrie, *Ancient Weights and Measures* (1926).

[2] See T. Eric Peet, *The Rhind Mathematical Papyrus* (1933); also Otto Neugebauer, *Vorlesungen über Geschichte der Antiken Mathematischen Wissenschaften, Erster Band, Vorgriechische Mathematik* (1934); T. Eric Peet, "Mathematics in Ancient Egypt," *Bulletin of the John Rylands Library, Manchester*, Vol. 15 (1931), pp. 409–441.

Egyptian geometry was a rudimentary science. The area of a four-sided field was found by multiplying one-half of the sum of two of its sides by one-half of the sum of its other two sides. The area of a triangle was found according to the correct formula—one-half of the base multiplied by the altitude. The value of π was $3\frac{13}{81}$, a figure which permitted a fairly accurate determination of the areas of circles. A correct method of finding the volume of a truncated pyramid was known. Ratio was expressed in terms of length and height. There is no evidence that the Egyptians understood the facts expressed in the Pythagorean theorem.

The surviving papyri do not show the development of a systematic knowledge of mathematics. Except in the Rhind Papyrus the problems are not grouped in a recognizable relation. Apparently the Egyptians kept the solutions, once found, although they later worked out better solutions for the same problems. No tables similar to those so common in Babylonian methematics were compiled, and no general rules were formulated.

3. *Egyptian Medicine.* The Egyptians were the founders of the medical profession of the Western world, if not of scientific medicine. The temples of the cult of Imhotep, the god of medicine, were the first medical schools, and its priests were the authors of the first medical treatises. Although the parts of Egyptian medical literature now extant were compiled in the second millennium B.C., it seems clear that its original elements were composed as early as the pyramid age. The specialist in medical learning seems to have appeared first under the Sixth Dynasty. When fully developed the Egyptian medical profession consisted of three kinds of practitioners—the physician, the surgeon, and the exorcist. The first two were somewhat scientific in their beliefs and practices; the third, of course, operated strictly in terms of the daimonic theory of disease.

Of the six surviving Egyptian medical texts two—the Edwin Smith Papyrus (*ca.* 1600 B.C.) and the Ebers Papyrus (*ca.* 1550 B.C.)—deserve special comment. The Kahun Papyrus (*ca.* 1900 B.C.) deals with diseases of women. The Hearst Papyrus (*ca.* 1550 B.C.) repeats part of the material of the Ebers Papyrus. The London Papyrus (*ca.* 1350 B.C.) and the Berlin Papyrus (*ca.* 1250 B.C.) contain more superstition than the older works.

The Edwin Smith Papyrus, which survives in a hieratic script, is believed to have been written under the Old Kingdom. For this reason it is said to be the oldest known surgical treatise. Sometime after its original composition additions were made to bring various definitions of terms up to date. In all, its pages contain the descrip-

tion of forty-eight surgical cases—arranged, as in modern medical works, in the order from the head downward. Among the injuries dealt with are 33 fractures, 27 head injuries, and 21 throat injuries. The cases are classified from the point of view of the likelihood of their response to treatment in three divisions: (1) favorable, (2) certain, and (3) unfavorable. No treatment is given for those classified as unfavorable. The fundamental therapeutic principle of the treatise is, "Let nature do its work." Uses of splints of three kinds, surgical stitching, cauterization, adhesive plaster, absorbent lint, bandages, swabs, and tampons are described. In the forty-two treatments recommended, three are mechanical or surgical, twenty combine surgical measures and external medicaments, and nineteen consist of only external applications. The remarkable fact about the discussion of these cases and treatments is that it is clearly based on the direct observation of the injuries. For this reason it may be believed that the author was thoroughly familiar with the accidents that occurred among workingmen on construction projects and the injuries that soldiers received in battles, and that for such cases, which had origin in known human activities, there was no need to predicate causes in the daimonic universe. The eight incantations and five recipes on the back of the Edwin Smith Papyrus are later additions having no place in the text itself.[1]

The most complete statement of Egyptian medical knowledge is found in the Ebers Papyrus. Apparently its author believed that the spirit of a drug, once it was given to a patient, acted as an amulet, and that the physician and his belongings possessed magical powers to cure diseases:

> With supreme audacity he [the physician] imbued his own excrement and urine, the very pen he wielded, the ink he used, and the papyrus he wrote upon with Healing Magic, prescribing them as the spirit moved him against the various infirmities and ills from threatened baldness to a distended bladder.[2]

Special magical words to be spoken when drugs were prepared were included in the recipes. Seven hundred substances, mostly animal but some vegetable and mineral, were used in the over eight hundred remedies. Over eighty of the recipes called for as many as

[1] J. H. Breasted, *The Edwin Smith Papyrus* (Oriental Institute Publications, Vol. 3, 1930).

[2] Cyril P. Bryan, *The Papyrus Ebers* (G. Bles, London, 1930), pp. 37–38. See also B. Ebbell, *The Papyrus Ebers: The greatest Egyptian medical document* (1937); Oswald Temkin, "Recent Publications on Egyptian and Babylonian Medicine," *Bulletin of the Institute of Medical History*, Vol. 4 (1936), pp. 247–256.

thirty-seven ingredients each. Of the forty-seven ailments described, fifteen were diseases identified by pathological conditions. The work contains no trace of the mixture of astrology and medicine which later became popular.

The Egyptians' knowledge of physiology was rudimentary, of anatomy fair. They knew about the pulse and bodily temperature and had names for the chief internal organs. The medical treatises contain about one hundred anatomical terms. The hieroglyphs for organs were derived from animal, not human, forms. The first known use of a word for the brain is found in the Edwin Smith Papyrus, where the fissures of the organ are compared to the wrinkled surface of slag from a copper furnace. The author of the work understood that injuries to the brain affected other parts of the body. The spinal column was also recognized as affecting various parts of the body, but no connection between it and the brain was recognized. Muscles, tendons, and ligaments were not clearly differentiated. The head was believed to be the seat of life. While there was life, air was believed to enter the head through the right ear; at death it departed from the left ear. The rise of mummification, carried on by expert embalmers, does not seem to have added much to anatomical knowledge.

Egyptian medicine knew four kinds of cures: (1) incubation, *i.e.*, the patient's sleeping in a sacred place so that its spirit might cure him; (2) magic and exorcism; (3) incantation and drugs; and (4) manual rites, *i.e.*, manipulation. Among the substances used as drugs were lizard's blood, swine's teeth, goose grease, wormwood, honey, opium, onion, turpentine, yeast, vinegar, peppermint, anise, cassia, castor oil, rancid fat, date blossoms, and even flyspecks. A treatment for pains in the limbs consisted of applying externally a mixture of castor oil and honey. A soothing syrup for babies was made from plant juices and flyspecks. A hair tonic was compounded from the heels of Abyssinian greyhounds, asses' hoofs, and date blossoms, boiled in oil. A cure for baldness was mixed from the fats of the horse, cat, snake, ibex, crocodile, and hippopotamus. As these recipes indicate, the Egyptians had almost no chemical knowledge. Their internal medicines were concocted on the principle that the nastier the mixture the greater its curative power. Remedies for headache were especially repulsive. Simple operations may have been performed on all parts of the body. Some differentiation was made between the diseases of women and children and those of men. Midwifery seems to have been a specialized profession. Because many diseases were believed to be caused by overeating, purgatives

were common remedies. Like the Babylonians, the Egyptians knew the uses of both enemas and emetics. Personal cleanliness was regarded as a protection against disease, but its efficacy had origin in religion rather than in a secular knowledge of the need for sanitation. The sun, of course, was the great sanitary agent of Egypt.

Certainly the most rational achievement of the Egyptian science was the "vessel theory" of health and sickness. It is stated clearly in the Ebers Papyrus:

> The beginning of the physician's secret: knowledge of the heart's movements and knowledge of the heart.
>
> There are vessels from it to every limb. As to this, when any physician, any surgeon, or any exorcist applies the hands or his fingers to the head, to the back of the head, to the hands, to the place of the stomach, to the arms or to the feet, then he examines the heart, because all his limbs possess its vessels, that is; it (the heart) speaks out the heart of every limb.
>
> As to "faintness": it is (due to the fact) that the heart does not speak or the vessels of the heart are dumb, there being no perception of them under the fingers (*i.e.*, thou dost not feel them); it arises through the air which fills them.[1]

Various other conditions, such as loss of consciousness, the fluttering of the heart, forgetfulness, and physical breakdown were associated with movements in the vessels. It was believed that sometimes they carried blood, sometimes water, sometimes air, and sometimes urine. Diseases occurred when the vessels became obstructed, heated, or stiffened. Actually, of course, as can be understood from the foregoing statements, the Egyptians had no real knowledge of the circulation of the blood. However, the theory was the first attempt to explain health and disease in terms of natural facts; except for the observations of the surgeons, it was the only point at which the Egyptian mind broke with the conception of the daimonic universe.

4. *Egyptian Astronomy and Geography.* Although observations of the heavenly bodies were necessary in order to guide agricultural production, Egyptian astronomy never ceased to be bound up with religion. The heavenly bodies were regarded as gods. The sun-god was believed to cross the sky in a boat. The stars were divided into two classes, the indestructible, *i.e.*, fixed, and the unwearied, *i.e.*, movable ones. The moon, whose phases were

[1] B. Ebbell, *The Papyrus Ebers: The greatest Egyptian medical document* (1937), pp. 114–116. Humphrey Milford, The Oxford University Press, Oxford.

known, was called the "the reckoner of time." Little attention was paid to the planets, and no record was kept of eclipses. The positions of the stars indicated situations among the gods, not among men. Thus the Egyptians never developed an astrological interpretation of heavenly phenomena. The star tables and star maps, made as early as the Old Kingdom, were aids to help the pharaoh find the way to heaven; apparently they had no astronomical significance. The universe was believed to extend under as well as over the earth. The sky was a flat roof over the earth; beneath the earth was a great ocean. The religious legends give a mixture of images of the heavenly world or the underworld, never a coherent view. No Egyptian astronomical treatises, if they were written, have survived.

Beyond the "hill countries," the deserts, and the seas which bordered their flat valley, the Egyptians had little knowledge of even near-by lands.

The Egyptian Social Outlook.

If, as the evidence indicates, the "seers" of Heliopolis established a solar calendar in 4226 B.C., the Egyptians must have believed from very early times that earthly life moved with the gods in heaven, and this belief always remained at the heart of Egyptian culture. In contrast to the Sumerians and Babylonians, who developed in astrology the belief that both the state and individuals were influenced by heavenly forces, the Egyptians conceived that the universe embodied a moral order established by the sun-god, Re. It was symbolized by Maat, his daughter, represented as a figure with bandaged eyes. The concept "maat," as organized in Egyptian society, embraced truth and justice. It was the ideal which Osiris upheld and men aspired to serve.

Under the Old Kingdom, as suggested by the "Maxims of Ptahhotep," the ideal was served especially in an individual morality. But as the result of the revolutionary outbreak, which seems to have had a profound effect on the Egyptian mind, it came to be served also by governmental administration. Individual right conduct and social justice were correlatives. Respect for property, deference to superiors, hospitality, kindness, peacefulness, cleanliness, and a quiet tongue were expected virtues; lying, hypocrisy, cheating, licentiousness, and drunkenness were vices, well known but, unfortunately, not always shunned. To elicit the love of one's inferiors and the respect of one's superiors were proper aims. Openhandedness and nonviolence were supreme virtues to be de-

clared in the judgment of the soul in the Hall of Double Justice. The good man was a son to the aged, a brother to the friendless, a spouse to the widow, a physician to the sick, and a father to the orphaned. In lean years, when famine came, he recognized no difference between the great and the little man. In the words of the "Eloquent Peasant," officials were educated in order to render justice: "Thou art instructed, thou art educated, thou art taught, but not for robbery." Personal righteousness under a divine moral order was the fundamental social ideal of Egyptian culture.[1]

In this ideal, it should be noted, there was a full acceptance of class status, the inferiority of labor, and poverty as the ordinary condition of common men; these, indeed, were aspects of the divine moral order. No known Egyptian ever conceived that the circumstance of worldly existence could or should be altered. Social amelioration was not a necessary element in the realization of social justice. These attitudes were completely in harmony with a culture whose static quality is supremely evidenced by the fact that during the period of its formation its language lost the narrative verb form.[2]

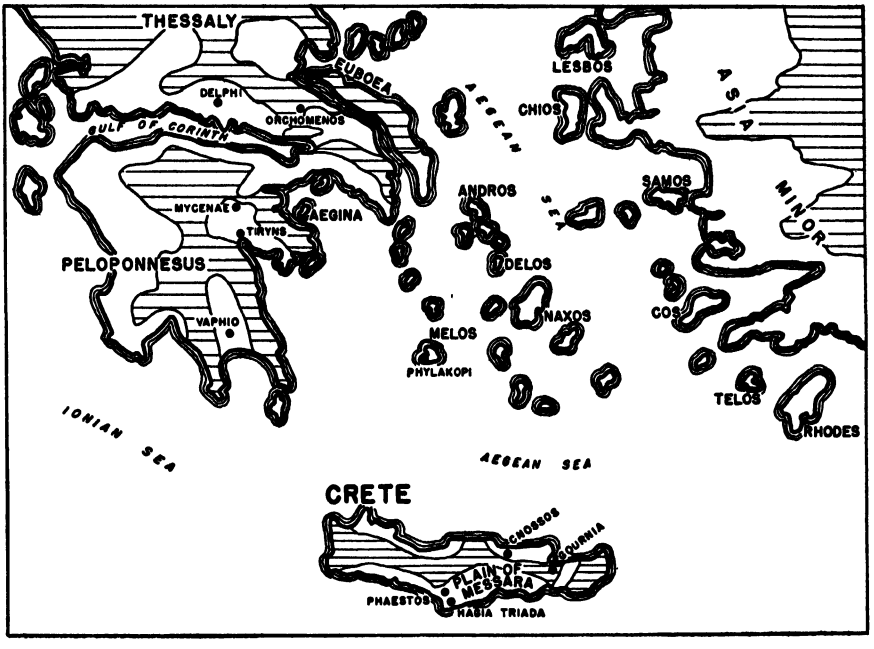
THE MINOAN CULTURAL TRADITION

The Greeks preserved a legend of Minos, a king of Crete, to whom they paid a yearly tribute of youths and maidens; from his name modern archaeologists have derived the name *Minoan* for the culture that developed in Crete from about the close of the fourth millennium B.C. The sources of this culture are obscure. Apparently it was rooted in the peasant-village culture which spread over Asia Minor in the fifth and fourth millenniums B.C., and apparently also its development was connected with a maritime movement from east to west through the entire length of the Mediterranean Sea. Its growth as an urban culture began with the introduction of copper. Its maturity coincided with the elaboration of bronze industries. And its fall came at the beginning of the iron age. Besides the neolithic phase (4000–*ca.* 3000 B.C.) three general periods of development are recognized: (1) the early Minoan period, 3000–2200 B.C., (2) the middle Minoan period 2200–1600 B.C., and (3) the late Minoan period, 1600–*ca.* 1100 B.C. Although the height of Minoan culture was reached only in the

[1] See J. H. Breasted, *The Dawn of Conscience* (1933); also Joyce O. Hertzler, *The Social Thought of the Ancient Civilizations* (1936).

[2] Allan H. Gardiner, *Some Aspects of the Egyptian Language System* (1937). Reprinted from the *Proceedings of the British Academy.*

CRETE AND THE EARLY AEGEAN LANDS



late period, its general pattern evolved from beginnings in the first period.[1]

The Minoan Cities.

Crete is a mountainous island, cut into isolated plains and valleys. In ancient times cypress forests covered the hills and ranges. Agriculture—the cultivation of barley and peas—thrived only in the valleys and on the plains. The olive and the vine were brought, it may be believed, from Asia Minor. The fig was the chief native fruit. The more mountainous western part of the island seems never to have been well settled. In the south central part of the island the Plain of Messara and a pleasant valley at its eastern end were probably the chief tilled areas, although the scattered plains and valleys of the eastern half of the island were

[1] On Minoan culture see J. D. S. Pendlebury, *The Archaeology of Crete: An introduction* (1939); J. D. S. Pendlebury, *A Handbook of the Palace of Knossos with Its Dependencies* (1933). A brief account can be found in C. H. Hawes and H. B. Hawes, *Crete: The forerunner of Greece* (1922). The authoritative archaeological study of Minoan culture is Sir Arthur Evans, *The Palace of Minos: A comparative account of the successive stages of early Cretan civilization as illustrated by the discoveries at Knossos* (6 vols., 1921).

settled. The cities were located at sites favorable for shipping; inland towns and villages clung to hilltops. The dominant environmental factor was the sea. In winter and spring the uncertain winds kept the sailors ashore, but in summer they sailed away—to Melos, the Aegean coasts, Asia Minor, Phoenicia, and Egypt, exchanging the products of their island for the products of these lands wherever they went. By the opening of the third millennium B.C. the Minoan sailors and traders were an important factor in the economic life of the entire eastern Mediterranean area. Alone among the ancient urban cultures Minoan culture rested on an economic surplus largely drawn from the profits of trade.

It is impossible to date closely either the end or the beginning of the neolithic age in Crete. The transition to metal industries was not well under way certainly until about the end of the fourth millennium B.C. By the middle of the third millennium B.C. the caves and simple huts of the neolithic age were displaced by buildings of rubble, large sun-baked brick, and stone. The use of stone was adopted slowly. At first small stones were used in walls and flat ones for pavements. The use of large worked stones was the result either of a technical advance or of the formation of a class of large wealth holders. The main achievements of the early Minoan age, besides brick and stone architecture, were (1) shapely pottery, (2) carved stone figurines and seals, (3) wall paintings, (4) a pictographic writing system, and (5) the labyrinth motif, which was worked into both architecture and the decorative arts. These achievements, it should be emphasized, are now commonly recognized as having been the elements of the first European urban culture.

During the early Minoan period Phaistos seems to have been a greater city than Cnossos. In the middle Minoan Age, however, when the number of settlements increased greatly, Cnossos rose to prominence. Its site on the northern coast and the rapid development of the bronze industry suggest that it was the center of trade with the European sources of copper and tin. About the end of the early Minoan Age these metals began to flow into the eastern Mediterranean area from the central Danubian lands. But notwithstanding its wealth, Cnossos was unable, it seems, to dominate the other cities. At sea its navy was powerful, and on land its prestige was undoubtedly great, but nothing can now be recognized of a political organization, if one existed. The cities, as well as the villages, were unfortified. As revealed in the provincial town of Gournia, they centered about a religious shrine and a

courtyard or market place. Artifacts found at this site testify to the high development of the metal and woodworking industries. Bronze knives, nails, awls, and chisels were cast in stone molds. Large saws were made for cutting lumber. Pottery of almost every style and type of ornament was produced, some of it painted in brilliant colors. Between 2000 B.C. and 1800 B.C., when Cnossos and Phaistos, as revealed by the remains of their palaces, were thriving centers of a diversified urban life, Minoan culture attained unity and its first climax; a second climax, reached in late Minoan Age, will be discussed in a subsequent section.[1]

The clearest fact about the development of Minoan culture, although its founders seem to have come from southwestern Anatolia and Syria, is a close connection with Egypt. Not only did Crete receive many traits from Egypt, but also the evolution of its culture followed the phases of Egyptian development. The first period of Minoan brilliance was contemporary with the Pyramid Age; the strength of its Egyptian influence at this time suggests that there may have been an Egyptian colony on the island. The decline of early Minoan culture occurred during the disorders of the last phase of the Old Kingdom, and its end seems to have come in a social revolution similar to that which disorganized Egypt after the fall of the Old Kingdom. The second period of Minoan brilliance, which coincided with the prosperous reigns of the Egyptian Middle Kingdom, ended abruptly with the overthrow of that kingdom. The reasons for this parallel development of Egyptian and Minoan culture are obscure; perhaps the commerce which contributed so much to the wealth of Crete thrived only when Egypt was able to take its wares or employ its sailors as carriers between the Nile Delta and eastern Mediterranean coasts.

This connection between Egypt and Crete, however, did not lessen the originality of the islanders; their cultural tradition was as distinct as that of either Egypt or Mesopotamia. Although the Minoans seem to have derived their industries from southwestern Asia, only a few Mesopotamian art motifs and intellectual products reached Crete.

The Intellectual and Artistic Aspects of Minoan Culture.

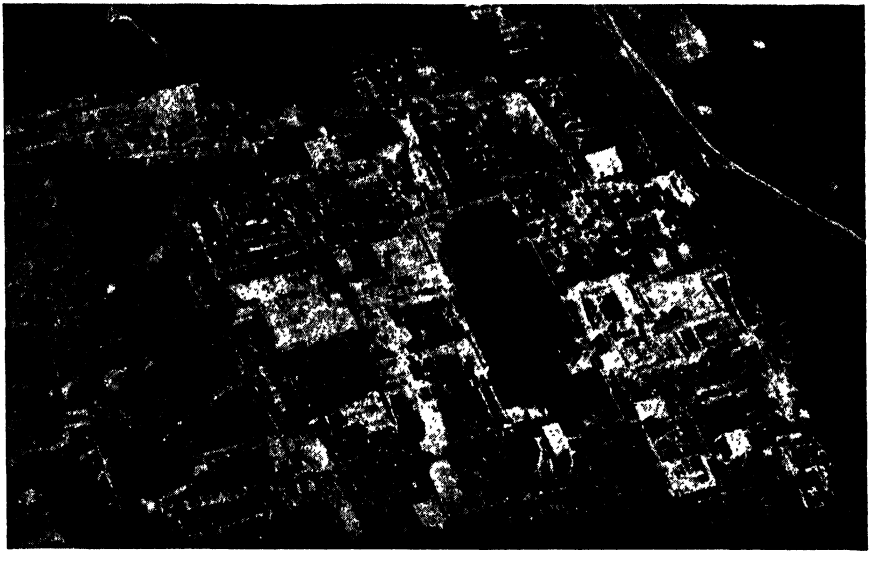
Except for the deductions that can be made from artifacts, little is known of Minoan intellectual development, for the script has not been deciphered.

[1] See pp. 233, 256.

1. *Minoan Literate Learning.* The early Minoan writing system consisted of pictographs on beads and seals. In middle Minoan times these pictographs were replaced by a linear script, with artistically formed characters. Most of the surviving documents are clay tablets, which seem to be inventories of arms, metal ingots, and foodstuffs in the royal palace at Cnossos. A simple decimal system of numeration and the Egyptian form of the Babylonian weights and measures were employed. The digits were written with upright lines, the tens with horizontal lines, the hundreds with circles, and the thousands with four or five spurs. The largest number known to have been used is 19,000. The Minoan calendar was based on "counting the moons." Scratchings on the walls of middle Minoan houses may indicate that the knowledge of writing had spread beyond palace circles.

2. *Minoan Religion.* The chief Minoan deity was a Mother Goddess of matronly proportions. Figurines, which always show her dressed in the height of the current fashion, suggest that she may have been the Minoan counterpart of the Semitic Ishtar and the Egyptian Isis. Associated with her was a youthful consort, usually represented as descending from the sky. Associated with her also were doves, the symbols of divine inspiration, and snakes, the symbols of the fertility and friendliness of the earth. As Lady of the Snake she ruled the underworld; as Lady of Wild Creatures she reigned over the earth; and as Lady of the Dove she was supreme in heaven. The bull was sacrificed in her honor. Libations of his blood were poured at her altars, and his horns graced them. The ceremonies of her worship seem to have been of two kinds: (1) a dignified ritualistic performance of sacrifices and (2) a wild dance led by priestesses. Flowers had a prominent part in the ceremonies in her honor. Among the symbols of Minoan cults, the most interesting are the double ax, signifying the lightning bolt, and the cross, which was known in all the forms commonly associated with Christianity. The trinitarian conception, evidenced in the prominence given to the number three and in association of religious symbols in units of three, was also well developed. Because many shrines are found in hollow places in the ground, it is believed that popular worship was concerned with snakes, which, it should be noted, were probably regarded as beneficent rather than evil spirits. Domestic rather than public worship was probably the rule.

The Minoan religion seems to have been only another elaboration of the peasant-village beliefs which were at the base of the



By the courtesy of SIR ARTHUR EVANS. *Photograph by* E. G. LUMSDEN. *From* SIR ARTHUR EVANS, *The Palace of Minos*, (6 *vols.*, 1921). *Macmillan & Co., Ltd., London*

THE PALACE SITE AT CNOSSOS

The great palace at Cnossos was a composite structure built around a central court originally laid out about 2200 B.C. The main entrance to the palace was from the south (lower left-hand corner of the photograph). Magazines were ranged along the south side of the palace. The royal quarters and state rooms were on the north side of the central court. Various buildings, such as a caravanserai, a royal villa, a high priest's house, and a temple tomb, clustered about the palace.

Babylonian and Egyptian religions. The kings were undoubtedly regarded as living representations of the gods.

3. *Minoan Art.* The greatest monuments of Minoan culture are the ruined palaces of Cnossos, Phaistos, and a few other sites. They were destroyed and rebuilt several times. Situated on low hilltops, with chambers, corridors, stairways, and halls strung together about a central court, the palaces must have presented to the eye an interesting but irregular picture. Foundations were built of large, well-cut stones, walls of rubble and timber, and roofs of wood. The walls were covered with a smooth plaster. Halls and doorways were decorated with wooden columns tapering toward the bottom. Balustrades lined stairways and balconies. Walls were decorated with frescoes and floors with tile mosaics. Drains of interlocking clay pipes led rain water from collecting basins on upper stories to the lower levels of the buildings. Light

entered the rooms of upper stories through windows and sifted down into rooms on the lower story through wells. Ordinary houses were of two and three stories, with windows high above the streets. The streets, which were narrow, only about five feet wide, were paved with stone. In the middle Minoan period the palace at Cnossos covered a little more than five acres; the surrounding town was much larger. The towns were not walled.

Shrines, theaters, arenas, procession halls, storerooms, workshops, and arsenals were built into the labyrinthine palaces, which, as a result, were places for living as well as for worship and pompous display.

Fresco painting began in the early Minoan age, but the first notable example of the art survives from the middle Minoan period. It depicts a boy gathering flowers on a rocky hillside. Although the scene is not well drawn, its effect is vividly alive. The high development of painting on pottery in the middle Minoan period seems to have been due to the transfer of the fresco technique to the new material. The use of colors, particularly orange, blue, saffron, yellow, and light brown, was brilliant and the sense of form exquisite. The selection of motifs from the fields and the sea was unique. The use of perspective and light and shade was not understood. Minoan design is notable for the sure handling of the curved line. The artists seem to have avoided the use of the straight line so prominent in Babylonian and Egyptian art.

The Minoans excelled in carving seals and modeling small figurines. In the early Minoan period they imitated Egyptian figures, such as apes, waterfowl, bulls, and scarabs. In the middle Minoan period human figurines were popular. The most common one represented the Lady of the Snake; it was often done in faience or glazed pottery and terra cotta. Another popular figure was the athlete or "bull leaper." The engravings on seals, not unlike those of Babylonia, depicted men, animals, and fanciful monsters. Some of the seals had symmetrical designs. Plaques of cows and wild goats with their young were made in faience. The Minoans did not produce any large statues in the round or great reliefs. After a slow start they became superb metalworkers. A necklace or head band of leaves wrought with extreme delicacy, which survives from the early Minoan period, is a remarkable example of their high skill as goldsmiths. In the middle Minoan period intricately decorated sword and dagger handles were produced. Finely cut gems and exquisite textiles and leather articles were also produced in this age. The men wore caps, loincloths, and

high boots; their chief weapon was the dagger. The women wore high peaked caps, long skirts, sashes, and bodices cut low at the neck. Their jewelry consisted mainly of colored stones and small metal figurines.[1]

The Minoan Feeling for Life.

Just as the Babylonians produced a world outlook and the Egyptians a social outlook, so the Minoans shaped a feeling for life as a whole. This feeling is manifest in their art. The chief products of their arts and crafts were objects of daily life or decorations for such objects. And the motifs were drawn mainly from the daily walks of life. In other words the Minoans found beauty in common things and sought to put beauty into utilitarian objects. The naturalism revealed in their treatment of human and animal forms and motions testifies to their appreciation of familiar and domestic things. There is nothing in Minoan art, except perhaps the decorations of the throne room and processional hall in the palace at Cnossos, that can be called *grand.* Their conventions of style lacked the rigidity characteristic of Egyptian and Babylonian art. Minoan art, it appears, was not dominated by religion as were the arts of Babylonia and Egypt.

The Minoans possessed poise and grace. They were secular-minded. They were "artistic." Perhaps they were the first people to *play*, *i.e.*, to make sport an element in their culture. One of the remarkable finds at Cnossos is a floor picture showing a crowd of spectators at some sort of public exhibition. Alone among ancient urban peoples the Minoans embodied in their art the spirit of gaiety and good humor; they could laugh—even boisterously—and sing.

The significance of a sense of humor in the development of Western culture has been far greater than sober-minded persons are willing to believe.

[1] For a pictorial report on Minoan art, see H. T. Bossert, *The Art of Ancient Crete* (1937).

Chapter V

THE DIFFUSION AND ELABORATION OF THE ANCIENT-ORIENTAL URBAN CULTURES

By the opening of the fifth millennium B.C. the ancient-oriental lands were a world of scattered villages. By the close of the fourth millennium B.C. favored areas were the centers of urban cultures. Fifteen hundred years later the lands became the seats of empires. Just as the cities rose out of the villages, so the empires rose out of the cities.

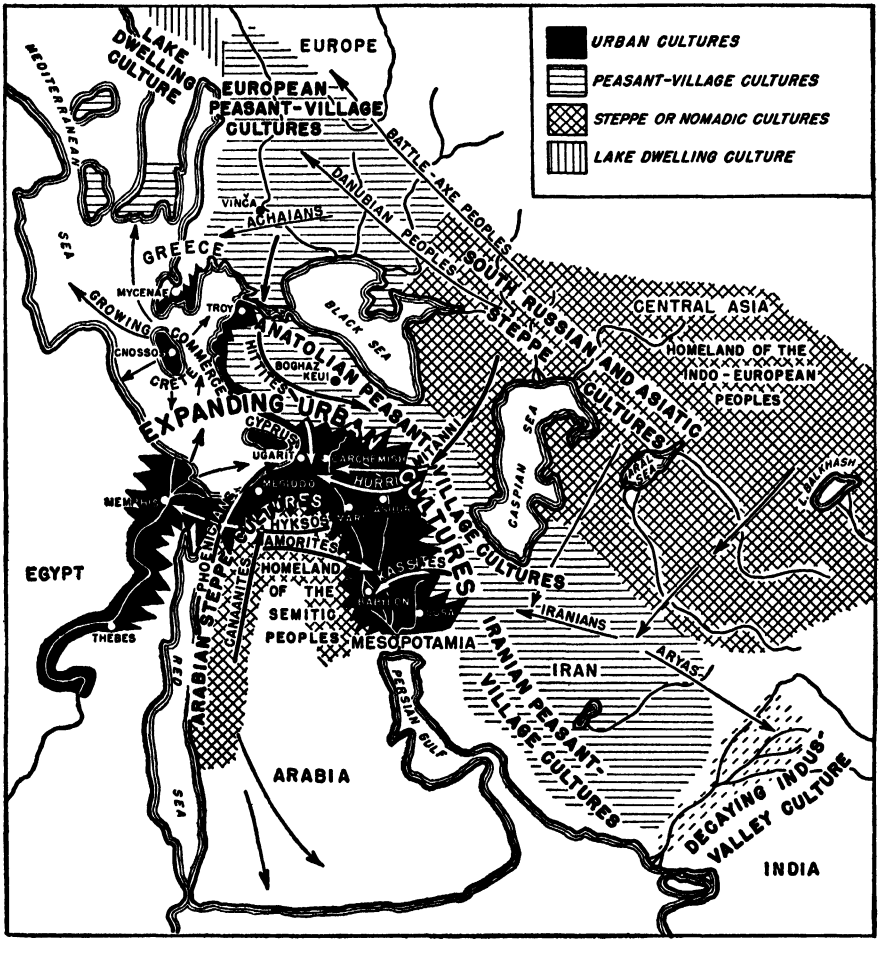
The process of this development was not too complex.

In both Mesopotamia and Egypt the cities were unified politically only after many struggles between them; in the course of these struggles governmental and military institutions were evolved. These institutions were means of control, which, having been organized among several cities, could be extended to areas beyond the original urban centers.

This extension was impelled mainly by economic forces. The urban demands for stones, timber, metals, jewels, etc., were satisfied only by the exploitation of resources outside the valleys; such exploitation had two main aspects: (1) it introduced new economic activities into areas supplying raw materials, and (2) it gave the products of urban industry in return for these raw materials. Thus new forms of work, wealth, and consumption spread outward from urban centers. When trade of this kind between the cities and outlying regions became continuous, the kings sent out military expeditions to protect it, and thereby united economic and political factors in that combination which the world has learned to call *imperialism.*

The economic and political impact of urban culture on raw-material areas, by increasing wealth production, brought a growth of population, and, by supplying new wares, aroused desires which

PEOPLES AND CULTURE AREAS c.2000 B.C.



turned eyes toward the urban centers; as a result the inhabitants of outlying regions attacked the urban areas, giving imperialism its counteraspect of foreign invasion and domination. In time, too, as a result of this interaction between urban production-and-consumption centers and raw-material areas, new cities arose, and a further penetration of unexploited lands was promoted, new cities struggling with old cities for the control of an ever widening wealth-producing area, with the victors seeking ways to organize and perpetuate the advantage they had won. Thus the rise and fall of empires became a normal aspect of the development of urban cul-

tures, and war and peace were mainly functions of the struggle for imperial domination.

Peaceful trade, easy conquest, organized exploitation, border warfare, counterattack, brilliant victory, recurrent disorder, sudden defeat, bloody vengeance and expropriation: the cycle of imperialism was too encrusted with startling events to be seen as an interplay of relatively simple economic and social forces.

THE FIRST AGE OF IMPERIALISM, 2000–500 B.C.

By the opening of the second millennium B.C. the development of ancient-oriental cultures had created a situation ripe for imperialism. Trade had become continuous, not only between urban centers and raw-material areas but also between the different urban areas, and the urban rulers had found reason to penetrate the raw-material areas. Thus Mesopotamian kings entered Syria, Anatolia, the Armenian Highland, and Iran, and Egyptian pharaohs invaded Sinai, Libya, and Nubia. Assyrian merchants lived among the peoples of eastern Asia Minor. Egyptian traders frequented the island of Cyprus and the ports of Syria. And Minoan sailors trafficked along the coasts of the eastern Mediterranean and Aegean lands. At the edges of the areas, into which the urban cultures were expanding, were peasant-village cultures, and beyond them, both north and south, nomadic cultures. The carriers of these nomadic cultures were restless, pushing into the areas of peasant-village culture and toward the urban centers.

Shortly after 2000 B.C. this combination of circumstances set up movements and struggles of peoples within and without the urban culture areas that filled the last thousand years of ancient-oriental times. In the course of these events the ancient-oriental urban cultures were diffused and elaborated, new cultural traditions were formed, and some old ones were disintegrated. Indeed, the transition from the ancient-oriental cultures to the cultures even now at the base of human life occurred in the course of these struggles.[1]

The Coming of the Indo-Europeans.

Late in the third millennium B.C. peoples from the northern grasslands (see Eurasian Environmental Areas, *ca.* 5000 B.C., facing page 44) began to move southward and eastward toward the

[1] On the general history of the first age of imperialism see *The Cambridge Ancient History*, Vol. 2, *The Egyptian and Hittite Empires to* 1000 *B.C.* (1924), and Vol. 3, *The Assyrian Empire* (1929); also Eduard Meyer, *Geschichte des Altertums*, Vol. 2, *Die Zeit der Aegyptischen Grossmacht* (1928).

ancient-oriental urban culture areas. Perhaps the diffusion of field agriculture and metalworking had produced an expansion of peasant-village cultures in southeastern Europe, southern Russia, and Iran and central Asia which aroused a desire for richer lands, and trade routes showed the ways to them. Perhaps, also, the drier and warmer climate which, about this time, thinned the forests over the Eurasian mountain backbone facilitated the movement. As these peoples approached the ancient-oriental urban lands, they either conquered or mixed with the near-by peasant-village peoples, so that commonly they did not enter the urban culture areas as pure Indo-Europeans, whatever they might have been.

The Hittites, originally at home somewhere in southeastern Europe, moved eastward across Asia Minor and occupied the Anatolian Highland. The Kassites, first identified in the central Zagros Mountains, worked into lower Mesopotamia as field hands and mercenary troops and, about 1750 B.C., displaced the Semitic rulers of Babylon as overlords of the flood plain. Farther north the Hurri pushed outward from the region around Lake Van, over the mountainous areas in which the Tigris and Euphrates had their sources, and occupied the northern Mesopotamian steppe and part of northern Syria. After 1800 B.C. they dominated the lands between the Anatolian Highland and Lake Van as far south as the great bend in the Euphrates River. In the eighteenth century B.C. the Hyksos—the Egyptian name meant "rulers of foreign lands"—invaded Egypt from Syria and Palestine and organized a shadowy regime which seems to have rested on more or less continuous plundering rather than on orderly government. The Iranians and the Aryas, it is conjectured, moved southward about 2300 B.C., reaching Bactria, where, probably about the middle of the second millennium B.C., they separated, the first turning westward toward Lake Urmia and the second pushing through the Hindu Kush Mountains to northwestern India.

The Indo-European element in these diverse movements varied considerably. The Hittites were an Indo-European people—the first to appear in history—who established themselves as rulers over the ancient native population of the Anatolian Highland. The Hurri, it seems, belonged to this ancient native population, now commonly called the Caucasian people, but during their expansion they were ruled by an Indo-European minority known as the Mitanni; this group was so small that the Hurrian language was spoken not only by the people but also by the kings. An Indo-European element among the Kassites is indicated by their worship

of Indo-European gods. The Hyksos were not an ethnic group but a horde of mixed Semitic, Hurrian, and Indo-European elements; their chiefs bore Indo-European names. The Iranians and Aryas were undoubtedly Indo-Europeans.

Who were the Indo-Europeans?

Above all, it should be emphasized, the Indo-Europeans were a cultural, not a racial, group. Their early racial make-up is not known. Recent studies of their languages, which have a common basic vocabulary, indicate that they were originally at home in a temperate grassland, where the seasons were sharply differentiated, where the birch, the willow, and the fir were the common trees, and where fish and tropical animals were unknown. The lands which conform most closely to these conditions are east and north of the Caspian Sea. Here, probably in the fourth millennium B.C., a blending of a central Asiatic people and a people from the Iranian Plateau began, and about 3000 B.C. they achieved at least a cultural unity. In the third millennium B.C. they borrowed some elements of agriculture from the peasant-village people of Turkestan and southern Russia and received the rudiments of metalworking from the Sumerians. Their words for copper and gold came from Mesopotamia. Although they knew grain (they had a word for grain but none for wheat, barley, bread, or porridge) they were a pastoral people. They were, it seems, the original possessors of the horse, but they used it only in warfare. They employed oxen for draft purposes, both on the plow and on the wheeled carts which they made the family domicile while on the move. Commonly they settled in the growing season, but in the autumn they moved to sheltered spots where they wintered. When they established permanent settlements, they built with timber. Their religion, especially in the worship of sky-gods, and their folklore, like their language, contained many elements common in the religions, folklores, and languages of the Indo-Aryans that settled in India, Iran, Asia Minor, and Europe. They had no idols or temples; worship was conducted by the father, who acted as the priest of the family.

The earliest movements of the Indo-European peoples probably took them westward into southern Russia and southeastern Europe, so that by the end of the third millennium B.C. they occupied a broad belt from the Danubian plain to the Oxus and Jaxartes valleys. Geographical factors caused them to come into the ancient-oriental urban culture areas by different routes—across Asia Minor from the west, through the Caucasus ranges, and over the central Asiatic plain. Throughout the entire period of ancient-

oriental imperial struggle, their movements, which converged on the urban centers, were an important factor in political, if not cultural, development.

With the advent of the Indo-European peoples the fundamental population elements of southwestern Asia and the Mediterranean lands were finally established. Racially the peoples of these areas were Mediterranean, with a large admixture of the Alpine strain and smaller parts of Negroid and Nordic blood. The Negroid element was noticeable chiefly in Egypt, the Nordic mainly along the northern edges of the ancient urban areas. Linguistically there were also four main groups: (1) the Caucasian, over Asia Minor and Iran, (2) the Hamitic, in Egypt and northern Africa, (3) the Semitic, in Arabia and the Fertile Crescent, and (4) the Indo-European, in the forest and grassland areas from western Europe to Bactria. The new empires arose in the clash of the Indo-European and the Semitic peoples, who, since the end of the third millennium B.C., have faced each other constantly along the Fertile Crescent and across the Mediterranean Sea. In ancient times they did not yet feel the pressure of Asiatic peoples who, after the appearance of the Huns in the fourth Christian century, were a threat to each of them for the greater part of a thousand years.[1]

The Empire of the Hurri, 1800–1400 B.C.

In the areas between the Kassite dominion in southern Mesopotamia and the Hyksos empire the Hurri, under the Mitannian kings, created a state which for the first time gave political unity to the upper Tigris-Euphrates valley and its bordering lands. Its chief city, although not the capital, was Carchemish, located at the main

[1] In the nineteenth century controversy over the origins of the Indo-European peoples or, as they were known then, the Aryans, raged among European scholars. This controversy was, as a matter of fact, an aspect of the rivalry of the various nationalities. Many German scholars held that the original home of the Aryans or Indo-Europeans was in Baltic Sea lands. Most of the non-German scholars found the Aryan homeland in other places—the Danube valley, or southern Russia, or Turkestan, or even India. A recent statement of German views on many aspects of the Aryan problem may be found in H. A. Hirt, *Germanen und Indogermanen; Volkstum, Sprache, Heimat, Kultur* . . . (1936). See also by the same author *Die Indogermanen; ihre Verbreitung, ihre Urheimat, und ihre Kultur* (2 vols., 1905–1907).

Discussions of the Indo-Europeans in terms of present evidence are George Poisson, *Les Aryens: étude linguistique, ethnologique, et préhistorique* (1934); V. Gordon Childe, *The Aryans: A study of Indo-European origins* (1926); J. L. Myres, "Ethnology, Habitat, Linguistic, and Common Culture of the Indo-Europeans up to the Time of the Migrations," pp. 183–244, in Edward Eyre, editor, *European Civilization: Its origin and development*, Vol. I, *Prehistoric Man and the Earliest Known Societies* (1934). See also C. S. Coon, *The Races of Europe* (1939), pp. 178 *ff.*; William M. McGovern, *The Early Empires of Central Asia: A study of the Scythians and the Huns and the part they played in world history* (1939);

crossing of the upper Euphrates, but its seat was in the hill country between the upper rivers. Although the metal and cloth industries of the ancient peasant-village population were the chief source of wealth, besides agriculture, the importance of the state actually rested on the control of the trade routes that converged at Carchemish. Both Babylonia and Assyria were economically weakened, and intercourse between Asia Minor and lands to the south was controlled through the possession of this city. Political power was held by Hurrian nobles, who used the horse not only to draw the light chariot but also to ride. With them the "man on horseback" first appeared in history.

At the time of their greatest power—1500–1450 B.C.—the Mitannian kings, who, it should be remembered, never ruled all the lands occupied by the Hurri, held both the Hittites and the Assyrians in vassalage.[1]

The Egyptian Empire, 1600–1350 B.C.

Against the hated Hyksos the southern Egyptians waged an almost continuous war for independence.[2] When victory finally rested with them, their education in the ways of imperialism was well advanced, for they had learned a new technique of warfare, namely, the use of the horse-drawn chariot, and had discovered that the fruits of victory are sweet. Their leader, Ahmose I (*ca.* 1580–1557 B.C.), who founded the Eighteenth Dynasty (*ca.* 1580–1350 B.C.), purged the old nobility of all who opposed him and gave their lands, slaves, and titles to his faithful supporters. The people looked upon him as a war lord. His chief imperial venture was an invasion of Nubia. Thutmose I (*ca.* 1536–1520 B.C.) penetrated Asia as far as the great bend of the Euphrates River and organized Nubia as a conquered province to the fourth Nile cataract. From the prow of his barge in the Nile procession celebrating his victories he hung the prince of conquered Nubia—head downward; the prince has never reported on the view of imperial glory afforded by this position.

Albrecht Götze, *Hethiter, Churriter, und Assyrer* (1936); Jules Charpentier, "The Original Home of the Indo-Europeans," *Bulletin of the School of Oriental Studies* [University of London], Vol. 4 (1926), pp. 147–170; A. H. Sayce, "The Aryan Problem—Fifty Years Later," *Antiquity*, Vol. 1 (1927), pp. 204–215; A. T. Olmstead, "The Original Home of the Aryans," *The Journal of the American Oriental Society*, Vol. 48 (1928), pp. 358 *ff.*

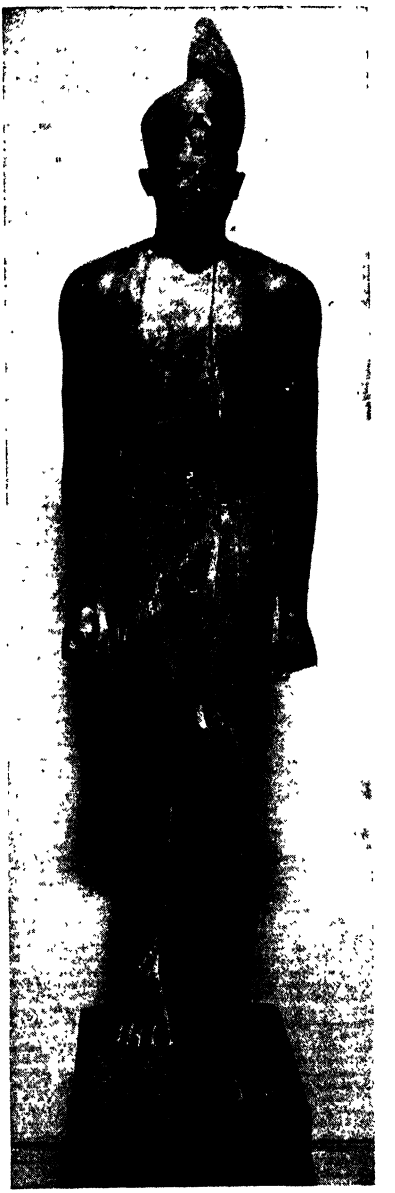
[1] Albrecht Götze, *Hethiter, Churriter, und Assyrer* (1936), pp. 114–132; E. A. Speiser, *Ethnic Movements in the Near East in the Second Millennium B.C.* (1933); Robert H. Pfeifer, "Nuzi and the Hurri," *Report of the Smithsonian Institution*, 1935, pp. 535–555.

[2] On the Egyptian empire and its relations with Asiatic peoples see Friedrich Bilabel, *Geschichte Vorderasiens und Ägyptens, vom 16. Jahrhundert v. Chr. bis auf die Neuzeit* (1927).

Some time after the death of Thutmose I the royal power passed into the hands of Hatshepsut (*ca.* 1520–1479 B.C.), the half-sister of Thutmose II, who gave the empire a masterly rule.[1] Her chief supporters were the priests of the state cult of Amon, who, in order to explain how a woman could occupy the throne of Horus, the falcon god, invented several theological fictions. She always appeared before her subjects in male attire and with a long black beard. She consolidated the imperial gains of her predecessors, extended the trade with Punt, and pushed mining enterprises.

Her nephew and successor—Thutmose III (*ca.* 1479–1447 B.C.)—is known to history as the first "great general," "empire builder," and "world hero." During the early years of his long reign he conducted repeated campaigns in Palestine and Syria. The goal of these campaigns was the "Syrian saddle," that narrow plain upon which converged roads from Egypt, the Mediterranean coast, and Asia Minor and from which radiated roads down the Euphrates, across Mesopotamia, and into the Armenian Highland. In his first campaign he built a wall around Megiddo, the city dominating the plain, and starved its population into surrender. Unfortunately for the

[1] William F. Edgerton, *The Thutmosid Succession* (Oriental Institute Studies in Ancient-Oriental Civilization, No. 8, 1933).



By the courtesy of the Metropolitan Museum of Art

THUTMOSE III

Under Thutmose III the Egyptian empire was organized in forms which, although the source was forgotten, endured in the later monarchies and empires of the ancient Near East and the Mediterranean lands.

success of this operation the king of Kadesh, in whose territory the city was situated, escaped with most of his followers before the wall was completed. But the spoils of the victory were worth its costs:

> There was great booty of animals, twenty thousand five hundred sheep, two thousand goats, two thousand cattle, over two thousand mares, a few stallions. Chariots were taken to the number of nearly a thousand, and included that of the king of Kadesh, worked with gold and with a golden pole. His royal tent, adorned with silver, two hundred suits of bronze armor, five hundred bows were added to the spoil. From the plain below the city, yellow with harvest, more than a hundred thousand bushels of grain were garnered; this year starvation was to be the lot of the peasants.[1]

Many were the years in succeeding centuries when the peasants, for a similar reason, were to know a similar lot.

Thutmose III governed Egypt and the conquered lands with great attention to detail. Fortresses and garrisons were maintained along the main roads and in the outlying areas where border attacks were likely to occur. Surveys of the land were made in order to levy tribute, which was collected in kind, depending on the products of the country. Palestine, for example, paid a tribute in slaves, cattle, sheep, horses, incense, wine, oil, wood, industrial products, and metals. Although Nubian gold, slaves, and mercenaries were the chief material supports of the empire, its power had origin in a military system which, like the ancient organization of labor, expressed the true genius of Egyptian statecraft.

The Egyptian empire reached its height under Amenhotep III (*ca.* 1411–1375 B.C.). Egypt was supreme in power, rich in all the products of the fields, shops, and mines, and splendid with the artistic products of a burst of creative genius, equaling, if not surpassing, the achievements of the great Pyramid Age. To her capital, Thebes, and the great cities, Abydos and Memphis, came traders of all nations, and to her court came messengers bearing gifts and asking favors, and there came also princesses, sent by their royal fathers in exchange for advantages which intrigue and cupidity could not win from the pharaohs. Little wonder then that the pharaohs, like the sun, seemed to shed a beneficence over the entire world. Imperial dominion was a heady wine.

But outward peace masked intrigues and conspiracies. When kings in Asia Minor and Mesopotamia plotted to arouse the Syrian vassals to revolt, the pharaohs countered by playing off one king

[1] A. T. Olmstead, *A History of Palestine and Syria to the Macedonian Conquest* (1931), pp. 134–135. By permission of Charles Scribner's Sons, New York.

against another, never allowing one to become too strong. Great amounts of gold were paid out in subsidies, and many marriages were arranged to serve diplomatic interests. Recently the diplomacy of the age has been revealed in numerous letters and documents discovered at Tell el-Amarna in Egypt and at Boghaz Keui in central Anatolia, the site of the capital of the Hittite kingdom.[1]

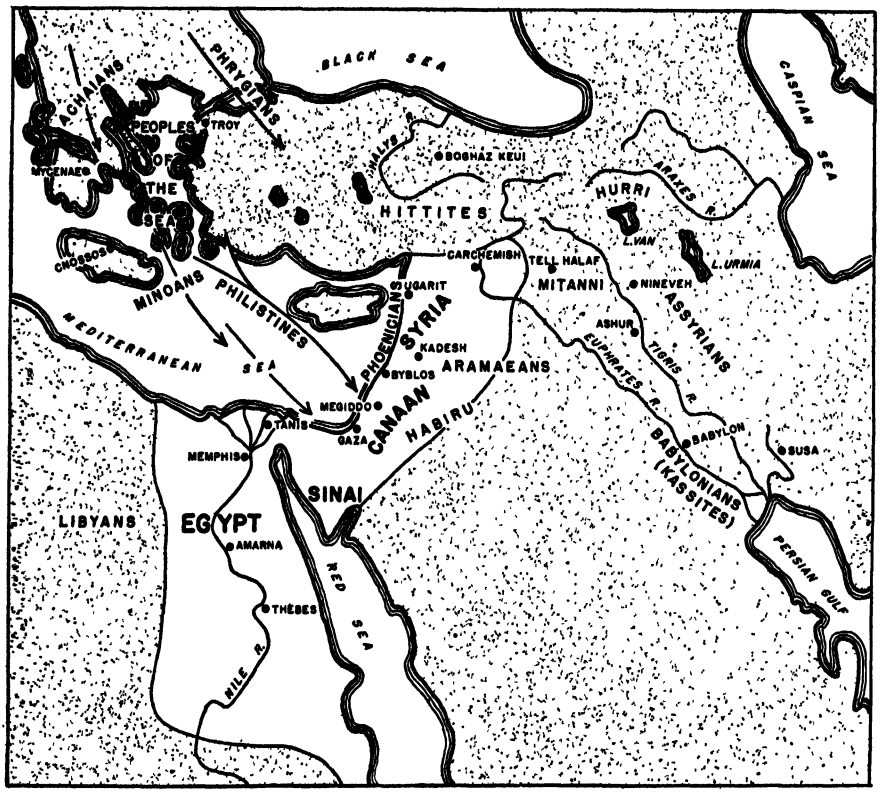
Under Amenhotep IV (*ca.* 1375–1358 B.C.) forces having origin in imperial success brought discord to the nation.[2] Among them was undoubtedly the influence at the court of Asiatic women and, perhaps, their slaves. In view of the religiosity of Egyptian culture, these forces necessarily emerged in forms which opposed the national religious tradition. Amenhotep IV is usually known as Ikhnaton, the name he adopted when he displaced the cult of Amon with the worship of the solar disk, the god Aton, which had attracted some attention among the priests of Heliopolis. Aton was the sole deity, and Ikhnaton—the name means "Aton is satisfied" —was his priest. The new cult, which symbolized the union of many peoples under the rule of the Egyptian pharaoh, had three sacred cities—one in Egypt, another in Syria, and still another in Nubia. In order to establish the cult as the religion of the empire, Ikhnaton undertook to suppress all notices of Amon in the temples. The policy provoked the resistance of the priests of Amon, who, it seems, had the support of the Egyptian masses, for in the fourth year of the reign a great revolt was put down by force of arms. Popular resistance probably had origin in the fact that, with the elevation of Aton to supreme godship, the cult of Osiris, through which all Egyptians expected to survive after death, lost the support of the state, and the Egyptians were unprepared for a religion of personal salvation.

After the suppression of the people Ikhnaton withdrew to the new city, Akhetaton, now called Tell el-Amarna; there he lived an aesthetic life, surrounded only by his family and the intimate circle of the court. But the neglect of foreign affairs brought troubles. The Amarna letters give a vivid picture of the disorders that accompanied the inroads of the desert peoples following the revolts of the Syrian cities. But Ikhnaton did not heed the appeals for aid. Throughout these events his support came almost entirely from loyal foreign troops and the self-made men he elevated to the priesthood of Aton.

[1] Samuel A. B. Mercer, editor, *The Tell El-Amarna Tablets* (2 vols., 1937).

[2] James Baikie, *The Amarna Age: A study of the crises of the ancient world* (1926); Arthur Weigall, *The Life and Times of Ikhnaton, Pharaoh of Egypt* (rev. ed., 1923).

THE EGYPTIAN EMPIRE, c. 1450 B.C. AND NEIGHBORING PEOPLES c. 1450-1200 B.C.



Ikhnaton's work was finally undone by those elements in the army which, because they disliked the turn of foreign affairs, rose in revolt; their leader, Horemheb (*ca.* 1350–1315 B.C.), deposed Tutenkhamon, a nonentity, the discovery of whose tomb made the front page, and took control of the situation. His chief task was to conduct the war against the Hittites, who were invading Syria. For a time he governed as the "commander of commanders," but finally he ascended the throne. Needless to say, the victory of the army became also the victory of the priests of Amon, although at first, it may be believed, there was an attempt to keep Ikhnaton's religion. Priests of "good families" were again appointed, and "educated men" were put in the official positions. At the same time severe measures were taken against soldiers who robbed farmers. The

temples of Amon, Ptah, Osiris, and the other gods were opened, and their priests recovered both dignities and properties.

The Egyptian empire survived the crisis, but the great days were over. Under the Nineteenth Dynasty (*ca.* 1350–1200 B.C.), of whom Rameses II (*ca.* 1292–1225 B.C.) was the greatest pharaoh, the Hittite advance in Syria was halted, ancient tradition was revived, and the priests of Amon grew constantly in wealth and power. Finally, the high priest of Amon succeeded to the throne at Thebes, and his successors, through intermarriages with the Twenty-first Dynasty (1090–945 B.C.), which arose in the Delta, probably ruled all Egypt from time to time. The re-establishment of a native regime was not permanent, however, for with the Twenty-fifth Dynasty (712–663 B.C.) an Ethiopian house succeeded to the throne. Under Psammetichus (*ca.* 663–610 B.C.), who came to power after Assyrian invaders had driven the Ethiopians from Egypt, a growing commerce brought new wealth, the Delta became the center of prosperity, and many foreign cultural materials found their way into Egyptian life. In religion and art, however, tradition survived; indeed, under the leadership of the priests, it was cultivated in every form that nurtured the piety of the masses. The religiosity of Egyptian culture, it is important to emphasize, successfully resisted every disintegrating force of the imperial age.

The Minoan Sea Empire, 1600–1400 B.C.

Shortly before the middle of the second millennium B.C. the Minoans entered upon their final period of prosperity and expansion.[1] Their traders swarmed through the Cyclades, around the Aegean coasts, and as far west as Sicily and southern Italy, and their colonists penetrated the European mainland, particularly the fertile plains of Argolis and Messene in the Peloponnesus. Now for the first time the vine and the olive were cultivated in Europe, shrines to the Earth Mother were built, and palaces with frescoes on the walls were erected. From the Peloponnesus the Minoan culture spread to Boeotia and Thessaly, and under its influence the first European cities rose—Mycenae, Tiryns, and Orchomenos. But, unlike the Cretan cities, they were walled fortresses, and their Indo-European rulers were warriors. Bronze working and the potter's wheel reached Thessaly about the middle of the second millennium B.C.

[1] See Gustave Glotz, *The Aegean Civilization* (1925); A. R. Burn, *Minoans, Philistines, and Greeks B.C.* 1400–900 (1930).

Peaceful penetration, rather than conquest, spread Minoan culture around the Aegean Basin, but the power of Cnossos, whose king lived in a new palace, rested on a formidable navy. About 1500 B.C. this king bore the name Minos, from which, as previously noted, the name Minoan is derived. He rose to power by destroying the princes of Phaistos and other Minoan cities; also he threw down their palaces. Although tribute was levied on conquered cities, the king added to his revenues by maintaining large workshops for the production of pottery, textiles, and oil, which were exported not only to the European mainland but also to Asia Minor, Syria, and Egypt. The monuments of Thutmose III, which show the Minoans bearing tribute to the pharaoh, probably merely memorialized the trade that throve between the two empires. There is no evidence of their having clashed.

But suddenly about 1400 B.C. disaster fell on Cnossos; the great palace was destroyed, and the Minoan empire collapsed. The authors of this disaster were, it is altogether likely, the warriors of the new cities on the European mainland.

The Hittite Empire, 1400–1200 B.C.

After the first successes on the Anatolian Highland and the inroads into Babylonia and Syria, the Hittites fell under the dominion of the Hurri, who held them in vassalage for about two centuries.[1]

The political organization of the Hittite kingdom—a military feudalism—indicates that the Hittites were a conquering minority ruling a native peasant-village population. Their military power rested on the horse-drawn chariot and well-made bronze weapons. A priesthood shared with the nobility the overlordship of the peasant villagers. The kings, who were only kings among equals, were probably elected; at any rate the succession was frequently disturbed by assassination and intrigue. The wealth of the kingdom was based on agriculture, husbandry, crafts, and metalworking trades, organized along Mesopotamian lines. The Hittites brought the horse and, perhaps, the vine to central Anatolia.

The great opportunity of the Hittites came with the weakening of the Egyptian empire during Ikhnaton's reign. Under Shubbiluliuma (*ca.* 1385–1345 B.C.) they drove the Mitanni from the upper Euphrates valley, pacified central Asia Minor, and organized

[1] Albrecht Götze, *Hethiter, Churriter, und Assyrer* (1936), pp. 43–78; also H. H. von der Osten, *The Alishar Hüyük, Seasons of* 1930–32, (Oriental Institute Publications, No. 30, 1937), Part III, Chap. VIII; John Garstang, *The Hittite Empire* (1929).

a chain of vassal states in Syria and northern Mesopotamia. At this time, also, they probably extended their influence westward to the Aegean coast. On the thrones of the vassal states, Shubbiluliuma placed his sons, but he let slip an opportunity of winning the Egyptian throne by delaying too long his reply to a request by Ikhnaton's widow for a prince who would become her husband.

Two rivals constantly menaced Hittite power. On the south the revived Egyptian empire fought to recover Syria, and on the east Assyria threatened the lands that had been taken from the Mitanni. In order to meet the Assyrian menace the Hittites made peace with the Egyptians in 1271 B.C. and entered into the first of those treaties known to history which bound the parties in an eternal fraternal bond. Each nation agreed to respect the territories of the other, to come to the defense of the other if it was attacked by a third power, and to help the other put down internal rebellion. A further offset to Assyria was attempted by inciting Babylonia to attack in the rear.

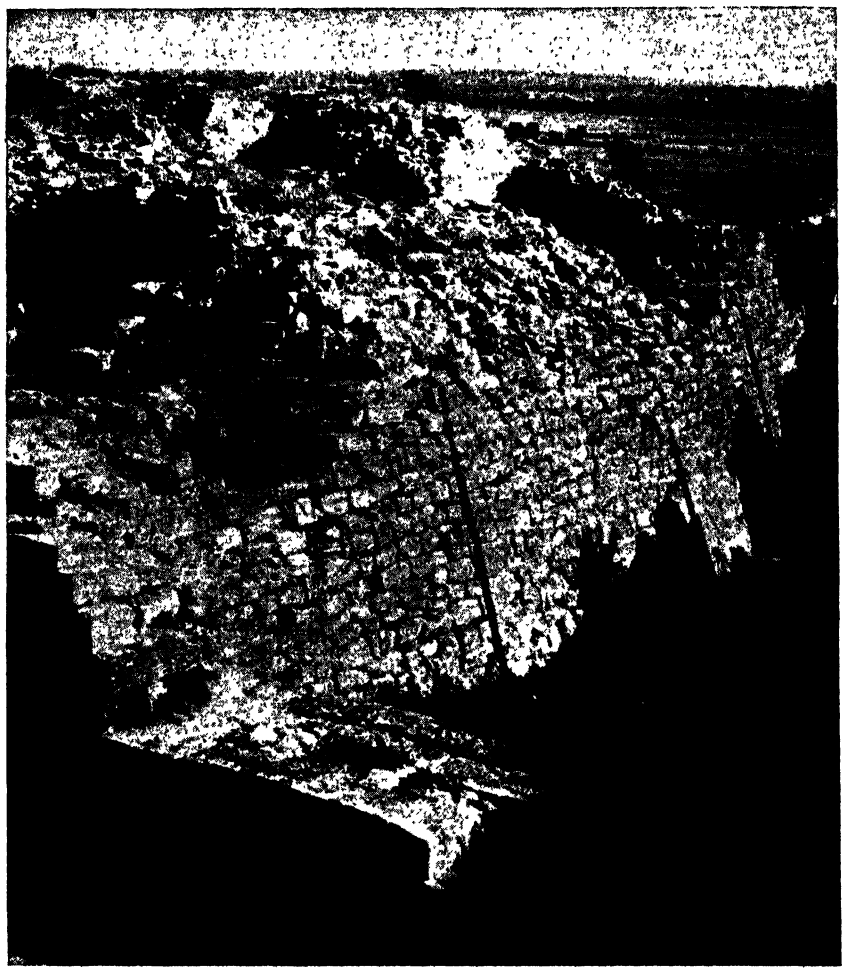
After the middle of the thirteenth century B.C. Hittite power weakened under the pressure of invaders from the northwest and at the end of the century disappeared entirely, except for small kingdoms that held northern Syria. Nothing is known about the final struggle of the Hittites in Asia Minor.

New Invaders from the North and the South, 1600–1000 B.C.

About the middle of the second millennium B.C. new Indo-European peoples began to stir beyond the Minoan sea empire and the Hittite kingdom, and new Semitic tribes pushed into the Fertile Crescent.[1]

As early, perhaps, as the opening of the second millennium B.C. small groups of Indo-Europeans penetrated the Aegean Basin, where they ultimately settled among the native peasants, learned navigation, and borrowed many Minoan culture traits. The Achaians, as they are known, were, it seems, the builders of the cities of Tiryns, Mycenae, and Orchomenos and the heirs of the Minoan sea empire, which, as previously noted, they overthrew about 1400 B.C. In the Mycenaean age (1400–1200 B.C.) they dominated the coasts along the Aegean Sea, warring with one another and fighting all comers. Chief among their opponents was Troy, which occupied the ancient site that dominated the Helles-

[1] See A. R. Burn, *Minoans, Philistines, and Greeks B.C.* 1400–900 (1930); A. T. Olmstead, *A History of Palestine and Syria to the Macedonian Conquest* (1931).



By BURTON HOLMES. *From Ewing Galloway*

THE WALLS OF TROY

Archaeologists have identified nine cities at the mound of Hissarlik between the neolithic age and Greco-Roman times. The second city, which possessed massive walls, was a center of commercial and cultural penetration of Europe; its period was 2500–2300 B.C. The sixth city, a great Mycenaean fortress, dominated the northern Aegean lands from 1900 B.C. to 1350 B.C. Homer's Troy is now identified with its sucessor, the seventh city; very small parts of its walls remain.

pont. The Trojans were a branch of the Phrygian people who penetrated Asia Minor when the Hittite power began to weaken; apparently they occupied the site near the entrance of the Hellespont about 1500 B.C. Their city was surrounded by walls 20 feet high and 16 feet thick and crowned with a rampart 15 feet high. Shortly after 1200 B.C. the Achaians, under the leadership of Mycenae, which suffered from Trojan competition in the pottery trade, united to attack this stronghold. Whether they triumphed by trickery, as narrated by Homer, or carried the city by storm is unknown; at any rate they captured it, reduced its walls, and burned its citadel. The date now usually assigned for the Trojan War is 1194–1184 B.C.

Immediately after 1400 B.C. raiders whom the Egyptians knew as the Shardana, or "people of the sea," reached the Nile Delta, where some of them found employment as mercenaries in the pharaoh's service. Probably these raiders were relatives of the Achaians or a people displaced by them. A century later their attacks, impelled by drought—for the invaders cried, "There is corn in Egypt"—seriously menaced the old empires. The last Hittite king came to the throne about 1210 B.C., and Egypt was forced to fight not only for imperial dominion but also for existence. Rameses III (*ca.* 1198–1167 B.C.) destroyed the raiders in a great naval battle, but the empire was doomed, for soon new peoples swarmed into its Asiatic area.

The advance of the Indo-Europeans released the native peoples of Asia Minor from the rule of the Minoans and Hittites. The Lydians occupied the southwestern corner, and the Carians and Lycians settled along its southern coast. The Philistines, having failed to establish themselves in Egypt, won control of the Syrian coastal plain and for a time, about 1125 B.C., dominated its cities. They seem to have made themselves a military aristocracy which, living in fortified towns, lorded it over a native peasantry. Their culture was undoubtedly derived from Minoan sources, but their original home, it is now believed, was along the southern coast of Asia Minor.[1]

By this time three streams of new invaders were finding their way south from the Indo-European homelands. The Dorian Greeks pushed from the Danube valley into Thessaly, the Peloponnesus, and Crete. The Phrygians, moving along the coasts of the Black Sea, displaced the Hittites on the Anatolian Highland. And the Medes and Persians filtered into western Iran.

[1] R. A. S. Macalister, *The Philistines: Their history and civilization* (1914).

The movements of the southern grassland peoples added to the disorders created by the northerners. About the middle of the second millennium B.C. Aramaean tribes, Bedouins like their predecessors from the Arabian Desert, appeared on the middle Euphrates, and a century later began to attack towns in Syria and Palestine. By 1350 B.C. they had occupied almost the entire area from Babylon to Carchemish and westward to Palestine. In the twelfth century B.C. they penetrated parts of Mesopotamia and established several small kingdoms in Syria. Chief among them were Kadesh, Damascus, and Aleppo.

With the Aramaeans came the Habiru, known later as the Hebrews,[1] and the Phoenicians.

The Phoenicians seem to have arrived on the Syrian coast from southern Arabia shortly after the expulsion of the Hyksos from Egypt; there, under Egyptian tutelage, they acquired the industrial arts and trading habits for which they became famous. Indeed, their prosperity was based largely on the opportunity the Egyptian empire gave for an extended commerce. In this connection it should be noted that the Syrian coast was the point of convergence of sea routes to Egypt, Cyprus, and the Aegean Basin, quite as the Syrian hinterland was the center to which came the great inland routes from Asia Minor and Mesopotamia. The fall of the Minoan sea empire opened the Aegean and Mediterranean seas to their enterprise. When the Egyptian empire disintegrated, they were the first people to win freedom, and, except for brief periods of Philistine and Assyrian rule, they were able to maintain it until the Persian advance in the sixth century B.C. After 1000 B.C. their chief cities—Tyre, Sidon, and Byblos—were rich with a varied commerce. They exported timber from the forests of Lebanon and numerous industrial products—glass, enameled vases, jewelry, metal pieces, purple dye, needlework, linen, and woolen cloth. In return they bought raw materials, metals, and slaves. They seem to have organized the first widespread trade in slaves. Their towns, well fortified against attacks from land and protected from the sea by an unsurpassed navy, were ruled by mercantile oligarchies, whose members sought profit at the cost of every other objective. Under Assyrian pressure they sent colonists into the western Mediterranean area.[2]

Connected with these movements was a general expansion of Mediterranean commerce, stimulated partly by a quest for metals, especially iron, silver, and gold, and partly by urban industry's

[1] See p. 331.
[2] See p. 494.

need for a market in which goods were sold for a price computed in metals. Because the development of ironworking increased the productivity of many occupations and the invention of coinage gave a higher mobility to capital, both industrial and commercial activities were intensified. After 1000 B.C., when these new economic factors became fully operative, Mediterranean commerce touched—at its outer limits—Britain in the west and India in the east, the Rhine and Vistula valleys in the north and the Sahara Desert, the second Nile cataract, and southern Arabia in the south. Spain and southern Arabia became important outposts of Mediterranean commerce, and Phoenicia and Greece leading competitors for its control.[1]

The Assyrian Empire, 1400–600 B.C.

The upper Tigris valley was a seat of peasant-village culture long before the first cities appeared in Sumer, and an urban culture developed there late in the third millennium B.C.[2] Thus appeared the "land of Ashur," a strip of country on the left bank of the middle Tigris, to which the Greeks, much later, gave the name "Assyria." Besides the ancient native peasants, the chief element in the population were hardy Semitic farmers, who were in all probability closely related to the Amorites of Babylonia. Under Babylonian influence Assyria became an industrial and commercial country. As previously noted, Assyrian merchants were the middlemen between the rising towns of Asia Minor and the Armenian Highland and the Babylonian cities even before 2000 B.C., and their chief city, Ashur, astride the routes that led to Iran and at the eastern terminus of the road across Mesopotamia to Syria, was advantageously located for both trade and war. Throughout the history of Assyria the control of the route across northern Mesopotamia to Asia Minor, Assyria, and Egypt was an important factor in its economic and political life.

Sometime in the middle of the second millennium B.C. Assyria became a well-organized kingdom and began to play a part in the politics of both Mesopotamia and the northern hill countries. The advance of the Hurri choked Assyrian expansion for about two centuries, and the Aramaean inroads disturbed its economic life.

[1] See Fritz M. Heichelheim, *Wirtschaftsgeschichte des Altertums vom Paläolithikum bis zur Völkerwanderung Germanen, Slaven, und Araber* (2 vols., 1938), Vol. I, pp. 239 *ff.*

[2] On the history of Assyria see Sidney Smith, *Early History of Assyria to* 1000 *B.C.* (1928); A. T. Olmstead, *History of Assyria* (1923); and Wolfram von Soden, *Der Aufstieg des Assyrerreichs als Geschichtliches Problem* (1937).



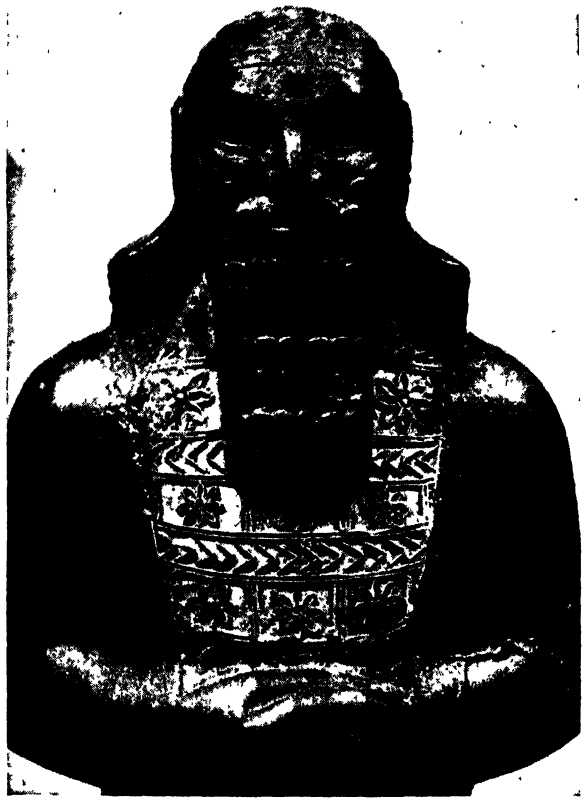
Underwood and Underwood

ASHUR

From this lair the "Assyrian wolf" first began to prowl. Looking northeast toward the Tigris River are to be seen, in order, the ruins of the temple, of the government buildings, and of the citadel.

With the overthrow of the Mitannian kings Assyria revived, and the defeat of the Hittites opened the way for expansion. Tiglath-Pileser I (*ca.* 1116–1093 B.C.) captured Babylon and raided eastern Asia Minor as far north as the Black Sea. But the full flower of Assyrian imperialism did not bloom until the disorders accompanying the new invasions had quieted down.

In the ninth century B.C. Ashurnasirpal II (*ca.* 883–859 B.C.) consolidated a control over the upper Tigris piedmont and, after an overhauling of the army, struck eastward, northward, and westward; his seizure of Carchemish brought him into Syria, where rival conquerors had met and clashed for a thousand years. From this vantage point his successors struck down one after another the surrounding peoples. Sargon II (*ca.* 722–705 B.C.) ruled over an

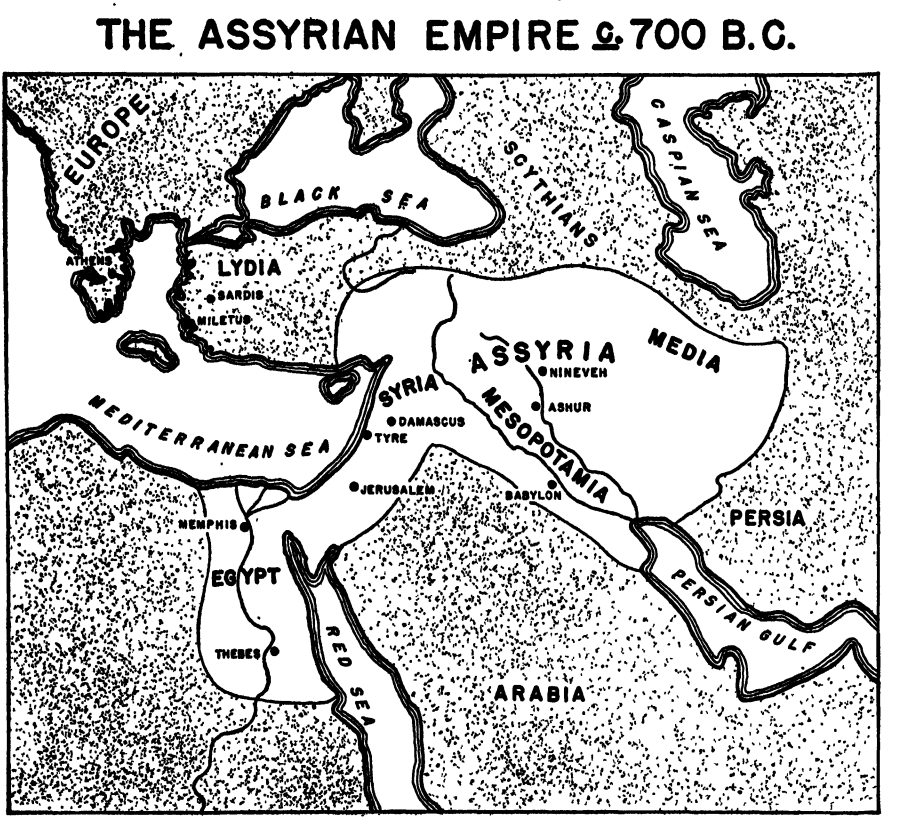


By the courtesy of the Museum of Fine Arts, Boston

ASHURNASIRPAL II

In this photograph the creator of the Assyrian empire is shown as the high priest, the earthly vice-regent of the god Ashur. His hands are folded in a ritual position as old as Sumerian culture.

empire stretching from the Nile and Halys rivers in the west to the Persian Gulf and Lake Urmia in the east, and outside these boundaries there were a few minor tributary kingdoms. This vast dominion rested upon the first thoroughly organized military power in the history of the world, and the spirit of its masters has lived through subsequent centuries as the symbol of naked physical violence. Certainly men who saw high mountains as iron daggers pushed into the sky could easily adopt violence as a policy of state-



craft. Their emperors boasted, "Over their fields I poured misery, the waters of their ditches, I dyed with the blood of their warriors, like wool," and strengthened their power over the subjected peoples by deporting them into various parts of the empire. This considered policy, which reached its height under Tiglath-Pileser III (*ca.* 745–727 B.C.), was a highly significant factor in the uprooting of peoples, the disorganization of cultural traditions, and the mixing of cultural materials which, of course, had gone on throughout the age of imperialism. In the main only the pick of the conquered peoples were transported.

But terror bred only opposition. The conquered peoples continually conspired and intrigued, formed numerous coalitions, and broke into revolt upon any occasion that seemed likely to offer success. And external enemies were always ready to offer aid to rebels. Tribesmen from the southern deserts constantly harried the peasantry of the upper Euphrates valley and Syria. Scythians and

Cimmerians—new Indo-European peoples—surged along the northern and northwestern frontiers. The Haldians around Lake Van were a constant menace, while on the east and south the Medes watched with a covetous eye for an opening that would lead from their mountain homes to the Tigris valley.

To meet these dangers the Assyrian emperors spent their lives campaigning; that they found energy to make their capital, Nineveh, more splendid than any preceding Asiatic city is testimony both to their vigor and to their ability. Tiglath-Pileser III conquered Babylonia and Syria; his successor, Shalmaneser (*ca.* 727–722 B.C.), forced Egypt to submit. But there was no peace. In 722 B.C. Sargon II destroyed the city of Samaria and laid waste to the lands of the northern Hebrews. In 689 B.C. Sennacherib (*ca.* 705–681 B.C.) shocked the world by demolishing Babylon. It is only fair to note, however, that his successor, Essarhaddon (*ca.* 681–668 B.C.), undertook the restoration of the ancient city.

The ebb of Assyrian might began in 660 B.C., when the Egyptians, with the aid of mercenaries from Asia Minor, recovered independence. Ashurbanipal (*ca.* 668–625 B.C.), the *grand monarque* of Assyria, fought bitterly to hold power, but the risings in Egypt, Phoenicia, Babylonia, Elam, and Media ultimately exhausted Assyrian strength. The costly struggle against Elam opened the frontiers to foreign enemies. On the east the Medes advanced, on the west the Cimmerians, on the north the Scythians, and on the south the Chaldeans, or neo-Babylonians. Although they were defeated in their first attempts to reach Nineveh, their second effort was successful. In 612 B.C. the Medes and their allies, the Chaldeans, stormed the Assyrian capital; three years later the Chaldeans and Scythians wiped out the last Assyrian army and slaughtered all of the members of the ruling house. The "Assyrian wolf" raged no more.

The Chaldean, or Neo-Babylonian, Empire, Early Sixth Century B.C.

After the fall of Nineveh lower Mesopotamia, known as Chaldea, recovered independence, and under Nebuchadnezzar II (*ca.* 604–562 B.C.) Babylon, rebuilt with greater splendor than ever, blazed in an unsurpassed glory. The new Babylon was the flower of the cosmopolitanism which the imperial age had nurtured throughout the Fertile Crescent and bordering lands, and its wealth rested on a commerce reaching, at least indirectly, to the limits of the then known world:

Like a gigantic octupus, Babylon stretched her tentacles over the whole earth. On the north road, an endless string of her caravans crawled towards Ecbatana . . . ; from Ecbatana they went eastward through the Caspian Gates, until they came to Herat; there they parted, some making for Bactria and others or India by Kabul; here again they divided, some going to the heart of the land of riches by Peucela and Taxila, to Patna on the Ganges and to Bactriana and the Jaxartes. Other caravans went westward towards the Mediterranean, first up the Euphrates to Anthemusia . . . and thence westwards by numbers of smaller tracks which spread out fanwise to Phoenicia, Judah, Moab, and down to Pelusium in Egypt, flooding those countries with Babylonian goods. A last route, going further up the river, led the horses and camels which carried the wealth of India, now all pouring into Babylon, to Syria and through Cilicia and Phrygia to Sardis and those strange Greeks.[1]

But the future belonged not to Babylon; rather it belonged to those Indo-European peoples who, quickly overthrowing the city's rule and finally destroying its structures, never forgot its glories. In the name of Babylon endured the organization and ideal of life to which the earliest urban cultures had given birth.

THE CULTURAL ACHIEVEMENTS OF THE FIRST AGE OF IMPERIALISM

The primary factor in the development of cultures during the first age of imperialism was the mingling of peoples on a stage far larger than in any preceding time. To the peaceful intercourse of a constantly widening commerce were added the incessant movements of peoples and the clashes of armies. The transportation of conquered populations and the gathering of slaves from almost every land threw cultural materials together at the base of society quite as effectively as did the development of diplomacy and international marriages at the apex. Social interaction in the presence of culture traits loosened from their traditional milieu was favorable both to their assimilation into new patterns and to the making of innovations. Thus the first age of imperialism brought the organization of culture patterns in areas much greater in size than those of the original urban cultures, as well as innovations, which, while they did not disrupt the ancient traditions, gave urban culture as a whole a more secure base.

The Diffusion of Urban Culture after 2000 B.C.

At the opening of the third millennium B.C. urban cultures existed in lower Mesopotamia, the Nile valley, and Crete. There

[1] G. R. Tabouis, *Nebuchadnezzar* (1931), pp. 229–230. The McGraw-Hill Book Company, Inc., New York.

were towns in upper Mesopotamia and Syria. Across Anatolia and around the Aegean Basin lived peasant villagers, except for the townsmen at the site of the future Troy. A millennium later the lands bounded on the north by the Black Sea and the Caucasus Mountains, on the west by the Aegean and Mediterranean seas, on the south by the Red Sea, the Arabian Desert, and the Persian Gulf, and on the east by the Iranian Plateau formed a vast region which, with Egypt attached by political and economic ties, constituted a single culture area—dotted and dominated by cities. In the Amarna letters about 150 towns and cities were mentioned, and there were urban communities beyond the range of interest of the authors of these letters, especially in the Aegean Basin. Notable among these cities were Ugarit in Syria and Megiddo, Lachish, and Jericho in Canaan. Ugarit was the entrepôt of a flourishing trade between Mesopotamia and the eastern Mediterranean and Aegean lands. Megiddo and Lachish dominated the route across Canaan between Egypt and Syria. Jericho was the economic center of the Jordan valley.

1. *The Rise of New Urban Cultures.* As the new peoples established themselves in geographical areas about the Fertile Crescent, they developed new urban cultures. In every instance, it can be said, however, these cultures owed more to their ancient predecessors than they did to the genius of their makers.

In northern Mesopotamia and the adjacent hill countries the Hurri assimilated materials from Babylonia into the ancient peasant-village culture, but they lacked the literate learning and industrial techniques necessary for the development of a rich culture. Their religion centered around Teshkub, a weather god, but included a veritable chaos of gods and daimons, many of which were mixed animals and human figures unlike those of the lower valley. It is important to note in this connection that they gave a finer artistic rendering to the animal form than had either the Sumerians or the Babylonians. The carriers of Hurrian culture were knights, whose outlook was more military than economic or religious; apparently the temple priests, who played the dominant role in Sumerian and Babylonian culture, had a minor influence among the Hurri.

Hittite culture was a "border phenomenon"; that is to say, it was an amalgamation of materials from scattered urban sources with a mixed primitive heritage. The documents from Boghaz Keui testify to this amalgamation in that they reveal the use of the cuneiform script to write Hittite (which contains words from several different languages), the adoption of Babylonian grammatical forms,

and the making of dictionaries in Sumerian, Akkadian, and Hittite. Under the influence of Egypt and Crete a second script, used chiefly on monuments, was developed. The chief known scientific work in the Hittite language is a copy of a Mitannian treatise on horse breeding. Hittite literature seems to have consisted almost entirely of materials borrowed from Babylonia; through it an acquaintance with the ancient Sumerian epics was spread about Asia Minor. Hittite law, which was codified in the fourteenth century B.C., reveals a complex economic order having the forms of property and varieties of business relations long known in Mesopotamia, but it is not clear how greatly its development was influenced by Assyrian and Babylonian precedents. The most distinctive achievement of Hittite culture was the prologues of their treaties, which, in fact, are the first historical narratives. The Hittite religion was a mixture of Indo-European, Hurrian, and Babylonian elements. Besides the god Teshkub, Ishtar had a wide popularity. And daimons were numerous and powerful. Hittite culture was carried by a small group of knights and priests that closely surrounded the king; when the kingdom fell, this group was destroyed or dispersed, and its culture quickly disappeared.[1]

Assyrian culture rested on the ancient peasant-village culture of the upper Tigris valley, but its economic, political, and religious institutions were derived largely from Sumer and Babylonia, while its military outlook, and the distinctive elements of its art, namely animal figures in low relief, were a heritage from the Hurri. The literate learning of the Assyrians was based on Babylonian achievements. They borrowed the Akkadian script for the writing of Assyrian. They copied the ancient literary works, especially the epics, to which they gave new renderings, and elaborated the lists of natural objects and materials which were the chief forms of Babylonian scientific learning. They added considerably to the practical knowledge of chemistry, notably as regards the use of drugs, the preparation of ores, and the making of glass. They also accumulated a great body of astronomical data based on the direct observation of the heavens; for them, however, this observation was completely astrological in purpose. From 900 to 600 B.C. Assyria was the intellectual center of the ancient-oriental world. Under Ashurbanipal, the last great Assyrian king, a great library was developed at Nineveh as a storehouse of learning; in the middle of the nineteenth Christian century when its site was excavated,

[1] On the Hurrian and Hittite culture see Georges Contenau, *La Civilisation des Hittites et des Mitanniens* (1934); also Louis Delaporte, *Les Hittites* (1936).

over ten thousand tablets and prisms were found. Under the influence, perhaps, of the Hittite prologues of treaties the Assyrians developed a yearly chronicle and a narrative of royal activities. Together the Hittites and Assyrians laid the foundations of history as a chronological narrative, chiefly, it should be noted, of military and political events. Except to raise the god, Ashur, to the headship of the pantheon, the Assyrians hardly modified the ancient Mesopotamian cults. The main achievements of the Assyrians were in military and political organization, which, as will be noted shortly,[1] gave an increased efficiency to imperial rule. Archaeological data indicate that the gap between the peasantry and the residents of the Assyrian cities was very wide, a fact which explains the quick disintegration of Assyrian culture once these cities were destroyed.[2]

Syria, Phoenicia, and Palestine faced all three of the original ancient-oriental culture areas, namely, Mesopotamia, Crete, and Egypt, and from each of them, at one time or another, they received many cultural materials. Available evidence now indicates that these lands were the sites of peasant-village cultures as early as either the Nile or Tigris-Euphrates valleys, if not earlier, and the centers of city life shortly after the beginning of the third millennium B.C. Both Egyptian and Mesopotamian traders and military expeditions touched them in the middle of the third millennium B.C., and after that time they were under influences from each center of ancient-oriental urban culture. Toward the close of the third millennium B.C. Cyprus, where Minoan influence was strong, rose to prominence as a source of copper and silver. The great economic product of Syria was the timber—the cedar of Lebanon—which both Egypt and Babylonia lacked, but, as commerce developed, its importance as a center to which the routes from the neighboring urban culture areas ran steadily increased. These circumstances combined to develop in these lands a culture which was never unified, although its role in the shaping of the broad cultural patterns which survived from the first imperial age into later times was greater than those of the other lands just noted:

> Syria and Palestine formed the geographical centre of the greater Egypto-Mesopotamian civilization, within whose domain there was always active movement of cultural elements, tending to create an almost imperceptible synthesis. It is, therefore, not surprising to find that, as soon as we go below superficial differences of culture, we find far-reaching

[1] See pp. 295, 310, 312.

[2] On Assyrian culture see A. T. Olmstead, *History of Assyria* (1923); Bruno Meissner, *Babylonien und Assyrien* (2 vols., 1920–1925); Georges Contenau, *La Civilisation d'Assur et de Babylon* (1937).

similarities in essentials. Arts and crafts, modes of thought and ways of expressing them wandered from land to land, from people to people until they had permeated the whole mass.[1]

Artifacts and documents discovered at Mari, Ugarit, Megiddo, Lachish, and Jericho show that Syria and Canaan had developed an urban culture quite like that of Mesopotamia early in the second millennium B.C. The documents found at Ugarit, known from the modern name of the site as the Ras Shamra tablets, are dated in the seventeenth century B.C.[2] They give an account of the rivalry of the two gods, El and Baal, who later in Hebrew times stand in the background of the prevailing religious beliefs of Syria, Phoenicia, and Palestine. The pantheon described in this account had more than fifty gods and goddesses, all directly interested in human affairs; there was similarity between it and the Hittite pantheon. One god, who acted as a judge, took special care of widows and orphans. The ancient peasant-village concern with death and resurrection had a prominent place in the popular faith. According to the "Legend of Danel," Danel prayed to El for a son and his prayer was granted. The son, Aqhat, became god of the summer crops and received the fruits of the fields from the people. But the right to receive these fruits was claimed by the goddess Anat for her unborn heir. When she attacked Aqhat, he relinquished his claim, but her henchmen murdered him in spite of his generosity. In bitter grief Danel appealed to El, who promised the resurrection of Aqhat. When all the people mourned, Aqhat returned to earth and received a universal tribute. Associated with this myth were rituals like those connected with similar legends among other peoples of the ancient-oriental lands.

In the Amarna letters Syria and Palestine appear as lands of small princedoms centered about fortified cities. The Phoenician cities—Gebal, Tyre, Sidon, and Byblos—were important commercial and industrial centers where every aspect of ancient urban culture, except perhaps monarchal rule, found a place, and even the cities of early Palestine were centers of literate learning. One of the cities had a name which meant "Book Town."

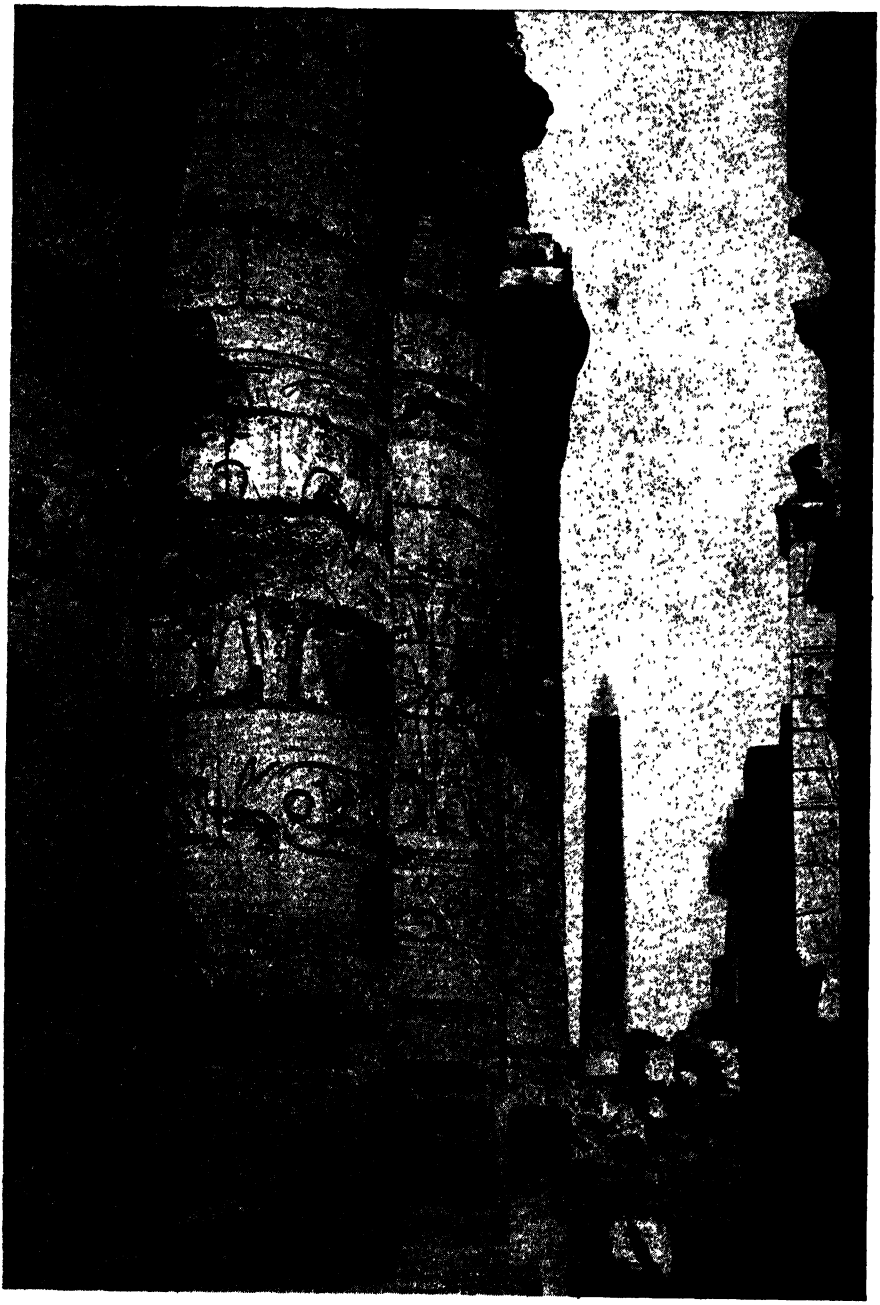
[1] Elihu Grant, ed., *The Haverford Symposium on Archaeology and the Bible* (1938), p. 2. On the culture of Palestine before the coming of the Hebrews see Alfred Bertholet, *A History of Hebrew Civilization* (1926), pp. 37–114.

[2] See J. W. Jack, *The Ras Shamra Tablets: Their bearing on the Old Testament* (1935); Zellig S. Harris, "Ras Shamra: Canaanite Civilization and Language," *Annual Report of the Smithsonian Institution*, 1937, pp. 479–501; T. H. Caster, "Ras Shamra, 1929–1939," *Antiquity*, Vol. 13 (1939), pp. 304–319; William C. Graham, "Recent Light on the Cultural Origins of the Hebrews," *The Journal of Religion*, Vol. 14 (1934), pp. 306–329.

Urban culture in Syria, Phoenicia, and Palestine evolved generally under Babylonian influences, but the merchants and kings owed a great debt to Egypt, under whose tutelage they had risen to economic and political prominence. The geographical factors which promoted the growth of many princedoms and independent cities gave the culture of these lands a distinctive element: if not a love of liberty, at least a dislike of centralized authority. Strengthening this tendency was the experience of the people throughout the imperial age which made them, as each new conqueror came, recurrent rebels. On the one hand, after the manner of the Phoenicians, they learned to look beyond political power to economic advantage; on the other hand, as did the Hebrews, who fell heir to the culture of Palestine, they faced the problem of justice regardless of political rule. Thus linked to the syncretic tendency in the culture of these lands were forces likely to nurture innovations.

2. *The Growing Unity of Urban Cultures in the Ancient-Oriental Lands.* More important, however, than the rise of these new urban cultures, which as a matter of fact were the work of small conquering groups, was the organization of the life of the masses everywhere in more or less common patterns.

Innumerable examples of the diffusion that contributed to this development can be cited. The use of beer and wine spread everywhere. Square-stone masonry reached the Aegean Basin, Asia Minor, and Mesopotamia. The "Epic of Gilgamesh" became known throughout Asia Minor. A flood of foreign cultural materials poured into Egypt. The Syrian Mother Goddess won new adherents among Egyptian women. Thutmose III had representations of foreign plants made on the walls of Egyptian temples. Asiatic words for "merchant," "horse," and "chariot" were adopted. The Phoenician handicrafts were imitated. And the luxurious life of the court was enriched by foreign goods and furniture. More important, however, than mere diffusion was the assimilation of cultural materials in cosmopolitan patterns. A unified technology in agriculture and the basic crafts grew up; business practices, largely Babylonian in form, were widely used; the cuneiform script was adopted almost everywhere for diplomatic correspondence; weights and measures, Babylonian in origin, tended to become uniform; the codification of law was general; and various bodies of learning and lore were widely disseminated. In the fourteenth century B.C. for the first time physicians, magicians, and astrologers began to travel. And a common intellectual out-



HAMILTON M. WRIGHT

THE TEMPLE OF KARNAK

(For descriptive legend see opposite page)

look, which blended the all-pervading demonology with astrological beliefs and a vague concept of a single universal god, slowly took form.[1] Of special importance in this development of cosmopolitan culture patterns throughout the ancient urban culture areas was the slow rise of a Semitic language—Aramaic—as an international tongue, first for commercial purposes and later for intellectual discourse.

THE ELABORATION OF THE ANCIENT URBAN CULTURAL TRADITIONS.

Amidst these clashes of peoples the ancient urban cultural traditions persisted, and the great cults remained unchanged. But certain elements of the ancient cultures were elaborated. The chief developments of this character were (1) an improvement of cities, (2) an expansion of literate learning, (3) a growth of naturalism in the arts, and (4) a slight advance in science.

1. *The Improvement of Cities.* The first cities were confused agglomerations of habitations about a central shrine or, later, a palace, and so they remained until almost the end of ancient-oriental times. But little by little the elements of an improved urban design came into existence. The earliest arrangement of habitations in rectangular blocks was made in Egypt in the middle of the third millennium B.C. in the construction of workers' barracks, but it was not used in a city plan in ancient-oriental times. Toward the end of the third millennium B.C. the temple area, as in Ur, became a planned group of structures, walls, terraces, courts, and various kinds of buildings. In the course of the development of irrigation in both Mesopotamia and Egypt the use of canals and reservoirs to provide a continuous supply of water became common. An important departure in city planning was taken when a special street, usually broad and well paved, was built for processions, from a gate of the city to the temple area. Under the Egyptian empire such a street, 1¼ miles in length and lined with sphinxes, led to the temple of Karnak at Thebes.

[1] Sidney Smith, *Early History of Assyria to* 1000 *B.C.* (1928), p. 340: "The religions of the various peoples of Western Asia from about 1500–800 B.C. were in fact one and the same religion in various local or national forms. . . ." Chatto & Windus, London.

THE TEMPLE OF KARNAK

This great hypostyle hall built at Karnak in Middle Egypt by the Nineteenth Dynasty contained 134 columns. Those of the central avenue are 70 feet high. The hall was a monumental structure in a well planned temple area, surrounded partly by walls and partly by colonnades and approached by an avenue of sphinxes. The obelisk is an Egyptian form of commemorative pillar; its oldest examples survive from the Eleventh Dynasty.

Landscaping seems to have originated in Egypt. Hatshepsut, for example, took great pride in the garden of Amon, for which she imported tropical plants from Punt.

As city life was diffused, especially over Asia Minor and Syria, the need for defense impelled a planning of walls, streets, and fortifications and the construction of means of obtaining a continuous supply of water. This diffusion, it should be noted, was not accompanied by a spread of irrigation, except, perhaps, in Iran. Underground tunnels were built in Syria about the beginning of the first millennium B.C., and aqueducts were constructed in Assyria somewhat later.

Apparently the Assyrians first combined several of the foregoing elements in an urban design, for Nineveh was laid out with streets at right angles, parks, terraces, and lagoons, and water was brought to it from near-by hills by an aqueduct. After the eighth century B.C. the cities of the Mesopotamian plain conformed more or less to a common pattern, dominated by walls and gates, from at least one of which a wide street, intersected by cross streets, ran to temples and palaces located at various points within the cities. The houses, however, were not arranged on any pattern in the spaces between the few important streets.

The diffusion of square-stone masonry was perhaps the greatest factor making for improvement of urban building, for with it temples, houses, aqueducts, pavements, and tunnels became better constructed and, consequently, more enduring and serviceable.[1]

2. *The Expansion of Literate Learning.* Although the priests generally retained a monopoly of literate learning, there was a spread of the knowledge of writing to other groups. In the imperial Egyptian court scribes kept archives, and courtiers developed literary as well as artistic tastes. Officers in the new army, known as "scribe commanders," and foremen in the mines of Sinai kept records and made reports. By the opening of the first millennium B.C. merchants in almost every important city of Egypt and the Fertile Crescent found writing a necessary aid in business; although some of them may have employed scribes, many of them undoubtedly were able to read and write.

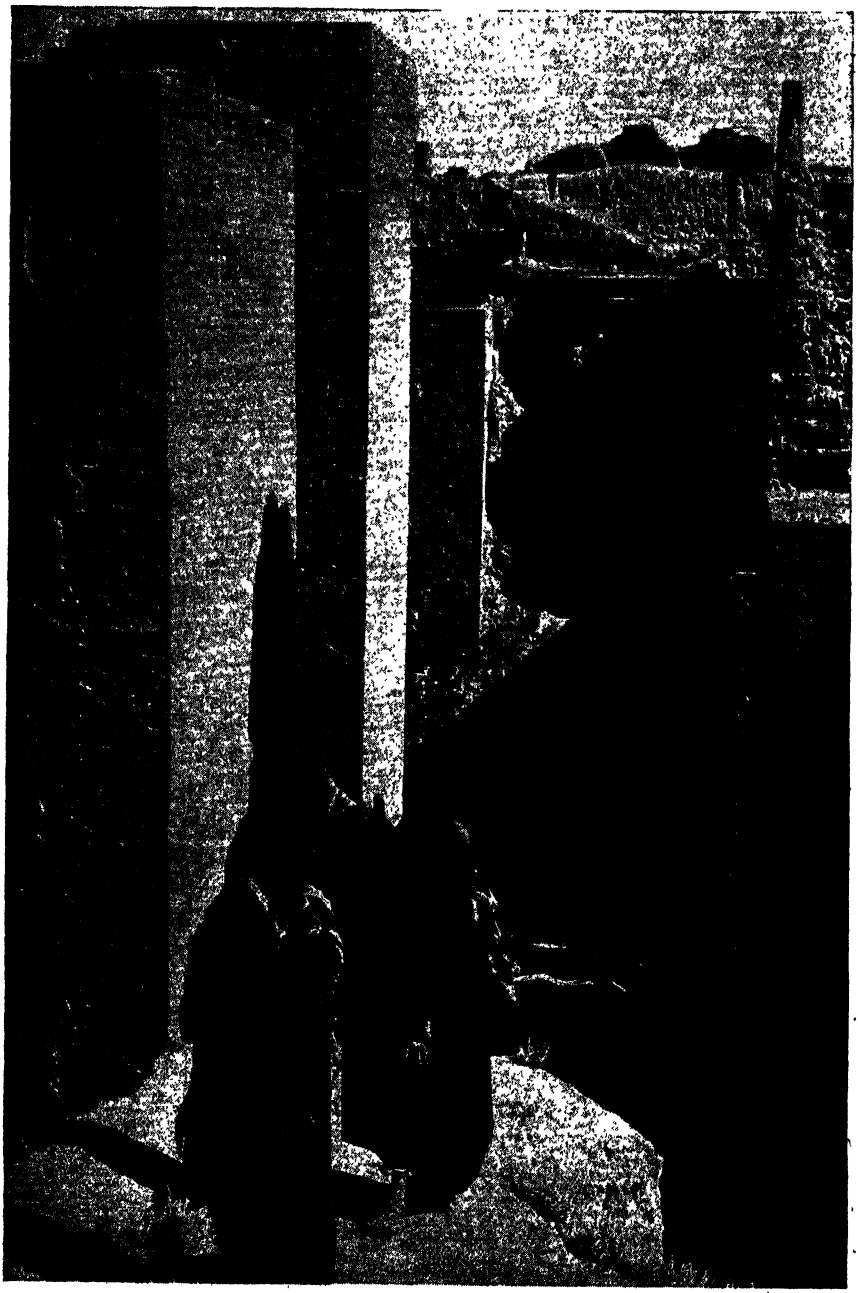
In the course of this diffusion of literacy the ancient writing systems underwent some changes. Shortly after the beginning of the second millennium B.C. the cuneiform symbols were simplified

[1] See F. J. Haverfield, *Ancient Town-planning* (1913); T. H. Hughes and E. A. G. Lamborn, *Town and Town-planning, Ancient & Modern* (1922).

by a reduction of the number of wedges. This script, which, as previously noted, became the medium of diplomatic correspondence, played about the same role during the second half of the second millennium B.C. that the French language played in Europe in modern times. In Egypt the hieratic script was used for almost all purposes except monumental inscriptions, and many colloquial expressions and Semitic words were introduced into the written language. At the end of the first age of imperialism the even more simplified demotic script came into general use. Before the middle of the second millennium B.C. the scribes of the Minoan court developed a new script, which seems to have been a response to the needs of the growing commerce.

Literature remained mainly religious in content and form—liturgies, prayers and spells, and hymns—but there were some innovations. In Egypt the romantic tale, the "love song," and perhaps the "playlet" became common literary forms. The tales treated of animals, doomed princes, Cinderella-like princesses, and faithless lovers in a way foreshadowing their treatment in both Western and Eastern literature. The love songs leave no doubt that the ways of man and maid are very old. The ancient custom of letter writing was more widely practiced than ever. The distinctive literary achievement of the Asiatic peoples, as previously noted, was the historical narrative; they seem to have produced no tales or love poems. Wisdom literature, in the style known in the Western world as proverbs, flourished during the second millennium B.C.

The compilation and preservation of ancient learning was the most important literary activity of the imperial age. Under the Egyptian empire many of the writings from the Pyramid Age and succeeding centuries were given the forms in which they are now known. In Mesopotamia the priests at Nippur maintained their collection of Sumerian and Babylonian texts. The materials in these texts are an index of both the range and the quality of literate learning in the imperial age. In Mesopotamia dictionaries, phrase books, lists of synonyms, and combined lists of Sumerian, Akkadian, Hittite, and even Egyptian words were in common use. The Assyrians, it seems, began to employ grammatical distinctions in making such lists. In Egypt magical and astrological materials grew like barnacles on the ancient compilations. After 1200 B.C. astrological speculation, allegory, dream interpretation, and omenology absorbed almost all intellectual energy in both Egypt and Asiatic lands; such were the typical interests of the learned



Underwood and Underwood

THE ISHTAR GATE, BABYLON

(For descriptive legend see opposite page)

groups of the time.[1] On the whole the learning of the imperial age repeated mechanically, without originality even in expression, the learning of the third millennium B.C.

3. *The Development of the Arts.* In general the traditional conventions and motifs of Egyptian, Babylonian, and Minoan art persisted in the imperial age, but new notes were struck, especially in architecture, sculpture, and painting.

The imperial age was truly a period of great buildings. The temples and palaces of Egypt, the palaces of Cnossos and Mycenae, the walls and palaces of Nineveh, and the palaces of Babylon surpassed in magnificence and ornateness all other ancient buildings, not excepting the pyramids. The chief architectural innovations of the age were the work of the Egyptians of the Eighteenth Dynasty, who introduced the hypostyle hall. This structure consisted of six rows of pillars, the two central rows being taller than the outside rows, covered by a flat roof. Light penetrated the interior through openings between the central columns. The columns were imitations of the stalks of the lotus and other plants. The colonnaded hall, consisting of a court enclosed by a double row of columns was a development from Pyramid Age temples. The warlike character of the age promoted a general development of fortifications, especially walls and towers. The use of walls led necessarily to the construction of gates, some of which, for example the "Lion Gate" at Mycenae, the "Gate of Winged Bulls" at Khorsabad, and the "Ishtar Gate" of glazed brick at Babylon, are among the greatest architectural remains of ancient-oriental urban cultures. The Assyrians adopted the Egyptian square-stone masonry but the Babylonians to the end of their days built only with brick. The first imperial age knew every architectural device of classical and medieval times except the spire, but its architects never succeeded in bringing these devices together in designs possessing proportion, balance, and unity.

The supreme achievements of the artists of the imperial age were in sculpture and painting.

[1] John A. Wilson, "The Present State of Egyptian Studies," in Elihu Grant, ed., *The Haverford Symposium on Archaeology and the Bible* (1938), p. 206.

THE ISHTAR GATE, BABYLON

In the reign of Nebuchadnezzar II (605–562 B.C.) Babylon was the center of the world, and this gate, on the northwest corner of the city, was its most magnificent entrance. On the right, just inside the gate, were the famous Hanging Gardens, and beyond them, also on the right, the Temple and the Ziggurat of Marduk.

The Egyptians revived portrait statuary, rendering features, form, and drapery more realistically than in the Pyramid Age. The artists of Ikhnaton's court so completely abandoned the ancient conventions that their representations of the king's features were actually ugly. Their treatment of his queen, Nefertiti, however, has seldom been excelled as an idealistic rendering of beautiful feminine features. Under the Nineteenth and Twentieth Dynasties the different racial types known to the Egyptians were clearly distinguished in tomb reliefs. Attempts to portray action were rather clumsy. The Asiatic peoples, who never developed the human figure as an art motif, were highly successful in rendering animal forms. Assyrian lions, horses, gazelles, and dogs have never been excelled as realistic representations in low relief. Egyptian and Assyrian battle scenes were alike remarkable in design and detailed execution.

The Egyptians and Minoans were the great painters of the age. Egyptian pictures of Nile scenes, hunting activities, wild animals and birds among plants were not only brilliant in color but also accurate in drawing and clear in conception. Line, mass, and color contributed to a total effect that was vividly alive. The most brilliant products of Minoan art were the great frescoes of the royal palaces. At Hagia Triada, a site close by Phaistos, richly colored paintings of a cat stalking a pheasant, a warrior leading his retainers, and dogs chasing a boar adorned the walls. The "Cupbearer" of Cnossos reveals a dignified but adept treatment of the human form. Quite as remarkable as these frescoes were the colorful representations of fish, octopuses, and other forms in paintings and on vases and pots. An advance in artistic technique brought the development of reliefs on both pottery and metal cups. Among these reliefs, a procession of harvesters going to the fields in a merry mood is justly famous. The figurines of the age, ivory and faience, were models of graceful form and action. The mood of Minoan art under the great sea empire seems to have been that the fullness and goodness of life are momentary things, like the "plucked flower," which, no matter how beautiful, must soon pass away.[1]

There is clear evidence of the interaction of Egyptian and Minoan art during the heights of the Egyptian and Minoan empires.

[1] On Minoan art in this period see Edith H. Hall, *The Decorative Arts in Crete in the Bronze Age* (1907).

For reproductions of Egyptian paintings see Nina M. Davies, *Ancient Egyptian Paintings Selected, Copied, and Described* (3 vols., 1936); this is a special publication of the Oriental Institute of the University of Chicago. See also Henri Frankfort, *The Mural Paintings of El-'Amarneh* (1929).

4. *The Advance of Science.* In many respects the tendencies of scientific developments of the early periods of ancient urban cultures were not carried forward in the imperial age.

No significant advances were made in timekeeping, mensuration, mathematics, or medicine. But a much more complete knowledge of the movement of heavenly bodies was acquired, and the sequence of equinoxes was clearly established. The Babylonians seem to have improved their calendar by fixing the number of days introduced to complete the year; they also invented one of the first scientific instruments, the gnomon, a rod set on a horizontal surface to show the position of the sun by its shadow. The Assyrians maintained a system of observatories to record the movements of the heavenly bodies. The Egyptians borrowed the Babylonian week. At the very end of the imperial age, and later under Persian and Macedonian rule, the Babylonian astronomers first broke away from astrological concepts to found astronomy based on systematic observation. This development was rooted in the need of the Babylonians continually to adjust their lunar calendar of 354 days. By 747 B.C. they had developed a nineteen-year cycle of eclipses for determining the number of days to be intercalated; this period rested on the discovery that eclipses repeat themselves in an eighteen-year interval. Nabu-umanni, the first Babylonian astronomer whose name has survived, was able to establish accurately the time of the appearance of the new and the full moon. These astronomical achievements, which played a great part in the development of Greek astronomy, have been called the greatest ancient contribution to exact science.[1]

The technological advances in glazing, glassmaking, and ironworking added a great deal to the practical knowledge of natural substances and processes, but there was no science of chemistry. The most distinctive development in this field was the Assyrian discovery of the way to make glass of various colors. The writers on these matters commonly used strange signs to conceal their knowledge and make it appear mysterious. The seventh-century B.C. Assyrian texts dealing with glassmaking, however, were written in a straightforward style. Under the influence of magical beliefs chemical, pharmaceutical, and medical learning became more deeply embedded in superstition. In the complexity of style of the

[1] See A. T. Olmstead, "Babylonian Astronomy—Historical Sketch," *American Journal of Semitic Languages and Literatures*, Vol. 55 (1938), pp. 113–129; also J. H. Breasted, "The Beginnings of Time-Measurement and the Origin of Our Calendar," *The Scientific Monthly*, Vol. 41 (1935), pp. 289–304.

scientific writings, as well as in their magical contents, may be seen the beginnings of a learned tradition, which ultimately reached its highest development among the alchemists of medieval Europe.[1]

The growth of commerce and the campaigns of armies necessarily added much to the knowledge of geography, particularly about roads and topography. The Egyptians reached the Euphrates River, which seemed to them a topsy-turvy Nile because it ran in the opposite direction to their great river; they also learned about mountains covered with ice, a substance unknown in Egypt. By the end of the imperial age the old distinction between the "east" and the "west" was generally recognized. The Phoenicians gained a clear knowledge of the Mediterranean coasts and discovered the Atlantic Ocean. The word "ocean," whose etymology is unknown, came into use at this time. By the opening of the first millennium B.C. geographical knowledge had widened greatly. At the center of the world was the ancient area within the Zagros Mountains, the Taurus ranges, the eastern Mediterranean Sea, the Arabian Desert, and the Nile valley below the first cataract; at its outer edge were the Indus valley, perhaps vaguely known, central Asia, the Black Sea, the Danube valley, the Atlantic Ocean, the Sahara Desert, the Nile at the fourth cataract, Punt, and the Arabian Sea. How many areas beyond this rim were known even slightly cannot be guessed, but within it certainly knowledge was by no means accurate or extensive.

The universal dependence of earthly life upon the sun was recognized, but the idea was expressed only in religious terms. The elaboration of Babylonian astrology, which provided a theory of universal cause and effect, was the only development in the interpretation of natural phenomena during the first imperial age.

The Cultural Innovations of the First Imperial Age.

The truly significant cultural innovations of the first age of imperialism were made in the areas of intense social interaction outside of the original urban lands. Some of these innovations rested on new materials, like the horse and iron. Others were adaptations of old materials to new uses, like the derivation of alphabetical signs from the Egyptian hieroglyphs. And still others, like the concepts "One God" and "humanity," were products of the widened social intercourse. Five deserve special notice: (1) new

[1] See R. Campbell Thompson, *A Dictionary of Assyrian Chemistry and Geology* (1936), Intro., pp. xi–xlviii.

means of transport, (2) ironworking, (3) the alphabet, (4) coinage, and (5) monotheism.

1. *The New Means of Transport.* Closely related to the social and the cultural aspects of the first imperial age were the improved means of transportation by land and sea.

In the third millennium B.C. the chief means of transport by land were porters, oxen, and donkeys. The ox-drawn cart was probably a Sumerian invention. The donkey caravan came into use perhaps in northern Mesopotamia sometime before the opening of the second millennium B.C. Although the horse may have been known that early, it did not become a factor in economic or military pursuits until the arrival of the Indo-Europeans and their associates about 1800 B.C. The Hurri, it seems, employed the horse as a mount as well as a draft animal, but the Kassites, the Hittites, and the Hyksos apparently used it only to draw the light chariots with which they revolutionized warfare. The Assyrians were the first to develop the light cavalry as a military instrument. Because the ancient peoples did not solve the problem of harnessing the horse without choking its breathing, it was never employed for heavy hauling or field work; thus it long remained the warrior-aristocrat's animal, useful above all in fighting, but also employed in sport, first in hunting and then in racing. Horse breeding was for centuries mainly a royal industry. The Minoans seem to have built the first road—from Phaistos to Cnossos—for horse-drawn vehicles. The camel and the mule also came into use toward the end of the first imperial age. The dromedary camel, a native of the Arabian Desert, although known to the Sumerians, was first used on a large scale in transportation by the Assyrians; certain of their records speak of camels and camel drivers as numbered in the thousands. The breeding of the camel, especially in southern Arabia, was a factor in the diffusion of urban culture. Little is known about the origin of the mule, but it seems clear that by 600 B.C. it was sharing with the ass and the camel the burdens of commerce by land.[1]

The seaworthy vessel was probably originally developed by the Egyptians, who in the first half of the third millennium B.C. sent trading expeditions to Syria, Punt, and perhaps southern Arabia. For centuries they seem to have used a flat boat with an elevated stern and prow, which was propelled by both oars and sails. Toward the end of the Pyramid Age they invented the tiller

[1] W. L. Westermann, "On Inland Transportation and Communication in Antiquity," *The Political Science Quarterly*, Vol. 43 (1928), pp. 364–387.

and the steering post. At the same time they differentiated, at least on the Nile, between the passenger and the cargo boat; under the empire a further differentiation created a vessel especially adapted to warfare. Fleets of such vessels were maintained on both the lower and the upper Nile. The Minoans made many improvements in the Egyptian design. They lengthened the hull, added a ram, raised high masts, and invented tackle and rigging for manipulating the sails, upon which, except in harbors, they seem to have depended mainly for power. Sometimes they built cabins on their sailing crafts like those on the Egyptian Nile boats. The Phoenicians first differentiated between the seagoing "trader" and the warship. By broadening and deepening the hull they created a single-decked freighter that moved entirely under sail. Their warships, which were narrow and drew little water, were propelled by double banks of oars placed along the sides. This type of vessel is known as the bireme. They also introduced discipline into the management of crews and the practice of inspecting craft before they went on voyages. Organized naval forces were first formed by the Egyptians in order to resist the attacks of the "peoples of the sea"; the Egyptians seem also to have first established marine patrols, customhouses, and port regulations. The Phoenician navy served every ancient empire, except the Minoan, before the rise of the Greek cities.[1]

2. *The Introduction of Iron.* The invention of ironworking was a fitting culmination of earlier developments in metallurgy; like them, it seems to have originated somewhere in Anatolia or the Armenian Highland.

Iron, first known in the meteoritic form, was regarded as a sacred substance, containing the power of the thunderbolt. It was called the "metal of heaven" or the "metal of god." Iron beads dating from the fourth millennium B.C. have been found, and a number of iron objects from the third millennium B.C. are known. A knife having a bronze handle and a blade of terrestial iron was recently discovered at Eshnunna in Mesopotamia; it is said to date about 2800 B.C. Before the middle of the second millennium B.C. the Egyptian priests were using iron objects in temple rituals. But until the middle of the second millennium B.C. iron, because it was very rare, continued to be regarded as a sacred or precious metal.

The Hittites are usually said to have been the first people to work iron, although the evidence now at hand does not indicate

[1] Romola Anderson and R. C. Anderson, *The Sailing-Ship: Six thousand years of history* (1926).

that they, more than any other people of Anatolia and the Armenian Highland, were responsible for the early iron industry. About 1400 B.C.—perhaps even earlier—some of these peoples began to reduce iron ore in very simple pot-like furnaces, to which they applied a hand blast by means of a fan or a blowpipe. The bellows may have come into use about 1200 B.C. Only by means of a blast or a furnace designed to produce a heavy draft was the smelting of iron ore made possible, for the melting point of iron is considerably higher than that of copper or lead or the precious metals. The Hittites may have carried ironworking into Syria, which became the center of its diffusion over Mesopotamia and Egypt. The "iron age" began in Syria, Mesopotamia, Assyria, Palestine, and Cyprus about 1200 B.C., when iron weapons first displaced bronze weapons. After 1100 B.C., when iron became plentiful, iron implements—the pick, the hoe, the plowshare, the grappling iron, the hook, and the chain—were introduced. Egypt entered the iron age only in the eighth century B.C., when the Assyrians were making the first general use of the metal for both industrial and military purposes. Sargon is said to have possessed at that time between 150 and 200 tons of iron.[1]

3. *The Invention of Alphabetical Writing.* The invention of alphabetical writing is now known to have been made by the inhabitants of Sinai, who, working for the Egyptians in the copper mines, adapted certain Egyptian hieratic symbols to the writing of their Semitic language. To these symbols they added a number of new ones, so that altogether they used about thirty signs; of these eighteen have survived in the alphabets derived from their invention. The critical departure was the attaching to the Egyptian symbol of a single Semitic sound, that of the consonant. These few facts about the invention of alphabetical writing are known from inscriptions, containing only thirty-seven words, made in the nineteenth or eighteenth century B.C.

From Sinai alphabetical writing spread first northward and then southward among the Semitic peoples. In the seventeenth century B.C. the alphabetical signs, as revealed in the Ras Shamra tablets, were rendered in the cuneiform style, and for about two centuries this form of writing was used in parts of Syria and Phoenicia. About the end of the sixteenth century B.C. the north Semitic alphabets, the Phoenician and the Aramaic, were developed

[1] G. F. Wainwright, "The Coming of Iron," *Antiquity*, Vol. 10 (1936), pp. 5–24; Harold J. E. Peake, "The Origin and Early Working of Iron," *Geographical Review*, Vol. 23 (1933), pp. 639–665; H. Michell, *The Economics of Ancient Greece* (1940), pp. 119 *ff.*

THE ALPHABET

EGYPTIAN	SINAITIC	PHOENICIAN	ARAMAIC	KHAROSTHI	HEBREW	SABAEAN	BRAHMI	GREEK	LATIN	ENGLISH
									A	A
									B	B
									CG	CG
									D	D
									E	E
									F,V	F,V
										Z
									H	H
										(Th)
									I	I,J
										K
									L	L
									M	M
									N	N
									X	(X)
									O	O
									P	P
										(S)
									Q	Q
									R	R
		W	WH						S	S
		X							T	T

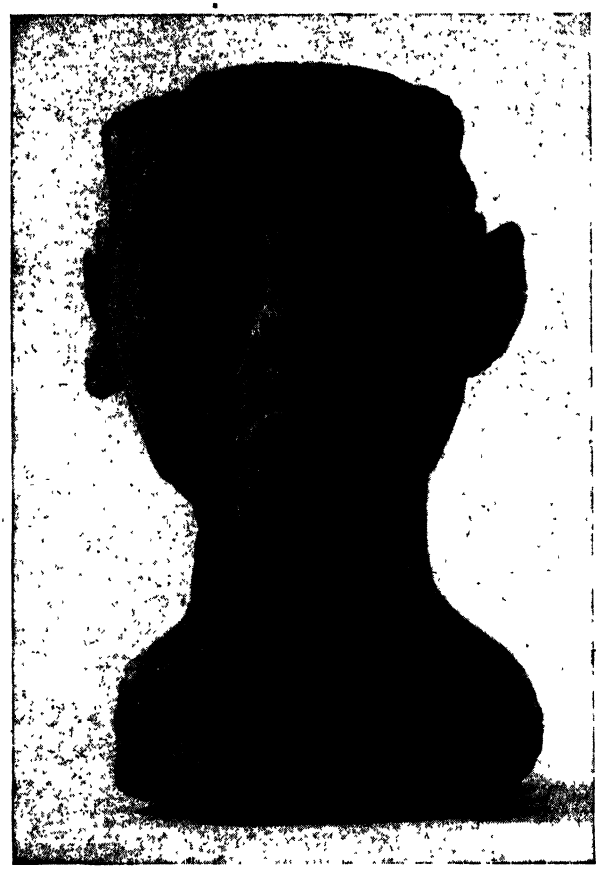
from the signs of the inscriptions of Sinai, and from them sprang in time—by different modifications—the Hebrew, Greek, Roman, Brahmi, Syriac, and Arabic alphabets. The Amharic alphabet of Ethiopia was derived from a south Semitic alphabet. The Moabite stone of the ninth century B.C., long the earliest evidence of the development of alphabetical writing, is now recognized as standing at the culmination rather than at the beginning of the development, for now many finds of the period 1200–800 B.C. give a fairly clear picture of alphabetical writing as a well-established culture trait.

The influence of the undeciphered Minoan script upon the development of alphabetical writing, although considered important by some scholars, has not yet been determined.[1]

4. *The Invention of Coinage.* Originally, as in primitive cultures, exchange in the early urban cultures was merely barter, and so it remained until late in the first imperial age, especially among the peasants. But urban dwellers required some way of standardizing the values of the numerous commodities in their markets, and to meet this need they developed mediums of exchange.[2] In Sumer the original medium was barley, in Egypt wheat. These articles were dealt in by weight. In the Pyramid Age copper coils began to circulate in Egypt, and in Akkadian times bars of copper and lead came into use in Mesopotamia. Merchants who dealt in these metals translated their values into weighed quantities of wheat and barley. In Assyria, after 1400 B.C., lumps of lead, bearing some kind of an impression, were used as a means of exchange. This is the first known use of specially marked pieces of metal as a medium of exchange. Sennacherib (*ca.* 705–681 B.C.) boasted, "I built a form of clay and poured bronze into it as in the making of half-shekel pieces." In Babylon of Nebuchadnezzar II's time metal pieces known as "Ishtar heads" (from which was derived the Greek *stater*) and "Shamash heads" circulated, but value was still computed by weight—the *shekel*, the *mina*, and the *bilitu*, known in Greek and Roman times as the *talent*. Sixty shekels made a mina, and sixty minae a talent.

[1] See Martin Sprengling, *The Alphabet: Its rise and development from Sinai inscriptions* (Oriental Institute Communications, No. 12, 1931); also John W. Flight, "The Present State of Studies in the History of Writing in the Near East," in Elihu Grant, ed., *The Haverford Symposium on Archaeology and the Bible* (1938), pp. 111–129. On the several forms of the alphabet see the article "Alphabet" in the *Encyclopaedia Britannica*, 14th ed.; also E. Chiera, *They Wrote on Clay* (1938), and Hans Jensen, *Die Schrift in Vergangenheit und Gegenwart* (1935).

[2] See p. 459.



By the courtesy of the Oriental Institute, University of Chicago

IKHNATON

The original of this head was found in a sculptor's workshop at Amarna, the seat of the religion of Aton built by Ikhnaton. This religion, now regarded as the earliest monotheism, combined the social aspects of imperialism, the political fact of divine-right monarchy, and the worship of the sun in beliefs which transcended in universality the national cults of Egypt.

The inventors of coined money, like the creators of the alphabet, were not, however, the bearers of an ancient cultural tradition; they were the Lydians, who after the fall of the Hittite empire, occupied part of western Asia Minor. Sometime in the eighth century B.C. they marked bean-shaped gold globules with a sign of value and, a little later, stamped them on both sides. These departures were probably developed from the Assyrian and

Minoan practice of stamping metal bars; in turn they became the source of the pattern of the flat circular coin decorated on both sides created by the Greeks.[1]

5. *The Appearance of Monotheism.* The idea "One Supreme God" first appeared clearly in Ikhnaton's religious reformation; this god was known, however, only to the pharaoh and a small chosen circle, and in spite of the fact that he was regarded as the only god "with warming hands," his care was not extended to the people except through the divine pharaoh. Foreigners, as well as Egyptians, it is interesting to note, were the recipients of this care if they lived under the pharaoh's rule. Ikhnaton's "Hymn to Aton," which expressed these ideas, is one of the greatest religious poems of ancient urban cultures:

> How manifold are thy works!
> They are hidden before us,
> O sole God whose power no other possesseth.
> Thou didst create the earth according to thy heart
> Whilst thou wast alone:
> Men, all cattle large and small,
> All that are upon the earth,
> That go about upon their feet;
> All that are on high,
> That fly with their wings.
> The foreign countries, Syria and Kush,
> The land of Egypt;
> Thou settest every man into his place. . . .

However, such ideas were not the exclusive property of the Egyptian religious reformer, for similar views appeared in Mesopotamia, where Shamash, the Babylonian sun-god, was given the attributes of a universal god:

> The mighty hills are surrounded by thy glory,
> The flat lands are filled with thy brightness,
> Thou hast power over the mountains, and lookest over the earth;
> Thou dost hang up the hems of the land, in the innermost part of heaven.
> The men of the lands, thou watchest over them all.

* * * * *

[1] See Sidney Smith, *Early History of Assyria to* 1000 *B.C.* (1928), pp. 323–324; also A. R. Burn, *Money and Monetary Policy B.C.* 1400–900 (1930); Charles T. Seltman, *Greek Coins: A history of metallic currency and coinage down to the fall of the Hellenistic kingdoms* (1933).

What places are not warmed by the beams of thy light?
Thou who lightest the darkness and brightenest the gloom,
Who putteth to flight the darkness and givest light to the wide earth,
Who brightenest the day and sendest down the midday heat upon the earth.

Bound up with the religious concept "monotheism" was the ethical idea "humanity," which like monotheism was never developed in concrete forms, but was nevertheless sensed under the play of the international forces of the imperial milieu.[1] Ikhnaton recognized humanity as a corollary of imperial rule. In late Babylonian times the concept "humanity" was expressed by merchants, not as the union of nations but as the harmony of classes. Perhaps the two concepts were blended in the growing feeling that the gods of all nations were but manifestations of a single god who had created both the physical universe and the moral world order.

In these ideas, however expressed, there was not the modern idea "humane." The absence of this idea, a universal characteristic of ancient urban cultures, is clearly evidenced in the philosophy of resignation, which after all was the most enduring ethical achievement of ancient peoples. All man could do was to bear patiently the evils which befell him. No representative of an ancient urban culture ever conceived that misery might be not the work of daimons or the punishment of gods but the normal product of social, economic, and political institutions. One God might rule humanity, but suffering was its certain lot.

THE SIGNIFICANCE OF THE FIRST AGE OF IMPERIALISM IN THE HISTORY OF CULTURAL TRADITIONS

In two fundamental respects the first age of imperialism marked the end of one era and the beginning of another in the general history of cultural traditions: (1) its innovations gave urban culture a firm base over a wide geographical area, and (2) it brought the disintegration of old peoples and the formation of new peoples as the carriers of urban cultures.

The innovations of the age strengthened but did not alter the base of urban cultures. The new means of transportation and communication bound together more tightly the original urban areas

[1] Allan W. Shorter, *An Introduction to Egyptian Religion* (1932), p. 106: "Without this gradual widening of vision, as a result of empire, which had preceded Ikhenaten [Ikhnaton], the leap to complete monotheism would have been impossible." James H. Breasted, *The Dawn of Conscience* (1934), p. 348: "Out of this far-reaching international *milieu* of the

and opened new regions to urban development. Because the introduction of iron increased the capacity to produce of ordinary workers more than it sharpened the skills of expert craftsmen, it added to the wealth necessary for the support of urban culture more than it fostered the growth of luxury. The invention of alphabetical writing, because it simplified literate learning, facilitated the accumulation and diffusion of the knowledge which was, indeed, the real support of urban culture. The emergence of the concepts "One God" and "humanity" provided religious and ethical support for urban culture on an extended social base. The invention of money made possible a new flexibility in the economic process implicit in the division of labor of urban communities; at the same time it permitted a greater concentration of economic power, so that wider enterprises could be more easily organized and managed. Finally, the new forms of military power opened the way for the political unification of large geographical areas; especially noteworthy in this respect was the development of naval force, for it meant a transfer of centers of power from more or less land-locked river valleys to the lands bordering the Mediterranean Sea. These developments, it can readily be seen, did not disturb the general organization of urban life; rather they knit this organization together more firmly and strengthened the social and cultural tendencies within it, so that, although new urban cultures developed rapidly, they did not differ greatly from their more slowly evolved predecessors.

The first imperial age imposed harsh fates on two ancient-oriental urban cultures, the Minoan and the Indus-Valley, by dispersing or destroying their carriers. Similarly, indeed, certain of the new urban cultures—the Hurrian, the Hittite, and the Assyrian—were affected by imperial strife. At the end of the first imperial age Mesopotamian culture was weakened, but its elements were already so widely diffused that they became fundamental elements in the urban cultures of the succeeding age. Only the Egyptian cultural tradition survived into that age without significant modification. The energy passed out of the original urban cultural traditions as early perhaps as the thirteenth century B.C.,[1] but

ancient Near East which enveloped Palestine, came forth the moral ideas which eventually furnished the dominant ethical conceptions of the western world." By permission of Charles Scribner's Sons, New York. See also Joyce O. Hertzler, *The Social Thought of the Ancient Civilizations* (1936), Chap. X, "A Summary of the Contributions to Social Thought of the Ancient Civilizations."

[1] See Eduard Meyer, *Geschichte des Altertums*, Vol. II, *Die Zeit der Aegyptischen Grossmacht* (1928), pp. 606–607.

new urban cultural traditions, so well consolidated that they could persist through changing economic, social, and political circumstances, slowly replaced them. The peculiar achievement of the first age of imperialism was the preservation and transmission of ancient materials which could be used by new peoples in the development of new cultural traditions.

Chapter VI

PATTERNS OF THE ANCIENT-ORIENTAL URBAN CULTURES

Although the traditions of the early urban cultures developed differently, the cultures embodied common patterns, and these patterns endured in spite of the complex growth of urban cultures after the disintegration of these ancient traditions. Thus the significant contribution of ancient-oriental urban cultures to the general development of civilization was a pervasive and persisting structure of life rather than the distinctive traits of later traditions. In fact, it is not far wrong to understand the problems of contemporary civilization as having origin in the disturbance of this anciently created structure. In this connection it is pertinent to recall that the period of ancient-oriental urban cultures—4500–500 B.C.—was almost twice as long as the period since their passing.

The fundamental patterns of the ancient-oriental urban cultures were organized in (1) an economic surplus, (2) a hierarchy of social classes, (3) a political system, and (4) a differentiation of the population, on the basis of the possession of a knowledge of writing, into literate and illiterate sections. To the intellectual development of the literate section of a population carrying an urban culture may be given the designation the *high intellectual tradition;* to the intellectual development of the illiterate section may be given the designation the *low intellectual tradition.* Since these patterns of the ancient-oriental urban cultures changed little until recently in the Western world, they, quite as much as the structure itself, have been important aspects of civilization.

In considering the structure and patterns of urban cultures it is important to realize that they are merely aspects of a social organization of life which has both internal and external relations. Individuals are to be understood, therefore, as developing their behavior within a social structure and as being affected in many

different ways by the external relations of this social structure. In other words, in an urban culture the interaction between individual and society is orderly according to the patterns of the culture. When viewed as a process this interaction should be seen as perpetuating the structure and relations into which individuals are organized and in terms of which they behave; in this manner urban society becomes the decisive factor in the development of cultural traditions, for these traditions consist of the patterns perpetuated in the urban social process. A cultural tradition develops largely as elements are displaced in or assimilated into the enduring patterns. The total complex of patterns always outweighs greatly any changes that may be occurring in the separate patterns. And changes in one pattern always affect other patterns in some way. An urban culture is, therefore, a dynamic social entity, always manifesting new internal and external aspects, but rarely disintegrating as a whole.

THE ACCUMULATION OF THE ECONOMIC SURPLUS

The economic base of urban cultures everywhere was an increased capacity to produce wealth; from the point of view of their common pattern this wealth gave rise to an *economic surplus*. An economic surplus may be defined as the wealth possessed by a people over and above the amount necessary for the subsistence of its members; the existence of such a surplus is manifest when a portion of a people can devote themselves to activities other than the obtaining of their own subsistence.

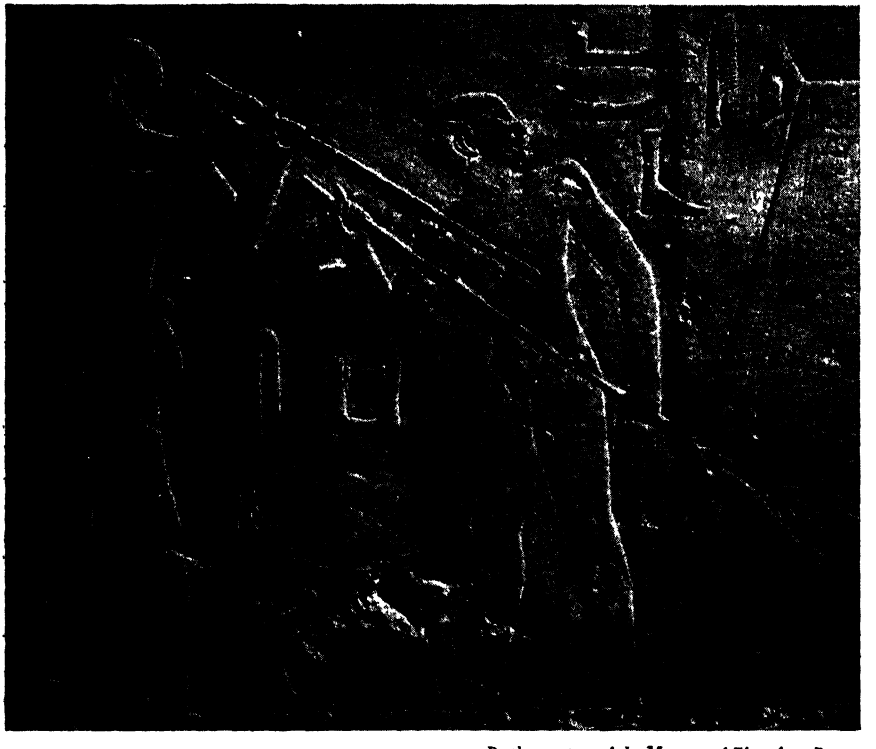
Early hunting men undoubtedly occasionally possessed a small economic surplus, and early peasant-village and nomadic peoples created the means of its production. But an economic surplus became a permanent factor in human affairs only when agriculture and husbandry were planted on the great subtropical flood plains. The city, of course, formed as a result of the accumulation of a surplus which permitted its inhabitants to follow pursuits other than those of producing the means of their own subsistence. From the first, therefore, production in urban cultures had two levels: (1) the primary, which, besides feeding the tillers of the soil, furnished the means of subsistence for some who did not work at agriculture, and (2) the secondary, which was carried on by those who could work at industries other than agriculture. The output of the secondary level was all surplus. Because increased agricultural productivity made possible the employment of more persons on the secondary level, the basic factor in the growth of the economic

surplus was always labor applied to land. But the increase and diversification of production on the secondary level gave all of those forms of wealth which made urban cultures far richer than any of their predecessors. The best evidence of the existence of an economic surplus in ancient times was, therefore, the multiplication of cities and the growth of their populations.

It is important to understand that the city could endure only so long as primary production created a surplus. If, after reaching a high level, agricultural production declined, the city, and with it the secondary production carried on by its population, necessarily decayed. On the contrary if new methods of tillage or the administration of the labor applied to land gave an increased production, more workers could be withdrawn from agriculture and devote their energies to secondary production. In its highest form, of course, secondary production consisted of those kinds of wealth created by the group having leisure, for its members, under no compulsion to produce the goods they consumed, were free to liberate their energies in whatever ways suited them. Some of them elaborated the modes of consumption, creating luxury. Others devised ways of management, increasing the total output. Still others devoted themselves to exciting their emotions by gross or refined expressions, thereby giving diverse forms to some of the arts. And still others pursued whatever they understood to be knowledge. Commonly these activities were not specialized; the members of the leisure group mingled them in strictly urban patterns of behavior. That the members of this group also went to the country to live part of the time did not mean that their mode of life there was rural; actually "country life" was an urban cultural product. But these activities were possible only so long as primary production was sufficient to allow secondary industries to thrive. When some circumstance or combination of circumstances affected primary production adversely for a length of time, urban life was bound to suffer. The fate of an urban culture was linked with those factors which increased or decreased its economic surplus.

The Production of Wealth.

The original growth of wealth which gave rise to cities was the result of a peculiar combination of cultural and environmental factors, but once the growth began it produced further increases by stimulating the inhabitants of flood plains to work and plan for greater output. Under this stimulus their efforts, in the course



By the courtesy of the Museum of Fine Arts, Boston

EGYPTIAN PEASANTS

The peasant was the socio-cultural type whose labor produced the primary wealth that supported all ancient-oriental urban cultures. Because very few peasants ever learned writing, they possessed and transmitted a mentality received from preliterate cultures. This intellectual aspect of the peasants, quite as much as their economic position, shaped the life of the masses in all early urban cultures.

of time, transformed agriculture, developed irrigation, invented metallurgy, refined the crafts, created a continuous commerce, and organized transportation. The grand result of these achievements was to establish urban culture on an economic foundation far less precarious than the combination of neolithic techniques and subtropical climate which had supported its early development.

1. *Field Agriculture.* Permanent field agriculture rested upon the transformation of the hoe into the plow and the use of the ox as a draft animal. Mesopotamian and Egyptian monuments of the early fourth millennium B.C. show field workers holding the

plow and prodding oxen, but the combined use of these implements was probably begun somewhat earlier, perhaps as a religious rite.[1] Mesopotamian seals depict the plowman garbed as a priest, and the Egyptians believed the plow a divine gift. At first the ox was attached to the plow by a rope tied to the horns. The neck yoke fastened to the plow beam was probably a Mesopotamian innovation of the third millennium B.C.; even after the opening of the third millennium B.C. the Egyptians seem occasionally to have used human power to draw the plow. About the end of the third millennium B.C. in Mesopotamia a drill was attached to the plow.

Besides the staples, wheat and barley, millet and flax were early adapted to field cultivation. But field agriculture did not supplant hoe culture. In fact, both gardening and orcharding steadily advanced. Orchards were almost as numerous as fields in the Land of the Two Rivers. The development of husbandry was also continuous, for grasslands were plentiful in some parts of the valleys. Dairying was certainly a leading occupation among the early settlers of the Tigris-Euphrates flood plain; they seem to have been the first people to care for meadows and make hay. By the opening of the fourth millennium B.C. herds of cattle, sheep, goats, and pigs were probably common in both Egypt and Mesopotamia. Because honey was almost the only sweet substance known, beekeeping very early became an important secondary agricultural occupation.

The integration of field agriculture, orcharding, gardening, and husbandry rooted man firmly in the soil and gave to the land that ordered aspect which first declared not only man's conquest of nature but also his achievement of a stable economy.

2. *Water Control and Irrigation.* In Mesopotamia water control probably originated in efforts to prevent destructive floods. The early Sumerian kings always boasted of the care they gave to canals, basins, and reservoirs. There is evidence of the existence of a general Mesopotamian irrigation system about the end of the third millennium B.C. In Egypt irrigation grew out of attempts to hold water on the land when the Nile subsided. Probably the earliest settlers on the flood plain took some measures to direct the flow of the floodwaters. They built dikes around their fields and dug channels leading from the river to the edges of the flood plain. Each year before the arrival of the flood they worked feverishly, clearing the main canals, strengthening old embankments, and

[1] See C. W. Bishop, "Origin and Early Diffusion of the Traction-Plough," *Antiquity*, Vol. 10 (1936), pp. 261 *ff.*

raising new dikes. In the narrow upper valley, basins with sloping sides from 12 to 20 feet high and openings facing upstream were filled with water as the Nile rose; when the flood went down, these stored waters were drained over near-by fields. When empty the inner surface of the basin was planted to grain. When the stored waters were not sufficient to bring grain to maturity the Egyptians laboriously carried water from the river to the fields, as did also the inhabitants of Mesopotamia. Both the Mesopotamian and the Egyptian irrigation systems reached their maximum efficiency shortly after the opening of the second millennium B.C. The control of the Indus waters seems never to have become as complete as that of the Tigris-Euphrates and the Nile. Floods were always a real danger to the cities, and drainage appears to have been quite as much a problem as irrigation.

By its nature water control was a cooperative undertaking, and its importance in production tended to make participation compulsory. Thus irrigation not only gave rise to a more secure economic life but also promoted the growth of social order under authority. Civil government, it may be argued, was rooted, at least in part, in the relation between man, the soil, and the water necessary for field agriculture. Furthermore, it made the cooperative factor an important element in production.

3. *Metallurgy.* Knowledge of metals and methods of working them were outgrowths of the stone and pottery industries.[1] In the use of stone men became familiar with various materials in the earth, and in the making of pottery they learned that the application of heat to materials had various effects. Copper, the first metal to be worked, was originally treated as a stone, *i.e.*, it was cold-hammered into various shapes.

When and where the property of fusibility of metals was discovered and adapted to human use is not known. Beads of fused copper have been found at both Mesopotamian and Egyptian sites of the fifth millennium B.C. Cast copper was used in the fourth millennium B.C. for fishhooks, needles, spearheads, and axes, as well as for decorative pieces. Early in the third millennium B.C. the process of casting known as cire-perdu (*i.e.*, lost wax) was used in Mesopotamia and Syria. In this process a model of the desired object is made in wax and then coated with clay; when the fluid

[1] On the beginnings of metallurgy see J. R. Partington, *Origin and Development of Applied Chemistry* (1935); H. Garland and C. O. Bannister, *Ancient Egyptian Metallurgy* (1927); T. A. Rickard, *Man and Metals: A history of mining in relation to the development of civilization* (2 vols., 1932).

metal is poured into the mold the wax melts and drains away, being replaced by the metal, which, when cooled, is separated from the clay form. An important advance in smelting copper came with the introduction of a small cylindrical furnace, to which a blowpipe blast may have been attached. Bronze, the alloy of tin and copper, was probably first made by smelting ores in which the metals were naturally mixed. The early Sumerian bronze seems to have been made from such a mixture, the source of which is unknown. By the middle of the third millennium B.C. the mixing of these metals had become an industrial process, and by the end of that millennium the proper proportions for making bronze of the best quality—nine parts copper and one part tin—were known throughout the metalworking areas. The development of iron-working in the second half of the second millennium B.C. was the culmination of the evolution of ancient metallurgy. Iron quickly displaced bronze for tools and weapons. However, it should be noted that the shift from stone to the metals was nowhere abrupt. The fact that the earliest metal tools and weapons were commonly copies of their stone antecedents indicates that men were slow to understand that the metals made possible a specialization of tools of improved design.

The precious metals—gold and silver—were known very early, and electrum, their natural alloy, won an early popularity because of its high brilliance. The semiprecious stones—turquoise, carnelian, amethysts, green feldspar, and lapis lazuli, as well as mother-of-pearl—were used to give luster to objects made of the bright metals.

The invention and elaboration of metallurgy was a decisive factor in the development of urban cultures, for it promoted an increase of wealth. (1) Each advance from stone to copper, copper to bronze, and bronze to iron brought improved tools and implements, so that labor's capacity to produce wealth grew steadily, if slowly. (2) As the quantities of metals accumulated, wealth became more tangible and enduring, which fact, because it excited cupidity, stimulated efforts to acquire it and resulted in further advances in production. (3) The need for supplies of metals led to the penetration of ever wider geographical areas and, as a result, their economic development. It is not remarkable, therefore, that each advance in metallurgy was followed by an expansion of the areas of urban cultures. Sumer was the first land to make metal objects an element of a luxurious life. Egypt first employed gold as a means to national power. And Assyria first achieved a full use

of iron in industry and warfare. The metals, wealth, and power have been from the first inextricably bound up with the development of urban cultures.

4. *The Refinement of the Crafts.* The refinement of the crafts developed along two main lines: (1) the improvement of tools and processes and (2) the utilization of new materials. The former contributed to the increase of skills and, consequently, a higher productivity; the latter gave rise to a diversification of commodities.

In the third millennium B.C. the common tools, such as the ax, the adze, the chisel, the knife, the saw, the drill, the mallet, the hammer, and the blowpipe were in daily use; in the second millennium B.C. the auger, the clamp, the plumb line, the trowel, the scissors, the bellows, the anvil, the tongs, and the heavy hammer were added to the kits of the carpenter, mason, and smith. The improvement of metal tools which gave a new mastery over hard materials like alabaster, slate, serpentine, and ivory commonly led to a decline of the potter's craft. The equipment of the spinner changed little from what it had been in neolithic times. Late in the second millennium B.C. the Egyptians introduced an improved loom from which European looms were derived until the industrial revolution of the eighteenth Christian century. Toward the end of the second millennium B.C. a considerable advance was made in preparing dyes. In the building industries advance seems to have been more the result of an increased efficiency in the organization of labor than of the improvement of techniques.

The superb workmanship revealed in the articles found in the early Sumerian and Egyptian graves suggests that the skills of the selected craftsmen who made luxury goods reached a high level very early, and the Mesopotamian seals and the Egyptian tomb furniture indicate that these skills became as great as those possessed by craftsmen in any later age. The introduction of metal tools, it seems, contributed not so much to the increase of skills among the selected workers who produced such goods as to the spread of the skills necessary for the production of common commodities among a large body of workers.

Present knowledge, which is more detailed for Egypt than for Mesopotamia and Crete, shows that the introduction of new materials and the use of old materials in new ways was slow but continuous throughout ancient-oriental times. The crafts were elaborated but not altered by such innovations.

The effect of the spreading of skills and the multiplications of materials was a diversification of commodities and an augmenta-

tion of their amounts, accompanied, of course, by the specialization of labor, a deepened economic interdependence, and an enriched consumption. Wealth grew both in amount and in kinds.

The Economic Characteristics of Ancient-Oriental Urban Cultures.

Besides the increase of wealth, which was the most important effect of the economic achievements described in the preceding pages, the leading economic characteristics of urban cultures were (1) a diversification of industry, *i.e.*, a division of labor, and (2) a dependence on a wide area for many products, *i.e.*, a wide extension of the community of exchange.

1. *Economic Cooperation at the Base of Urban Cultures.* Viewed as economic structures, urban cultures, therefore, are to be seen as internally complex and as externally far-flung. The best evidence of these characteristics is provided by the use of metals. When men began to use the metals a series of economic relations extending from the digger of the ore to the user of a finished metal product was established. Someone dug the ore. Someone smelted it. Someone shaped it into a tool. Someone used the tool. And someone consumed the articles produced with the tool. Thus urban cultures, it can be seen, were economically supported by a cooperation which bound individuals together in a continuous interdependence. For the individual this circumstance meant a greater opportunity to acquire and use wealth; for society it meant that wealth increased mainly through the organization of an ever wider social cooperation and in the development of an ever deeper integration with the physical environment.

It is important to realize that the economic specializations which entered into this cooperation and this integration were fixed in traditions possessed and perpetuated by special bodies of workers. Each craft was in a sense a "mystery" shared only by those who mastered it, and technological advance occurred mainly as the mystery was elaborated. The tools of mining industry, which are identical in type throughout the Syrian, Anatolian, Transcaucasian, and Danubian areas, indicate that the industry spread mainly as workers possessing a common tradition developed its several centers. Some of the crafts remained localized because workers having special knowledge and skills did not migrate. However, ancient-oriental trade seems commonly to have involved some movements of population as well as the exchange of goods. The economy of urban cultures was, therefore, an integra-

tion of man with nature through traditions carried by many specialized bodies of workers. Peasants are, of course, to be counted among these specialized bodies.

2. *The Economic Surplus and the Institutions of Urban Culture.* The increased production of wealth which rested on this cooperation and this integration was, as previously noted, the source of the economic surplus which supported urban culture. Its presence created circumstances under which new institutional arrangements were necessary. These circumstances can be suggested by noting certain questions which the presence of an economic surplus raised: (1) Who shall possess the economic surplus? (2) For what purpose shall its possessors use it? (3) Who shall work to replenish it? In the answer to these questions certain conditions or aspects of life, quite unknown to primitive peoples having little or no surplus, were established; they are suggested by such words as "work," "property," "riches," "luxury," "poverty," and "power." Every ancient-oriental urban culture developed the aspects of individual and social life suggested by these words, because the economic, social, and political institutions of these cultures embodied more or less similar answers to these questions. Indeed, the fundamental difference between primitive and urban cultures has origin in these results of the formation of an economic surplus.

Because an economic surplus may decline or increase, it was a constant factor not only in the organization of urban cultures but also in their historical development. In this connection the recurrence of two situations relative to the economic surplus should be noted. When any technological advance or new kind of enterprise gives rise to a considerable increase of the surplus, then the questions of possession and use come to the front. New claimants to the surplus appear, and new purposes for its use are set forth. Such assertions disturb existing possessors, for the realization of new claims and purposes may mean their dispossession or at least a weakening of their control over the surplus. In contrast to this situation is the circumstance created when natural forces, like drought, flood, temperature change, soil depletion, and disease, or social disintegration brought by invasion, war, and revolutionary strife cause a decrease of the economic surplus. Then the possessors may lose their portions of the economic surplus, and the body of the workers may even find it impossible to obtain subsistence. At such times the questions of possession, use, and replenishment of the economic surplus are raised in harsh forms, for old answers cannot be maintained and new answers can be made only in the

midst of disorder and suffering. The history of urban cultures reveals that the questions raised by the increase and decrease, as well as the presence, of an economic surplus have never been given lasting answers.

Since urban cultures appeared only with the formation of an economic surplus, they advanced largely as the economic surplus increased. In general, as is evident in the development of the ancient-oriental urban cultures, such increase has been brought about in three different ways: (1) by technological advances, such as the introduction of irrigation and metalworking, (2) by the expansion of economic enterprise, such as the Babylonian and Egyptian penetration of Syria, and (3) by the development of new forms of economic administration, such as gang slavery and the estate system of cultivation. The increase of the economic surplus has far-reaching effects not only because it raises the questions of possession, use, and replenishment, but also because it makes for the releases of energy which are important for all forms of cultural development. Throughout the history of urban cultures there has been constant interaction between factors affecting the increase or decrease of the economic surplus and other phases of cultural development.

The Economic Institutions of Ancient-Oriental Urban Cultures.

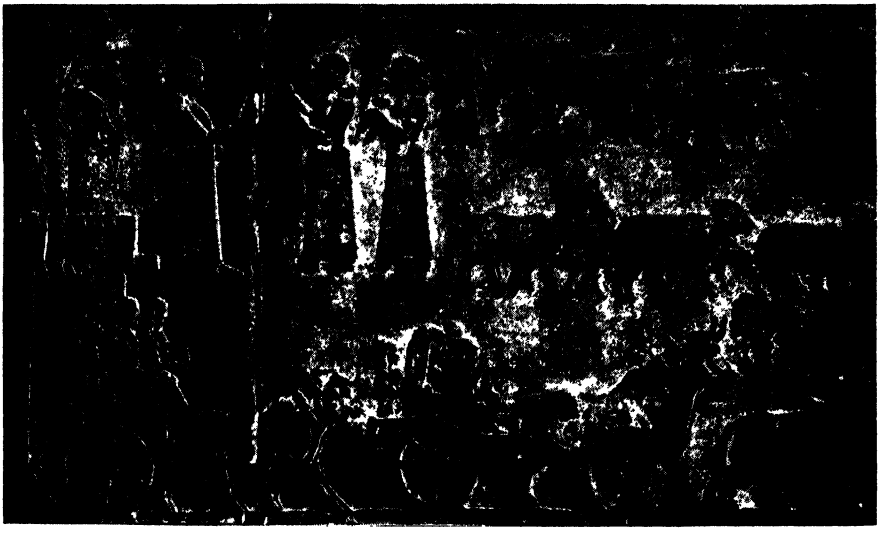
The institutional changes impelled by the formation of the economic surplus were not limited to the economic area, but here only the changes in holding and acquiring wealth are noted. It should be mentioned, however, that the system of labor control—slavery—to be noted in the discussion of social classes was as much an economic as a social institution.

1. *The Elaboration of the Right of Private Property.* As previously explained, the institution of private property existed in many forms among primitive peoples. Private property in land appeared, it seems, among peasant villagers as the natural result of the fact that a particular individual cultivated a particular plot of land. But this original peasant ownership depended upon the owner's working his possession. The formation of the economic surplus changed all this, for it enabled the owner to live on commodities produced by persons who did the cultivating. Yields beyond the amount necessary for the subsistence of the cultivators provided support for the owner of the land; on the basis of this right of private property in the products of the land he was able

to live in leisure or to undertake enterprises impossible to the cultivators. This surplus also made possible the specialization of labor, for craftsmen, subsisting on a portion of the products drawn from the cultivators, could devote all their time and energy to their occupations. Such concentration of effort undoubtedly led to the great increase of skills which characterized early peasant-village industries. The extension of private ownership not only to land, tools, and implements but also to human beings brought the entire production system under systematic direction, so that the economic surplus was further increased and, more important, its continuous replenishment was guaranteed.

In Mesopotamia the right of private property as developed by the Sumerians was taken over by the Babylonians. In Hammurabi's time both land and chattels could be bought, sold, loaned, leased, pledged, and bequeathed, and contracts covering any of these actions were enforceable at law. In other words a system of freehold property had evolved, *i.e.*, possessors had rights of use and disposal without hindrance by any religious or political authority. It must always be remembered, however, that not all property, especially in land, was held under this private right; in fact, much land was held by the king, the temples, and the nobles who owed military service to the king. In Egypt the right of private property was never defined as clearly as in Babylon. Land remained always the property of the pharaoh, and those to whom possession was granted were obligated to make certain payments or perform certain services. The Egyptian system of land ownership was essentially manorial in character, *i.e.*, the possession was dependent upon a nonproperty relation between the possessor and a superior. But the private ownership of chattels, with full rights of use and disposal, was the rule.

The general effect of these elaborations of the right of private property was to change profoundly its social significance. No longer as among peasant villagers was the right of private possession dependent upon the owner's use of his possession as the means of gaining subsistence; now it meant the right to receive a portion of a surplus produced by laborers who commonly worked for subsistence. In this changed position the right of private property entered upon that Jekyll and Hyde role it was to play in subsequent centuries, namely, the armor of the rich and the shackles of the poor. The need of the poor for subsistence became the means of compulsion which forced them to produce the surplus appropriated by the well to do. The social gulf between ancient urban



By the courtesy of the Oriental Institute, University of Chicago, and the British Museum

ASSYRIANS PLUNDERING

The plundering of conquered peoples was an important method of concentrating the large amounts of wealth necessary for the development of state projects in ancient-oriental urban cultures. In this picture the soldiers and scribes of Tiglath-Pileser III of Assyria are shown making a record of the booty from a captured town.

cultures and their forerunners was opened chiefly by this effect of the accumulation of an economic surplus.

2. *The Formation of Capital.* The primary function of a standardized medium of exchange was to give full flexibility to the right of private property in the economic surplus, so that shift of ownership could be easy; and this flexibility permitted the manipulation of the surplus in ways that might or might not increase it. With the invention of a medium of exchange, which served not only as a stimulus to trade but also as a storehouse of economic values, all manipulative activities became easier, and wealth, at least so far as its possession and accumulation was concerned, was divorced from labor.

This divorce was given a social form in *capital*, which may be defined as that part of the economic surplus used at any given time in the further production of wealth. Capital had existed in the immobile forms of weapons, tools, implements, animals, and seeds in the early hunting, herding, and tilling cultures. But with the use of metals as a storehouse of values and as the medium of their

exchange, capital obtained mobility; it ceased to be the accumulated means of the production of new wealth and became the means of commanding the use of these accumulated means, including the labor of individuals. Thus "business enterprise" became a possibility. That this possibility rapidly became a fact is evidenced by finds at Ur and Uruk, especially the latter, which indicate that new modes of economic action appeared suddenly just before the end of the fourth millennium B.C. This development, it seems clear, was merely an aspect of the general social upheaval which came with the perfection of metallurgy.

In the use of capital the chief activity was the making of exchanges of value stored in metals for real goods—lands, cattle, wheat, wool, cloth, pots, ores, etc.; to regularize such exchanges by fixing rights in property the *contract* was invented. The first contracts were entered into between Sumerian temple officials and cultivators for the rental of fields, houses, oxen, and boats. In Hammurabi's time the ownership of private property was so widely diffused that business on a contractual basis was the normal fact of Babylonian economy. The leasing of houses was particularly common; renters were expected to furnish their own doors as well as to keep the walls and roofs in repair. The Sumerians generally sealed contracts before witnesses and registered them with temple officials. In Babylon sales were illegal unless sworn to by witnesses. Contracts were in general use in Egypt under the Middle Kingdom.

The contract was the core-invention of business; its primary elaboration was the loan-and-interest contract, *i.e.*, the promissory note. The original loans seem to have been advances by temple officials to cultivators, who at harvest time repaid the advances together with an additional sum. In Sumer the interest rate on such advances ranged from 15 to 33 per cent. Hammurabi fixed the legal rate at 20 per cent. Loans for commercial purposes in his time were infrequent. The techniques of credit operations spread from Babylonia to Egypt, Assyria, and Asia Minor. Recently there has been found a tablet containing a list of investments of an Assyrian merchant in Asia Minor, where he had made loans to nine different individuals. The rates of interest paid by these persons varied generally between 24 and 30 per cent. One of them paid over 1,000 per cent.

A full picture of business as finally developed in Mesopotamia is given by documents from Nebuchadnezzar II's Babylon. The legal forms of various types of contracts—bills of sale, promissory

notes, deeds, and mortgages—were established, and the granting of loans had become a field of enterprise. Transactions involving the lending of capital for various commercial, industrial, and agrarian purposes were common. Although the temples, particularly the temple of Shamash at Nippur, still made loans, moneylending had largely passed into the hands of a small number of very wealthy families. They regularly dealt in loans of grain, dates, and lands at the rate of 20 per cent a year. For these loans they demanded security, usually the pledge of a piece of property, and, when a debtor defaulted, the pledge was taken up. A general attachment clause in contracts gave the creditor the right to seize all of a debtor's property. However, it was a common practice to "carry" a debtor who could not meet his obligation, although no loan contract was settled until the original sum was entirely repaid. By demanding pledges, interest was beaten up from 20 per cent to much higher rates. Loans for a half year sometimes paid as high as 40 per cent. Loans on fields and cattle often ran for considerable periods, sometimes for as long as ten years. Often a son had to settle for the contracts his father had made. Although Babylonian "businessmen" did not invent the practices of discounting loans and compounding interest, they learned to take advantage of seasonal variations in prices.

Thus the manipulation of the economic surplus in terms of the right of private property gave rise to business as contrasted with the economic processes of production, distribution, and consumption. These processes had gone on before there was an economic surplus; business—a manipulation of wealth that may or may not increase its amount—became possible only with the formation of an economic surplus.

3. *The Appearance of Economic Self-Interest.* Primitive men worked because they were in need or because they were pleased by it. Under urban cultures men found new reasons to work, or rather reasons to seek the possession of wealth they did not produce; more bluntly, the formation of the economic surplus which released some men from the necessity of winning their own subsistence provided a motive for men's attempting to obtain possession of portions of the surplus. The upshot of this circumstance was to make the pursuit of economic gain a leading motive. If the right of private property in the role of Hyde compelled some men to work hard for little reward, in the role of Jekyll it continually drove other men, seeking ever larger portions of the surplus, to increase the total surplus. The desire to possess a portion of the

economic surplus was, therefore, a leading cause of its continuous augmentation; thus urban cultures begot the increase of the wealth which was necessary to their existence. This augmentation was socially good, because with every increase of the economic surplus there were further liberations of energy and ability, if not richer satisfactions of needs and aspirations.

By setting before men the opportunity to acquire possession of wealth in ever greater amounts, urban cultures shaped a behavior in which the economic motive was a leading element, and, therefore, it can be argued that *economic self-interest* is a social and cultural, not a biological, fact. The economic advantages and disadvantages flowing from economic self-interest have always been distinctive aspects of urban cultures.

THE RISE OF SOCIAL CLASSES

The transition from the more or less homogeneous societies of early hunting, herding, and tilling men to the class organization of urban men was brought about in a complex process which made the possession of or the lack of the possession of power, or wealth, or prestige, or learning, or some combination of them, a distinction among individuals. A group of individuals sharing such a possession or lack of possession and recognizing membership in its terms is a *social class*. Social inequality was, therefore, a primary aspect of urban cultures from the first.

Comparative studies of primitive cultures suggest that social distinctions became more clearly defined as hunting gave way to nomadic and agricultural occupations. Age, *i.e.*, survival, was probably the first factor which gave social distinction; it defined the "elders," who were the recognized carriers of the sanctions of the past. Among the elders traditions of achievements of ancestors probably first distinguished individuals in terms of prestige and power. Those peculiar qualities which helped an individual to become a shaman also played an important part in early social differentiation. But in hunting and the early nomadic and peasant-village societies, economic distinctions were the result of these other factors. The elders, the shaman, and the "big man" received economic favors because of the qualities which already gave them distinction. The modern view—economic determinism—that the economic factor is decisive in the process of social differentiation is not confirmed by a study of the evidence of the origins of social distinctions.

However, in early urban cultures, the chief circumstance in the further development of social distinctions and in their class

organization was the formation of the economic surplus; in fact, when social classes were finally established, they were distinguished mainly by a difference of position with respect to the production and distribution of the economic surplus. In this difference of position were expressed the diversification of occupations and the division of labor between occupation and the direction of enterprise that was at the base of the production of wealth in urban cultures. Differences in consumption and authority were by-products of these economic distinctions. In a very definite sense these developments were merely aspects of the growth of a social cooperation without which urban culture could not exist. Social classes did not arise because individuals sought to create them. How, indeed, could man conceive a class structure without experiencing it? Rather, social classes arose because men discovered new potentialities for living and sought to realize them. The results of the efforts were quite unforeseen.

Class distinctions in early urban cultures were fixed in various kinds of social controls—tabus and customs and, above all, law, which, as the peculiar social control developed in urban cultures, performed the function of defining class rights and obligations. Law and also government owe an original class character to the fact that they were products of the social process which produced class distinctions.[1]

Under the primitive theory of daimonic powers social distinction was interpreted as a manifestation of divine favor, so that religious sanctions played a great role in establishing the positions of the early special-interest groups; the extreme form of this development is the *caste system*, *i.e.*, a structure of completely exclusive classes preserved by the observance of religious rites. But movement of individuals from one class to another was generally possible, and from time to time new specialization altered the positions of all classes, so that the tendency of class structures to solidify and remain unchanging was seldom worked out.

The decisive fact in the maintenance of the position of a social class is, perhaps, the control of the entrance of individuals into the position—economic or religious or political—its members hold. The most effective control, of course, is biological, *i.e.*, by birth. But there are other methods of control. Initiation, which involves the

[1] On the origin of social classes see Gunnar Landtman, *The Origin of the Inequality of the Social Classes* (1932); A. M. Hocart, *Kings and Councillors: An essay in the comparative anatomy of human society* (1936); Talcott Parsons, "An Analytical Approach to the Theory of Social Stratification," *The American Journal of Sociology*, Vol. 45 (1940), pp. 841–862.

performance of certain acts in terms of which the individual may be admitted or rejected, is probably older than the biological control. Appointment by the recognized head of a special-interest group or election by a body within a special-interest group charged with control over admissions to it, are later devices found serviceable in selecting members. But special-interest groups, however perpetuated, always possess privileges which lead them to unite in defense of their position and which set them off from other groups. In the main, too, these privileges always combine a possession of wealth and social power or a lack of them in such a way that control over another group or control by another group exists. The central fact in the existence of a social class is an exercise of power, either by it or upon it, which may call forth a counter exertion of power. Such power, of course, may touch one or several aspects of life; in other words, it may be more or less complete. Inasmuch as the bases of power and the modes of its exertion change as culture develops, the special-interest groups or social classes can be defined only in terms of the form of power a given culture embodies.

The Priest Class.

The prominence of religious artifacts, such as temples and tombs, in the remains of early cities indicates that the leaders of the new communities were priests, or rather priest-chiefs, who exercised both religious and secular powers. They received the accumulating economic surplus and, using it according to their conception of the role they played in the daimonic universe, built temples to the gods and tombs for themselves. The claim of these early priest-chiefs to the economic surplus had its origin in the universal primitive belief in sorcerers and medicine men as necessary mediators between men and the overworld of spirits; the economic surplus was the gift of the spirits whose favor the priest-chiefs successfully cultivated.[1]

In Sumer the god of the city was regarded as the ruler; the patesi, or human ruler, was simply his representative. This belief made the power of rule religious, and those who exercised it were,

[1] Gunnar Landtman, *The Origin of the Inequality of the Social Classes* (1938), pp. 114–115: "Everywhere the authority of priests is upheld by the same popular belief in their superiority and in the advantages obtainable through them. Everywhere their mediation is required in the craving for supernatural assistance in the adversities and misfortunes of human life. . . . Priesthood owes its origin to the universal need felt by mankind of superhuman assistance in the struggle of life." By permission of Kegan Paul, Trench, Trubner & Co., Ltd., London.

consequently, priestly governors. The church and state were so bound together that those exercising authority formed a theocracy, functioning on the one hand religiously and on the other hand secularly. In Egypt the pharaoh was originally believed to be a "living god," and those associated with him were known as the "servants of god." Although some of these servants had mainly religious duties and others performed secular tasks, they formed a single body whose members exercised the power of god. Through this body the divine power functioned as priest, warrior, judge, the protector of fields, and the patron of the arts and crafts. The pharaoh nominated the members of the group from a small number of families; originally, it may be surmised, the families belonged to his clan.

When fully developed the priest class of Mesopotamia was a hierarchy of three orders: (1) a college of high priests in each temple, (2) magicians who performed many functions in the temples, and (3) soothsayers or diviners who, living around the temples, were consulted about all kinds of private and public business. The high priests, appointed by omens, often were members of families serving in high political and military positions; in fact, the highest political and military ranks and the upper priesthood were generally a single class. The magicians and soothsayers were usually the descendants of priests. These orders wore a distinctive dress—a long fringed robe—shaved their heads, and went barefooted. Hammurabi's code defined a privileged position for the priest class. After Hammurabi's time the priesthoods of the various cults enjoyed certain economic advantages but possessed little political power, for they never united to form a single order in a consolidated state.

Late in the Pyramid Age in Egypt a distinction between the priestly group around the pharaoh and the priests of the temples appeared, and, in the course of time, the practice of allotting lands and income to the temples laid the basis for the growth of a priest class independent of royal authority. During the disorders at the end of the Old Kingdom royal representatives no longer inspected the temples or collected taxes on temple properties. With the rise of the Middle Kingdom the pharaoh recovered control of the temples, but the fusion of the priesthoods of Thebes and Heliopolis in the cult of Amon-Re created the germ of a new priest class, which certainly shared in the government of the empire that arose after the expulsion of the Hyksos. Under Hatshepsut the high priest of Amon was also vizier and minister of finance, as

well as the chief of the priests of upper and lower Egypt. By this time, however, other special-interest groups had appeared, especially a secular ruling group with two divisions, the bureaucracy and the army, so that the priesthood, although it was a privileged group, was not dominant. It seems that the priesthood of Amon-Re joined the military group in supporting Thutmose III when he ascended the throne and in opposing Ikhnaton when his policies not only violated established religious traditions but also threatened the existence of the empire. It is certain that this priesthood played a part, along with the army, in raising Horemheb to the throne. The restoration of the worship of Amon-Re which followed this event brought a consolidation of the priests of Heliopolis, Thebes, and Memphis and their achievement of both wealth and power. For a time certainly they dominated the throne, and those kings who were not obedient were deposed. After Rameses II the high priest of Amon-Re was the most important personage in the royal retinue, and the priesthood of Amon-Re was a state within the state. The soldier who founded the Twenty-first Dynasty (1094–947 B.C.) first seized the office of high priest and then made himself dictator. This event would seem to indicate that the possession of religious power was necessary to the exercise of the authority of the headship of the state.

During the last period of Egyptian history the priest class became a caste, dominated by a number of priestly families. It was organized as a hierarchy of several grades, the members of each possessing special privileges and wearing distinctive garbs. Membership in the hierarchy was hereditary, as were also the exemptions from paying the poll tax and performing forced labor. No one whose grandfather had not been a member of the hierarchy could become a priest. The wealth of the hierarchy was very great. In the twelfth century B.C. 2 per cent of the people were temple slaves and 15 per cent of the land was temple property. New gifts from the pharaohs constantly increased this wealth. But gifts did not satisfy priestly greed. To whoever had money to buy the priests sold scarabs which, laid on the breast of the mummy, were believed to silence the accusing voice of the heart before Osiris in the Hall of Double Justice; they also sold charms and spells for the dead to repeat and models of animals and workers to place in graves. The priests were not above tricking the people with mechanical images of the gods which moved forward through slowly opening doors when offerings were placed on the altar or turned their eyes when suppliants addressed prayers to them. This privileged and enor-

mously wealthy class virtually ruled Egypt until the Macedonian conquest in the fourth century B.C.

In evaluating the role of priest classes in early urban cultures it must be recognized that once they obtained possession of the economic surplus, economic interest compelled them to undertake works to increase the surplus; thus they became the administrators of estates, the directors of water control, the organizers of urban defense, and the promoters of commerce.

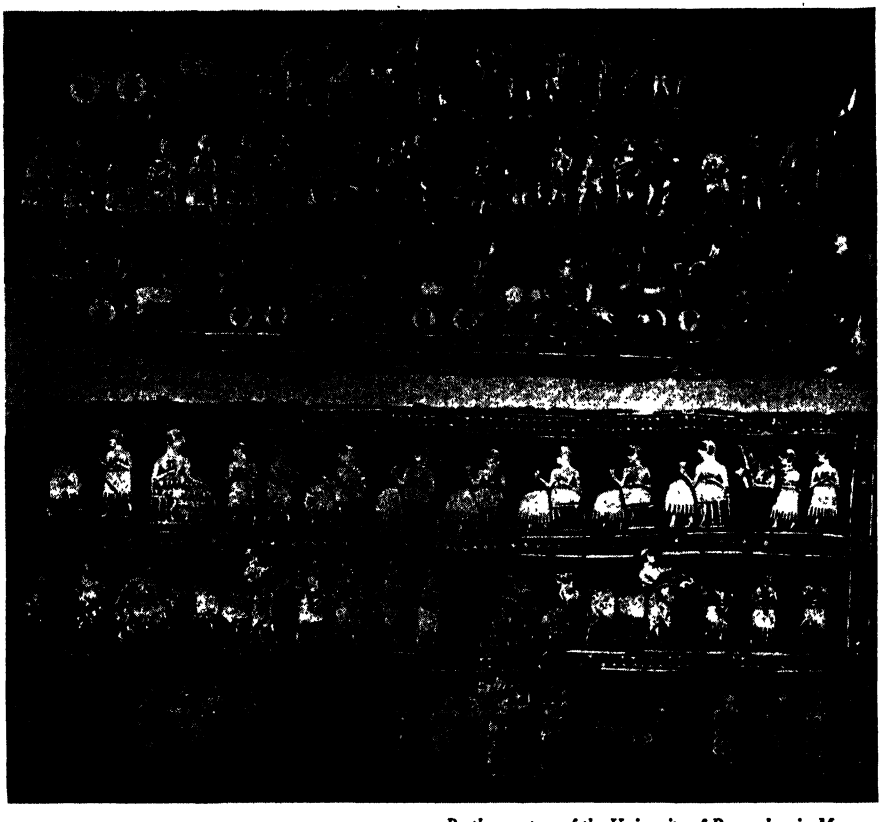
In these various capacities the priests acted as a possessing and ruling group, instructing the cultivators in the piety which ensured the replenishment of the economic surplus, managing the collective enterprises that added so much to the surplus, and enjoying the leisure and luxury which the possession of the surplus made possible. All early urban cultures were greatly enriched by these activities.

THE MILITARY CLASS.

In the early cities the fighting forces were drawn from the general body of the population as occasion demanded, and the priest-chiefs served as commanders. In Sumer the *levée en masse* long remained the regular means of raising troops; the civil officials were the officers. In Egypt until the rise of the empire the army consisted of the militia of the nomes.[1]

Although Sargon of Akkad seems to have established the first permanent military force in Mesopotamia, the Sumerians were the creators of organized warfare. The earliest evidence of an organized army is a monument set up early in the third millennium B.C. The two panels recently discovered at Ur add details as to the kinds of fighting men that formed these early armies. Inasmuch as the earliest representations of the Egyptian pharaoh show him coercing his enemies, it may be assumed that he was the chief of a military force as well as the head of a body of priests. When these two groups were differentiated in Egypt is not clear. However, it seems certain that the feudal age which saw the priest class become independent of the pharaoh's authority also brought the formation of a nobility which was military as well as political in character. But it is not certain that its members owed their position to military power. With the rise of the Middle Kingdom the pharaoh held power more by virtue of his command of a military force than because he exercised priestly functions. It is probably true that the

[1] On evolution of military forces see Oliver L. Spaulding *et al.*, *Warfare: A study of military methods from the earliest times* (1925).



By the courtesy of the University of Pennsylvania Museum

THE SUMERIAN ARMY

These two panels recently discovered at Ur show clearly the Sumerian army in various actions—in organized array headed by the king, in battle, in pursuit of the enemy, and in victory, plundering and feasting. Modern men have been taught so well that wealth is the source of power that they have forgotten that throughout history power has generally dictated the disposal of wealth.

chief social difference between the Old and the New Kingdom was the distinction between the priestly and military classes which existed in the latter. In Mesopotamia a military class appeared with the rise of Babylon, for Hammurabi's code defined its position. In return for military service, its members received grants of land and privileges from the king. The land could not be seized for debt, and the king was bound to ransom its holder in case he was captured in war. When Hammurabi displaced the priests as judges and governors, he appointed members of this class to the positions.



From ALBRECHT GÖTZE, *Hethiter, Churriter und Assyrer* (1936). *H. Aschehough & Co., Oslo*

THE ARMED HORSEMAN

This relief from Tell Halaf is among the earliest records of the armed horsemen who appeared in the ancient-oriental urban culture areas with the invasions of the Indo-European peoples. As a socio-cultural type the armed horseman or knight was the product of a revolution in military technology; for this reason his coming changed the composition of urban ruling classes more than it did the social structure of urban culture.

During the imperialistic struggles of the second millennium B.C. military classes became differentiated and established themselves alongside the priest classes as the possessors of wealth and power.[1] The introduction of bronze weapons seems to have led to the separation of the first specialized military forces from the ancient militia. Advances in military technique after the beginning of the second millennium B.C. carried this separation much farther. Every-

[1] See Eduard Meyer, *Geschichte des Altertums*, Vol. II. *Die Zeit der Aegyptischen Grossmacht* (1928), pp. 44–46.

where the introduction of the horse and chariot led to the formation of new military aristocracies. The prototype of these aristocracies came into the ancient-oriental urban areas with the Indo-European peoples; the individual type was the warrior-noble. In the Egyptian empire men who could furnish their own horses and chariots were given lands and freedom from taxation. And their sons, starting as stable boys, were trained for the army. Even the sons of the pharaohs came to go through this training. A special body of officers also appeared. Thus, although the priests of Amon-Re were powerful in domestic affairs, a military clique long controlled imperial policies.

The appearance of the military groups in the Egyptian empire was also evident in the activity of "veterans" and mercenaries. After campaigns in Syria, soldiers who returned to Egypt sometimes took to plundering the population. Mercenary troops, mainly foreigners, were used against them, but after a while they became even more troublesome than the veterans.

The same factors which made the military class an element in Egyptian life gave it significance in other lands. The Hittites and the Mitanni were horse-owning aristocracies, ruling conquered populations. And the Assyrians were governed by a thoroughgoing military aristocracy.

The differentiation of the priest and the military classes seldom resulted in clashes between them. The normal circumstance was their alliance in a common rule over the masses. The members of the military class believed in the theory of the daimonic universe which sustained the doctrine of the divine source of political power; and the priests, eager to retain power as well as economic advantage, were not averse to finding in this doctrine sanction for a rule which actually rested on force. Thus the Assyrian autocrats declared that Ishtar, mighty queen of the gods, had granted them "the scepter of justice" and did not embark on any public action without consulting her priests. During the age of imperialism the military aristocracies and the priest classes were the right and the left hands of a political rule, which, as far as the masses were concerned, must have seemed ambidextrous.

The Merchant, or Businessman, Class.

The differentiation of the function of economic enterprising from religious and military activity was very slow. Originally, of course, the direction of cultivation, industry, and trade was carried on by the priestly groups, and with the emergence of military

groups it commonly remained a state function, especially in Egypt. Although traders existed in Egypt under the Old Kingdom there is little evidence to support the conclusion that they were either numerous or wealthy or powerful, and at no later time did they become sufficiently prominent to be an independent factor in the national life. In Mesopotamia a merchant group, probably under royal patronage, appeared about the middle of the third millennium B.C. The golden age of Ur certainly knew the "independent businessman," and he was a prominent figure in Hammurabi's time. Under Kassite rule the "businessmen" of Babylon prospered and extended their interests throughout the Fertile Crescent. After the expulsion of the Kassites they became the chief power in lower Mesopotamia; they supported the Chaldean empire because they determined its policies:

> A capitalist trust stood four square and confronted the claims of kings and people and the force of external powers; it stood secure, buttressed by its philosophy of life. . . . The king was expected to recognize absolutely the divine causality; his whole life was to be devoted to prayer, the consultation of omens, and the restoration of temples. He might use force only in order to punish transgressors, and then he must put the memory from him. This meant that he was in the hands of the priests; but the merchants were at one with them. They wanted a king who would not hinder trade and restrict profit, a police-king at all costs, and one who made the most modest demands on the taxpayers, who would neither wage war nor limit their own power.[1]

As this passage suggests, the priest class found a way to retain influence even when "businessmen" rose to power. Babylon produced the first of those mercantile oligarchies which for centuries were to be the only rivals of the priest classes and military aristocracies for positions of dominance in urban culture groups. Late in the imperial age these groups, although not always ruling, were prominent in every important commercial center, and in the Phoenician cities they were the politically powerful class.

The Working Class.

The formation of the economic surplus, the development of industrial technology, and the growth of commerce were accompanied by economic specializations which created the working class of urban cultures; in the main it consisted of three parts—peasants,

[1] Hermann Schneider, *The History of World Civilization from Prehistoric Times to the Middle Ages* (2 vols., 1931), Vol. I, p. 136. By permission of Harcourt, Brace & Company, Inc., New York.

craftsmen, and slaves—each of which had a status somewhat different from the others.

1. *The Peasants.* The original cities were clusters of peasants under priestly rulers. The social base of urban cultures was, therefore, a peasantry, whose members, as tillers of the soil and keepers of cattle, created and replenished the economic surplus that went into the hands of their priestly rulers. In every respect, except one, these tillers of the soil lived as had their primitive peasant-village ancestors; the one alteration in the primitive manner of life was the imposition of the social controls that drained away from them the surplus their labor produced. These controls were: (1) obligations to the gods, *i.e.*, to the temples, (2) the payment of interest on loans made by temple officials to the cultivators, and (3) taxes, such as the poll, or head, tax. At what time the private ownership of land was made the means of appropriating all produce above the amount necessary for the peasant's subsistence cannot be determined, but the landlord must have existed in both Mesopotamia and Egypt by the opening of the third millennium B.C. The outcome of these developments was to fix the peasants generally in a status similar to that which later times have known as *serfdom*, *i.e.*, they were bound to the land and under obligation to work it.

Although the Egyptian documents do not speak of serfdom, there is reason to believe that the great body of workers on the land had very few legal rights, if any. Under the Old Kingdom the cultivators seem to have been organized in units of five "hands" under a leader who had the power to discipline them; these units were combined in gangs of tens and hundreds. The pyramids were built mainly by workers drawn from agriculture during the slack seasons; only a small body of workers remained on the job throughout the year. After the fall of the Old Kingdom the control of the workers passed into the hands of the nobles and temple priests, who used them as they saw fit. However, there is evidence that just as the nobles and priests freed themselves from royal authority, so some groups of workers obtained charters that made them independent. These groups formed the first free working class in Egypt. Under the Middle Kingdom all classes of workers, although owing heavy obligations to the state, were organized under their own leaders, who dealt with the royal overseers; this system amounted to a regimentation with the workers participating in allotting work and adjusting grievances. Under the Egyptian empire the peasants seem to have had obligations only to the state, except on those lands given to the temples, where they labored for the priests.

Control over the peasant seems to have been exercised through the head of the family, who was regarded for purposes of economic management and accounting as a state functionary. The extent to which the peasants were subject to enforced labor, as well as the degree of their freedom to move about, buy and sell, and own and lease land, is not clear. However, inasmuch as the pharaohs looked upon all resources, except those granted to temples, and upon the population as engaged in their service, it may be assumed that, regardless of looseness of organization, the peasants were subject to controls that diverted to the state a large part of their produce.

In Mesopotamia the status of many tillers of the soil seems to have been from a very early time that of serfdom. The provisions of Hammurabi's code, which recognized landlords, tenants, free peasants, and agricultural laborers, probably only summed up the development of economic specializations on the land. Under Assyrian law the serfs, who seem to have been numerous, could not leave the land; in fact, they were bought, sold, and inherited with it. One-half of their produce went to the owner of the land, who, in turn, had obligations to the state. Loans of seeds and food to the serf were repayable, however, without interest. The serf was also subject to enforced labor on roads, canals, and government structures.

As indicated by the differences of status among workers on the land in Assyria, the imperial age brought a diversification of the forms of control over agricultural production. Some lands were cultivated as crown possessions by state serfs. Similarly some were held by temple priesthoods and worked by temple serfs. The owners of private estates also had serfs to grow their crops. Under the estate system, which spread in the late imperial age, the owner commonly left the management of production and supervision of labor in charge of an overseer. As the growth of cities provided markets for agricultural produce, higher profits could be made by slave labor, which, as a result, was adapted to cultivation in late imperial times. However, it appears that the free peasant landholders owing taxes rather than labor to the state increased in numbers in these times. Assyria, for example, was originally a nation of free farmers (who probably had their own serfs) bound to perform military service to the king, and its power declined as these farmers lost their status. With the rise of money economy at the end of the imperial age, farming for profit expanded, great estates grew, many free peasants became landless workers, and serfs and slaves increased in number.

The significant factors in the life of tillers of the soil everywhere, regardless of the changes of control under which they worked the land, were (1) the village, where, it may be assumed, community, family, and religious life preserved their ancient patterns, and (2) the controls governing their labor, which, regardless of form, left in their hands only a bare subsistence. Because land was the chief source of wealth, they far outnumbered all other socio-economic types combined; because their technology was crude, their productivity was low, so that the maintenance of the economic surplus, so necessary to urban culture, was possible only if a considerable portion of the product of their labor was drawn away from them. In these aspects of the life of the tillers of the soil were fixed the fundamental conditions of mass life in ancient-oriental urban cultures.

2. *The Urban Craft Workers.* The earliest view of specialized craft workers reveals them concentrated about temples and shrines, where they worked under priestly controls. But, at least in Mesopotamia, where production for a market began, they spread very early to shops and bazaars. An urban working class seems to have been formed first in Babylonia, whose merchants supplied manufactured wares to Syria, Asia Minor, and the Armenian Highland. In Egypt the evolution of an urban working class was very slow. Under the Old Kingdom the craftsmen worked around the residences of the pharaohs and high priests and on estates. There is evidence that even in this age the most highly skilled workers were differentiated from common laborers; designers seem to have had an especially favored position. During the feudal age most of the craftsmen, like some of the peasants, seem to have obtained charters which established their freedom. The craftsmen of a village or town were organized under their own leader for the pursuit of their own interest. However, since production was carried on for household use and not for the market, these groups did not join in any common action. Families of craftsmen jealously guarded their special knowledge and skills, which were transmitted usually only from fathers to sons. Under the empire all workers, such as weavers, spinners, jewelers, porters, carvers, sailors, etc., were registered in brotherhoods or associations and worked under the supervision of royal overseers. They had the right to complain to the pharaoh against the inspectors. They were mostly attached to royal estates or temples, from which they received their wages in kind. Of special importance at this time were the workers at the crafts which produced chariots, bows and arrows, special costumes for soldiers, and a variety of incidental weapons; they were the workers in

the world's first identifiable munitions industry. On the whole the Egyptian skilled workers were more closely attached to the privileged classes than to the great body of peasants, porters, and building laborers, and many of the pharaoh's inspectors were probably drawn from the ranks of the older craftsmen.

Recent excavations at Amarna have revealed a workmen's settlement which seems to have been set apart from the city in order to keep the men and their families under discipline. The town was surrounded by a wall, guardhouses were located on the roads leading to and from it, and watchers on the cliffs above it could keep the denizens under constant surveillance. It seems that tomb workers and grave tenders, who had a reputation for disorderliness, were forced to live in closed communities as early as the Pyramid Age.[1] This treatment of workers refutes the assertion, sometimes made, that the building enterprises of the pharaohs were humanitarian activities to relieve unemployment.

Under Assyrian rule the craftsmen were organized in "colleges" or "guilds," which became the typical free working-class association of later times. Originally, it may be supposed, these bodies were useful in the management of production, but as the imperial age destroyed ruling groups, they remained as workers' organizations. Their religious characteristics were probably survivals of the early temple administration of labor.

In ancient-oriental times the number of craftsmen who worked exclusively at particular industries was probably very small, and many crafts, especially those which satisfied mass needs, were carried on by peasants or in the households of the landowners. The workers at the luxury trades were always set apart from such common workers. It was the growth and improvement of the cities, the development of ironworking, the organization of armies, and the expansion of shipping in the later imperial age which first gave rise to considerable bodies of urban workers other than the skilled craftsmen. At this time also large bodies of workers producing for an export market were formed in the Babylonian and Phoenician cities. The effect of these developments was to create for the first time in history an urban working class divorced from the land.

3. *Slaves.* Although slavery seems to have appeared in peasant-village cultures, it became a significant social institution only in urban cultures. At first slaves were probably confined to the temples, but later they became numerous in both urban and rural

[1] See T. Eric Peet and C. L. Woolley, *The City of Akhenaton* (1923).

districts. Besides temple slaves, who discharged religious duties, four types of slaves appeared: (1) domestic slaves, who performed menial tasks, (2) craft slaves, who worked in shops and markets, (3) gang slaves, who dug canals, erected walls, and built temples and tombs, and (4) rural slaves, who tended fields, orchards, and flocks. Slaves had the legal status of chattels, *i.e.*, they could be bought, sold, loaned, and pledged. But everywhere there were variations in status which affected their well-being. Generally speaking, hardships increased in the age of imperialism. The legal position of the slave under the code of Hammurabi has already been noted.[1]

The original Sumerian sign for slave, which meant "a male of a foreign land," suggests, probably correctly, that large-scale slavery originated when captives in war were no longer killed but were compelled to work for their captors. Sargon of Akkad introduced the practice of enslaving the entire populations of subjected cities. Although the pyramids were built by forced labor (barracks for four thousand men are still recognizable near one of the pyramids), large numbers of slaves did not appear in Egypt until after territorial expansion into Nubia and Syria. Then captives were organized on a military basis, the lists of slaves, including children, were kept up to date, the slaves were branded like cattle, and slavery in agriculture was begun. Assyria developed the policy of enslaving and transporting the populations of conquered countries. The mercantile oligarchs of Babylon recruited slaves largely by purchase. To supply them Semitic tribesmen made raids all around the Fertile Crescent and, it seems not unlikely, began to penetrate Africa. Debtors and the children of slave parents everywhere swelled the slave ranks, and freemen could and did sell their children into slavery. It is impossible even to guess the number of slaves held at any time by Egypt or Babylon; in the imperial age, when governments owned masses of public slaves, it seems safe to conjecture that they formed a significant proportion of the population.

The growth of slavery was stimulated by the formation of the economic surplus because for the first time it gave men value as workers. Slavery was a device for transferring the product of labor, above the barest minimum necessary for its subsistence, to those who possessed control over labor. Under the priest-chiefs' rule, slavery was not highly developed, for the ordinary religious controls were adequate to guarantee transfer of the surplus from the tillers

[1] See p. 141.



From Thebes

UPROOTED PEOPLES

This wall painting from Thebes, showing two Nubians, an Asiatic, and a Libyan, suggests one of the most important social aspects of the expansion of urban cultures, namely the uprooting of peoples. When conquered peoples were introduced into the labor force of an urban culture, they created new social circumstances and spread foreign cultural materials. The ultimate effects of this uprooting were a change in the basic population of the urban culture and a reorientation of its fundamental tradition in terms of the emotional outlook of the new basic population. These effects were usually manifested in a religious movement.

of the soil to the temple groups. When the introduction of metal tools and the development of systematic irrigation increased the surplus, slavery grew rapidly. Those developments of the imperial age, such as the rise and fall of empires, the expansion of commerce and industry, and the formation of military aristocracies and mercantile oligarchies, which were the consequences of the increase

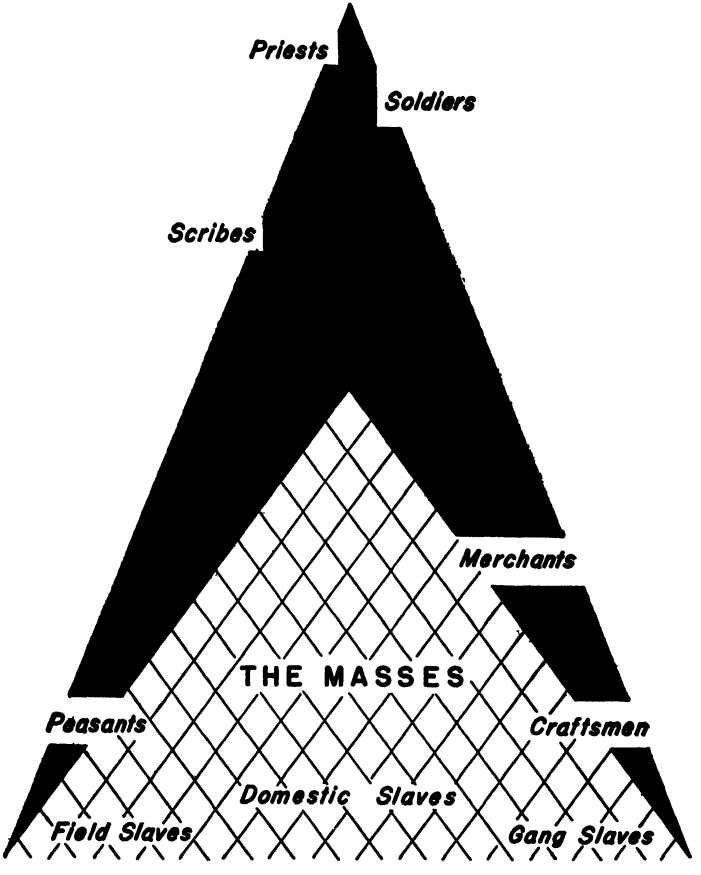
of the economic surplus, not only intensified the struggle for its possession but also promoted the growth of the chief means of its production and seizure, *i.e.*, slavery. No early urban ruling class ever thought of abolishing the right of enslavement, which was, after all, one of the chief attributes of power.

4. *The Conditions of Life of the Workers in Early Urban Cultures.* Except insofar as harsh rule imposed excessive burdens of labor, the members of the early working class lived much as did their neolithic ancestors. They dwelt mostly in villages not at all different from the ones their ancestors had known for thousands of years. In the cities of Mesopotamia their reed-and-mud huts were crowded around courtyards where filth accumulated and stench rose to heaven. In Egypt the urban workers lived in dirty back-to-back cubicles. They possessed only the simplest furniture, domestic utensils, and clothing; their children ran about dirty and naked. The Babylonian workers subsisted chiefly on grain, vegetables, and dates, which were allotted to them in quantities barely sufficient to maintain life; the standard diet of the Egyptian workers was bread and beer. Generally the peasants and craftsmen were better housed and fed than the slaves, but their mental and physical health was never touched by education or medical attention. To work and to procreate were their expected contributions to social order. The rise of cities and empires meant for them only hard labor, arbitrary exactions, and the sufferings of man-made calamities.

The Origin of Class Struggles.

Viewed as a whole the differentiation of social classes in ancient-oriental urban cultures produced the structure which is known as a *social pyramid.* At its summit were the priest class and the military aristocracy; late in the imperial age a small businessman class showed sufficient power in some places, notably Phoenicia and Babylonia, to rival them. In the cities the workers were mostly free craftsmen and slaves; in the country they were mainly free peasants and serfs. Generally the ruling classes recognized no kinship with the masses, and the latter, in turn, seldom, if ever, thought of altering their status. As time went on the social and cultural cleavage between the agricultural laborers and the urban workers became almost as wide as the gap between the workers and the ruling classes. Both the ruling classes and the urban workers felt the impact of urban social and cultural forces more than the agricultural workers, who, holding fast to the peasant-village way of life, were the least changing social element in the urban cultures.

ANCIENT-ORIENTAL SOCIAL PYRAMID



Although the tendency of early urban class structures was to solidify, class disturbances began very early. There is evidence that in the Sumerian cities different sections of the priest class quarreled over the division of the income of the temples. In Egypt at the end of the Fourth Dynasty the pharaoh engaged the priests of Re in a struggle for supremacy; he carried his opposition to the point of refusing to be buried under the symbol of Re. The lower classes seldom appear in the documents of the ancient-oriental urban cultures. Nothing is known of their political activities, if they undertook any, in Mesopotamia. However, it can be inferred from passages in the "Epic of Gilgamesh" that there was opposition sometimes to forced labor. In Egypt two revolutionary outbreaks by the lower classes are known. The first, as previously noted,

occurred at the beginning of the Sixth Dynasty, the second under the Twentieth. Both had origin in the failure of the ruling classes to permit the masses to have sufficient food, and both were accompanied by disorder, murder, and robbery. The first destroyed the power of Memphis, the residence of the pensioners of the early pharaohs; the second weakened the position of Thebes, the capital of the empire. In the second revolution soldiers joined the workers in plundering temples and tombs. Gangs of tomb robbers worked openly. "Fences" received the stolen goods. Officials, who shared in the spoils, winked at the depredations. Upper Egypt never recovered from this disaster, and power passed to the cities of the Delta, where foreign influences were strong.

Besides the exploitation of the economically weak by the politically strong, the chief cause of class struggle was the rivalry of classes sharing possession of the economic surplus for the power and wealth its ownership gave. However, general developments of culture which, by their nature, altered the positions of classes contributed to the occurrence of class conflicts; among these general developments may be mentioned: (1) an increase or decrease of the economic surplus which altered the circumstances around its possession, use, or replenishment, (2) a development of military techniques which shifted physical dominance from the many to the few, or vice versa, and (3) a diffusion of literate learning which gave to a new group the opportunity to redefine the position of other social groups, especially in a way favorable to itself. With respect to each of these factors an observation may be made. The increase of production that came with the introduction of bronze and iron seems to have led to controversy and conflict between secular and priestly rulers. The displacement of the priest class, at least to the extent that it was forced to share power with the military class, was due to the specialization of the military class that came with the introduction of chariotry. The emergence of merchant aristocracies was partly a result of their mastery of writing, which gave them the means of organizing government. The failure of the masses to rise above destructiveness in these struggles was caused largely by the fact that they never possessed either the political experience or the intellectual training necessary to develop a regime in terms of their interest. Usually several factors operated together in complex relations to cause class struggles, so that they never became clear-cut conflicts between two classes over a single issue; however, it should be emphasized that there were no class struggles in which the possession of the economic surplus was not at stake.

The Social Characteristics of Ancient-Oriental Urban Cultures.

The fundamental social characteristics of ancient-oriental urban culture had origin in the differentiation of the relatively small urban population from the rural masses and in the interactions between the urban culture group as a whole and external peoples.

The rural masses lived mainly in villages, more or less isolated from one another and also from the city; little occurred in the villages to disturb the modes of the primitive organization of life. The occupations were few and simple. Production was low, and the surplus was drained away. The villages were not a market for urban products. However, along with the wealth of the countryside which nourished the city went, it may be believed, a constant stream of migrants, for there is no reason to suppose that the early cities, any more than their successors, produced enough new persons to replace their populations from generation to generation. Sometimes the migrants were attracted by the great opportunities of the cities; and sometimes they were driven to them by changes which disorganized established relations between the land and its inhabitants. In the evolution of the ancient-oriental urban cultures appeared for the first time in history not only the landlord, the tenant, and the free farmer, but also the landless laborer, who, because his labor was important, became a serf or a slave. These specializations had origin more in urban economic developments than in technological innovations affecting agriculture. Lastly, it should be mentioned that the rural masses, as the heirs of neolithic ancestors, carried the intellectual outlook of primitive men. For them custom and the daimons ruled, except where urban governors fixed the law.

Within the small urban population went on an intensified competition for wealth, prestige, and power, as well as the heightened social interaction, which stirred energies and called forth abilities. The city was a creator and an organizer of a cultural tradition not because its denizens were more intelligent than the rural masses but because they were stimulated in this intensified social process. Among them the materials for innovations were more numerous than in the villages, and the rewards for making them were frequently quick and great. However, the social specializations made possible by technological departures and new economic and political functions were soon shaped into a structure of relations within which the individual necessarily moved. Although

movement from status to status in this structure was never completely stopped, it tended to be greatly retarded except when some development, such as new methods of producing wealth or new means of exercising physical power over others, brought a rapid shift of social positions. Usually these disturbances of the urban social pyramid were closely connected with a disorganization of rural relations. Finally the city population developed an intellectual outlook informed with its diversified experiences but not less traditional. For it, too, custom and the daimons ruled, except where legal code and quantitative measurement defined the new relations that constituted the urban social structure.

At the edges of the geographical area within which a city had economic impact an interaction went on constantly between its directing groups and foreign peoples. From these peoples the city tended to draw raw materials, and to them it commonly sent some goods and a few adventurers; both stimulated the foreign peoples, on the one hand, to adopt ways of life diffused from the urban center and, on the other hand, to advance slowly in power until they were able to penetrate the urban area. Just as there was a constant movement within the urban culture area between the rural and urban populations, so was there also an interaction between the whole population of the urban culture area and the foreign peoples at its edges. Invasions by one or the other were recurrent, and when the foreign people rose to urban culture conflict for supremacy normally broke out. Imperial action, therefore, was an implicit element in the development of urban cultures.

Over a period of time, it appears, the development of an urban culture brought changes in the population. The flow of migrants from the villages to the cities was counteracted by the introduction of foreign peoples—sometimes as slaves, sometimes as laborers and peasants, and sometimes as soldiers. Conflicts among the urban wealth-holding and power-exercising groups killed off their members, so that, in time, even the composition of the ruling classes was altered. However, in spite of changes in the basic population and in the ruling classes, the cultural tradition persisted, for indeed the interaction that produced these phenomena was organized in its forms, and the new groups were bound by them quite as had been their predecessors. Invading peoples in an urban culture area, although they might preserve the special symbols that identified them as a people, usually took over almost completely the culture of the area. For this reason cultural traditions persisted, although ruling classes changed and the basic population was altered. Only

the complete disorganization of a carrying group, not the displacement of its parts, was sufficient to disintegrate an urban cultural tradition.

Within the social process in which these lines of action persisted was also the constant interplay of the interests of social classes. Among the classes possessing the means of power—military prowess, or intellectual leadership, or wealth—a struggle for ascendancy was more or less continuous, although they found cooperation in the exercise of power over the masses easy to achieve. Their attitude toward the masses was expressed in the concept "subject," which derived most of its meaning from the belief that man is dependent on the daimonic universe for well-being. Just as the daimons expected men to serve them, so the ruling classes demanded willing service from the subject population. Just as the daimons rightfully attacked men for resisting them, so the ruling classes made justice mean the infliction of penalties upon subjects who failed in the performance of their obligations. This attitude, which pervaded all ancient-oriental urban cultures, was well expressed in a Hittite religious treatise, a part of which is paraphrased below:

> When a slave stands before his master, he must be washed and he must wear clean clothes. And the slave gives the master to eat and to drink. Then the master eats and drinks, is refreshed, and is gracious towards the slave.
>
> If, however, the slave is neglectful, is not zealous, and is indifferent toward his master, the servant annoys him. Then the master kills him, mutilates his nose, his eyes, his ears, and seizes his wife and children, his brother, his sister, his relatives, his descendants, be they male or female slaves. Then the master disgraces him in public and no one cares. If the servant dies, he does not die alone but his descendants are buried with him.[1]

The sinner before his god was not different from the servant before his master. And the master's benevolence and anger were godlike. Thus politics and economics were served by religion in the maintenance of the social order of ancient-oriental urban cultures.

[1] Giuseppe Furlani, "The Basic Aspects of Hittite Religion," *The Harvard Theological Review*, Vol. 31 (1931), p. 254. See also Joyce O. Hertzler, *The Social Thought of the Ancient Civilizations* (1936), p. 360: "The admonitions, the prophesies, the list of proprieties, and the legal codes, all accept or at least consider social gradations and distinguish between members of the in-group and the out-group." McGraw-Hill Book Company, Inc., New York.

THE DEVELOPMENT OF POLITICAL INSTITUTIONS

The early priest classes governed mainly through religious forms, for they controlled social relations more by custom and ritual than by law. The theory of ritual as a form of social control is that the performance of certain routines of behavior, which have no utility as technological acts, is necessary to the achievement of desired social ends; this theory rests, of course, upon the primitive belief, noted above, that human affairs are directly influenced by spiritual beings whose cooperation in realizing human desires is to be obtained only by acts which win their favor or abate their hostility. When fully developed as a means of social control, rituals become ceremonials performed by regularly constituted authorities, *i.e.*, the priests of the temple or the princely residence. Both the Mesopotamian ishakku and the Egyptian pharaoh lived day by day under rituals, and each year they underwent a ritualistic purification for the benefit of their lands. In Sumer festivals were celebrated every month, and priests sang liturgies on certain days of each month. The inclusive system of rituals formed a religious calendar which guided all activities—economic, social, and political—regarded as having special importance for the common welfare throughout the year. The early priestly observations of earth and sky phenomena were necessary in order to harmonize these ritualistic performances with the cycle of the seasons. The maintenance of this harmony, especially after the community became dependent upon cultivation, was evidence that the priests succeeded in keeping the favor of the spiritual overworld. It is probably not incorrect to believe that in both the Sumerian and Egyptian regimes government was looked upon as a form of magic.

The Divine Foundation of Government.

The primary contribution of the early priestly rulers of cities to political development was the theory that government has a divine foundation. If this theory originally meant that government is a form of magic, later it came to mean that rulers are "gods," and still later that a system of political institutions is divinely established.[1] The Mesopotamian ishakku was the vice-regent of his city's god; the Egyptian pharaoh was the "living god." The corollary of this theory of government was the belief that the overworld of spirits sends prosperity only when rulers have divine approval. Perhaps the Assyrians best expressed this assumption:

[1] See C. W. McEwan, *The Oriental Origin of the Hellenistic Kingship* (Oriental Institute Studies in Ancient Oriental Civilization, No. 13, 1934).

The God, King of gods, has named the name of the King my lord, for the royalty over the land of Ashur. . . . Prosperous government, durable days, years of equity, abundant rains, full rivers, prosperous commerce. The old men dance, the children sing, the maidens are joyful, the women conceive. They give birth to boys and girls. Child-bearing is easy. In their joy they say to the children, "The King, our Lord, has made him." The prisoners thou hast delivered. Those who were long sick revive. The hungry are satisfied, the thin become fat, and the naked are clothed.

But the Egyptians were hardly less emphatic in their conviction that well-being was the gift of the pharaoh:

He is shade in spring, a cold bath in summer.
He is a warm dry corner in winter time.
He is a rampart against the wind, when there is storm in the sky.

And military victory, no less than peaceful prosperity, was the gift of the gods, as proclaimed by Rameses II after the defeat of the Asiatic allies in the battle of Kadesh:

See, Amon has given to me his victory, although there is no infantry nor chariotry with me, (for) he causes every distant land to see my victory by my own arm, while I am alone. . . . Whenever I attack millions of them, their feet do not make a halt, but they flee. As for all those who shoot straight at me—lo, their arrows are scattered when they reach me![1]

When fully developed, these conceptions, which identified acceptance of the ruler's gods with the support of government, made piety and orthodoxy not only the necessary prerequisites of prosperity but also a defense of the existing regime, whatever its organization. The Egyptians declared this identification in the admonition "Fight for his [*i.e.*, the pharaoh's] name, defend his life. . . . Abstain from any hostile act with the threat, 'There is no tomb for him who rebels against his majesty; his body is thrown into the water.'" The Babylonians and Assyrians subjected political offenders to horrible tortures and executions; the Egyptians allowed them to commit suicide.

The Origin of Law: Civil Society.

Law differs from other types of social control primarily because it employs force to support an authority which claims to exist by virtue of social acceptance. Law was the necessary product of the

[1] John A. Wilson, "The Texts of the Battle of Kadesh," *The American Journal of Semitic Languages and Literatures*, Vol. 43 (1926–1927), p. 273.

new conditions of social life which arose in the early cities; probably four factors were important in its development. (1) The formation of the economic surplus created between men and the land and between workers and the possessors of the economic surplus relations which had not existed in peasant-village cultures. To formulate these relations the right of private property was elaborated, and rights, obligations, and crimes were defined in its terms. In this connection it is interesting to note that the oldest known legal documents in both Sumer and Egypt deal with land. (2) The growth of urban populations brought large numbers of people into semi-permanent associations that were different from village relations. To give order to these associations, particularly those arising in the specialization of labor, the exchange of goods in a market, and the coming and going of strangers, new controls were necessary. (3) The admittance of strangers into a city as permanent settlers, either as merchants or as slaves, resulted in their de-tribalization, *i.e.*, they were no longer bound by the rules of their native tribes, nor were they subject to the customs of a people among whom they had no tribal status. It was necessary, therefore, to establish a new status for them; this was done by defining their rights and obligations in law. (4) Finally, when the military class began to gain power, it established controls which served its interests. Accustomed to the use of force the military class tended to make the enforcement of law more severe than it had been under the priestly regimes. Codification, made possible by writing, gave both system and rigidity to law.

In the social order controlled through law the vague primitive conception of justice was replaced by a concise definition of specific rights and obligations and the establishment of a designated authority to enforce them. Thus the primitive society organized on a customary and ritualistic basis gave way to *civil society*. The spirit of this new order was well declared in the Egyptian rolls of the law, which were kept in open court where all could read: "Behold the dread of a prince is that he does justice." And the manner of his doing was epitomized in the instruction to judges issued by Thutmose III: "Thou shalt act alike to all, regard him whom you know as him you do not know, and him who is near to you as him who is far from your house."

Unfortunately, while the development of law gave justice a new meaning, it also provided injustice a new refuge, for injustice once embodied in law had at least the outward features of justice. Note has already been made of Hammurabi's legal system; an analysis of

the provisions of this code, from which other early legal systems differed more in detail than in general principles, reveals that the justice originally embodied in law had four main elements: (1) the legality of social classes, (2) revenge as the basis of punishment for crimes, (3) the supreme authority of the father over the family, and (4) the right of private property. Early urban men looked upon deviations from these principles as dangerous to social stability.

Although law was the product of social and economic forces, it was almost universally regarded as either having a divine origin or receiving the sanction of deity. Behind Hammurabi's code stood the power of Marduk, the god of Babylon. Egyptian law, according to the priests of Heliopolis, had been established by Re, and the noblest duty of the pharaoh was to sit in court. Egyptian judges never lost the priestly character. At a very late date the highest judge always carried a picture of the goddess of truth on his breast, and lesser judges acted under the guidance of the god Thoth, the model judge. Similar ideas prevailed in Babylonia, Assyria, and Syria. Inasmuch as law was regarded as having a religious base, civil society was not originally regarded as secular.

The Beginning of Taxation.

The revenues of all early urban governments were derived from the yearly produce of the land. In theory the temple, *i.e.*, the god, or the king owned the land, and its cultivators paid a portion of their crops as an obligation to the owners. When land passed into the hands of private owners they collected this yearly rent and then paid part of it to the temple or king. Privately owned land usually had a higher rental than state-owned land. In Hammurabi's Babylon the cultivator paid one-third to one-half of the crop to the landowner. In Egypt, even under the Old Kingdom, there seems to have been a land register which recorded the amounts to be paid by the cultivators. Under the empire Egypt was divided into fifty districts from which revenues in kind were gathered. Local tax collectors made monthly reports to the vizier, who had charge of all revenues. The treasury, known as the "White House," had two departments, the "cattle yard" and the "granary." According to Hebrew tradition the Egyptians, who used the word "labor" as we use the word "taxes," took one-fifth of the crop.

A second source of state income was the *corvée*, or forced labor. Each year cultivators were called upon to repair embankments, construct bridges, and dig irrigation canals. The earliest suggestion of working-class discontent is found in the "Epic of Gilgamesh,"

which records the complaints of the people against the excessive labors they were called upon to perform in constructing the walls of Uruk. The building of temples, tombs, palaces, and fortifications would have been impossible without the *corvée;* ultimately most public work was performed by state slaves or serfs.

In the imperial age the tribute of conquered peoples became another source of revenue. The Egyptian empire depended so much on revenues from Syria and Nubia that production at home declined. The Assyrians were the most thoroughgoing imperial exploiters; upon conquered peoples they levied an indemnity, a yearly tax, and special exactions whenever the king commanded.

The expansion of commerce brought two new sources of revenue: (1) customs, port dues, and market taxes levied upon trade and (2) the profits from the exploitation of mines and industries. In early Sumer the temple craftsmen labored for the benefit of the priestly rulers, and the profits of trade found their way to the same persons. Under the Middle Kingdom quarries in Egypt, gold mines in Nubia, and copper mines in Sinai were exploited by the state. Red Sea commerce was also a monopoly of the pharaohs. Under the empire agriculture, industry, and trade were administered for the profit of the imperial treasury. Careful accounts were kept of materials given to craftsmen, merchants dealt in foreign goods under licenses, and peasants tilled the land under the direction of imperial inspectors. It was the aim of the pharaoh to share in the profits of every form of enterprise. King Minos of Crete maintained potteries and workshops for the production of cloth. In Assyria the daughters of every serf were required to work in the king's spinning and weaving establishments. Indeed, so complete was the control of the economic life by most of the early governments that their economic policy may be called state capitalism.

If viewed merely as ways of raising the revenues of the state, the taxes and impositions are seen falsely, for actually, since the state consisted of a combination of priestly and military classes, they were the means by which the economic surplus was transferred from the working masses to the ruling classes. The state in early urban cultures was less a political organization than an engine of exploitation. Whatever it contributed to the growth of the economic surplus by the organization and direction of labor meant little or nothing to those who performed the labor.

The Formation of an Administrative Hierarchy.

The germ of the administrative corps of the state was the body of temple officials who had charge of economic activities. This body

grew into a permanent bureaucracy by a number of methods: (1) the extension of political control over irrigation, cultivation, and commerce, (2) the organization of systematic tax collection, (3) the fixing of the military responsibilities of local districts, and (4) the organization of a judicial system. As previously noted, these elements of an administrative machine were present in the kingdom of Babylon and the Middle Kingdom of Egypt. The administrative devices of both regimes persisted into the imperial age, giving form to its stronger governments.

When fully developed the administrative hierarchy had several sections: (1) the king's court, (2) provincial rulers, (3) district officials, (4) judges, and (5) clerks and accountants. Actual control of policy and administration was in the hands of the court—composed of the heads of the fiscal departments, the commander of the army, the high priest of the state cult, and various royal favorites. The provincial rulers supervised administration; often they were almost independent of central authority. The local officials, usually recruited from the district in which they functioned, performed the routine of administration, which was chiefly concerned, as in Assyria, with the raising of military levies, the imposing of the *corvée*, and the exaction of taxes. Tax collectors everywhere won a reputation for brutality. The judges presided over courts where complaints against officials and suits for breaches of the law were presented. The clerks and accountants, drawn from the group commonly designated as scribes, were usually trained especially for the work of managing and recording the governmental activity necessary to the performance of the obligations of the people. These officials, whatever their grade, were frequently corrupt, for, as the subjects of the Egyptian emperors complained, "The bribe of the rich man was stronger than the justice of the poor man's cause." The official hierarchy was keenly aware of the interests of those classes to which its members belonged.

The Police Power.

Behind the authority of kings, priests, nobles, and officials was some kind of force with which the population could be coerced. In the priestly regimes of the fourth and third millenniums B.C. these forces were undoubtedly small; probably they consisted of only a few men whose duties, among others, included the exercise of the power of police. Most likely their first duty was to act as the bodyguard of the rulers. The bodyguard of the Egyptian pharaoh was changed frequently in order to prevent the formation of a force that might intimidate him. In Sumer the original police forces were

attached to the temples. Hammurabi charged the military landholders, acting as civil officials, with the duty of enforcing the law.

The imperial and military developments of the second millennium B.C. contributed to the evolution of the police power in two ways. (1) In conquered lands the population was held in bondage by permanent military forces. The Egyptians maintained garrisons at fortified towns throughout their Asiatic dominions, and they took as hostages the members of defeated ruling families in order to prevent these families from organizing rebellions. Occasional resort to terroristic methods in dealing with the people served to keep them fearful and, therefore, peaceful. The Assyrians perfected these devices of subjugation. To military garrisons and the taking of hostages they added punitive raids and forced migrations of peoples. (2) Within the homelands of the imperial peoples the armies came to act as police forces. The pharaohs of the Egyptian empire established forces of Nubians, Semites, and Negroes among the people in order to hold them in subjugation. Ikhnaton put down the opposition to his religious reforms with foreign troops, and his successors depended on mercenaries to maintain public order. Sometime in the course of these developments the use of spies and informers seems to have become well established. As the heirs of the ancient-oriental imperial regimes, the Assyrians synthesized all of these devices in the first thoroughgoing repressive system.

The police power in early urban cultures, it may be believed, was far less a protector of the persons and property of ordinary individuals than it was a defense for those who held wealth and power. There seem to have been no regularly constituted police forces in any of the ancient-oriental cities.

An Official Propaganda.

Inasmuch as literate learning was a monopoly of the ruling classes, it served as a means of control over the masses, who commonly regarded all writing as magical. For these reasons the written works that were used in connection with state rituals and the other public acts of sovereigns generally contained assertions which justified their power; these works were, in fact, an official propaganda. Military defeats were described as victories. Victories in battles never fought were claimed. One Egyptian pharaoh declared that he was able to shoot an arrow through five inches of copper plating, a prowess which was, of course, not to be tested unless one was wearing about six inches of the metal. The favorite propaganda device was an interview between a dead ancestor who was believed

to be a god and a living king; in the colloquy the dead ancestor praised the king and urged his subjects to be faithful to him if they wished to escape from great evils. The priests, who had their own tricks to fool the populace, joined in this official propaganda. It was also deeply embedded in education, for the materials set before boys learning to write were generally passages that supported the supreme power.

THE KINGSHIP.

At the head of the state stood the all-powerful ruler; whatever his title, pharaoh, king, or emperor, he was a despot. He ruled by divine right. His person was sacred. His pronouncements were law. He had the power of life and death over every subject. He was responsible only to his god. The favor which his god bestowed upon him took form in the prosperity of his realm and the well-being of his subjects. His supreme position gave him a power which, when he was strong enough to exercise it, made him a significant factor for good and evil. At best he was a paternal autocrat; at worst he was an arbitrary extortioner and executioner. But he was seldom strong enough to formulate and carry out policies opposed by the official hierarchy or the priests. Actually, government was conducted in an atmosphere of constant intrigue among members of the court, who vied with one another in efforts to obtain the despot's ear. Usually he depended more on civil and military officers than he did upon priests, whom he found useful chiefly as instructors of his subjects in sentiments of loyalty and obedience. The priests, however, exerted influence through divination and by means of women who, enjoying the despot's favor, offered him advice which the priests wanted him to heed. The alliance of priests and female favorites is notorious in the history of government.

The material reward of despotism was the luxury of court life. As revealed in recently excavated tombs, the pattern of regal splendor took shape early in Sumer. The pharaohs of the Pyramid Age "lived like gods." Singers, dancers, magicians, and pygmies from Africa provided amusement for hours of relaxation. When tired of such exhibitions, the divine king might go for a sail on a lotus-filled lake in a splendid barge whose oarsmen were slender maidens from the harem, clad only in hair nets. The Assyrian kings varied the delights of the harem with the thrills of the hunt; they had a passion for killing lions. In their courts royal magnificence was formalized. Dozens of familiars, such as a master of ceremonies, an inspector of the harem, a chief eunuch, a director of

music, and a chief sword-bearer, looked after the king's desires, while high officials took turns at bearing his cup. Courtly etiquette was strict. No one was allowed to approach the king without prostrating himself. The Assyrian kings wore robes of the finest cloth, adorned with gold, silver, and precious jewels; their diadem was the symbol of eternity. Vestiges of this courtly etiquette and sartorial splendor survive even today in European monarchial courts, as well as in the papal court at Rome.

The Political Characteristics of the Ancient-Oriental Urban Cultures: the Oriental Monarchy.

The political regime which these several developments shaped is known as the *oriental monarchy*. It possessed no constitution, only a structure. It was above the law. Law was the fiat of government, which was in turn the product of developments giving social power effective organization. This organization—the oriental monarchy—was, on the one hand, the product of economic and social developments of early urban cultures and, on the other hand, the means of stabilizing and perpetuating the economic and social institutions which early urban cultures embodied. Historically, the oriental monarchy was the product of the intensified struggle to possess the economic surplus which followed the increase of wealth resulting from the introduction of systematic irrigation and metal tools. Institutionally, it was the original political solution of the problem of continuously producing and distributing the economic surplus. Socially, it was the means by which those who obtained the economic surplus ruled the masses, compelling thereby the continuous production of the wealth. Theoretically, it was a divine creation—at least, it was justified by a fixation of religious belief which declared to despot and subject alike the necessity of accepting his station in life. For the possessors of the economic surplus this was a gentle doctrine.

As the original form of government the oriental monarchy embodied many political practices which were to persist even when its pattern was broken. More important, however, than these incidental survivals was the persistence of the attitudes which defined the relations of the governing and the governed. Regardless of their conduct, the governing, because they claimed divine sanction, were believed to act justly, while the governed, notwithstanding great suffering at the hands of the governing, had no recognized legal or moral right to resist their demands and actions. The duty of the governed was to obey; to do otherwise was to violate the

divine will and bring down the just execution of authority. The force of political tradition in the ancient-oriental cultures was to deny the governed not only all participation in government but also all right to resist the actions of the governing.

THE INTELLECTUAL BASE OF URBAN CULTURES

Although the obvious difference between peasant-vil age and urban cultures, everywhere evident in the contrast between the remains of villages and the ruins of cities, was the growth of wealth, an intellectual difference no less significant appeared at a very early date. This difference arose from the invention of writing; in fact, this invention led to cultural innovations so important that scholars generally consider that it marks the passage of man from a primitive to a civilized way of life. In this sense the term "civilized" merely means the possession of a culture carried in a written, or literate, rather than in an oral tradition; from this point of view it is well to recognize that "primitive" culture is really a "preliterate" culture, because all early urban peoples quickly produced literate traditions. This development did not mean, however, that all individuals in the urban social structure were its carriers.

The Significance of the Invention of Writing for Social and Cultural Development.

Writing, it should be emphasized, was not invented for intellectual purposes but for the practical necessity of keeping accounts; in other words, writing, like most of the institutions of urban culture, had origin in the new circumstances brought about by the formation of the economic surplus. When wealth accumulated and economic rights and obligations were established, a means to record the amounts of wealth involved in these rights and obligations was necessary to give order to the structure of human relations thus evolved. Writing was originally a tool of administration, not an instrument of learning.[1]

[1] V. Gordon Childe, *Man Makes Himself* (1936), p. 172: "The oldest decipherable documents from Mesopotamia are, in fact, the accounts of temple revenues kept by priests. They reveal the temple as not only the centre of the city's religious life, but also the nucleus of capital accumulation. The temple functions as the great bank; the god is the capitalist of the land. The early temple archives record the god's loans of seeds or plough-animals to cultivators, the fields he has let to the tenants, wages paid to brewers, boat builders, spinners, and other employees, advances of grain or bullion to travelling merchants." C. A. Watts & Co., Ltd., London. See also A. Falkenstein, *Archaische Texte aus Uruk* (1936), p. 65: The script was used mainly to record economic facts. The idea of using it to record events did not appear for many centuries. E. A. Speiser, "The Beginnings of Civilization in Mesopotamia," *Supplement to the Journal of the American Oriental Society*, Dec. 1939,

However, the invention of writing involved a real advance in abstract thinking and created great potentialities for the development of thought. Undoubtedly the most significant factor in this advance of abstract thought was the formation of the urban community, which, since it removed its members from the intimate experience with nature habitual to peasant-villagers, permitted them to arrive at a more symbolical view of nature. In the same way, certainly, early urban life provided the stimulus and the material for realizing some of the potentialities for the development of thought that writing brought. Thus urban cultures nurtured intellectual advances which, although they were possible because of economic developments, were independent of them as regards form and content.

The primary effect of writing in the intellectual development of urban cultures was to set up a process of social standardization and consolidation.

In keeping accounts of their receipts, the priests of the early temples also fixed the obligations of the peasants; the result of this development was the assembling and classifying of various social controls, and thus the creation of "law codes." By giving permanent form to religious traditions long preserved orally, writing generated "sacred books." And by standardizing scattered oral versions of myths, stories, and songs, it mothered "classics." "Codes," "sacred books," and "classics" were the first significant intellectual products of literate men. Thus the invention of writing led to the consolidation of statements of right action, safe beliefs, and good taste, erecting, as a result, a strong intellectual bulwark against social change. Writing was, first and above all, the chief means of social unification of urban cultures.

The secondary effect of writing upon the intellectual development of urban cultures was to promote intellectual growth in ways that had never before been possible. By giving tradition a permanent form, writing inevitably opened a breach between old thought and new thinking, whenever there was any new thinking. And those changes in social relations that came with interaction between urban and foreign peoples, as well as in the movements between the countryside and the city, did produce new thinking. In the word-of-mouth transmission of ideas, variations of thought were assimilated

pp. 26–27: "Writing first served the purpose of temple economy, with private business turning to the new medium shortly afterwards. . . . Writing was not a deliberate invention, but the incidental by-product of a strong sense of private property, always a characteristic of classical Sumerian civilization."

into traditions from time to time without disturbance or shock. But when traditions were recorded, the comparison of their elements with new conceptions was bound to occur; thus conflict between traditions and new thinking became a normal aspect of intellectual growth. At the same time writing contributed to the formation of a new basis for thinking by making possible an accumulation of factual data. In terms of new facts old ideas could be tested and new ideas shaped, and the addition of new facts ensured the revaluation of ideas.

Within these conditions lay two circumstances extremely significant for intellectual developments: (1) the discovery that the assembling of factual information is a necessary step in the formulation of ideas and (2) the release of thinking from the restrictions that sustain established beliefs. The first potentiality meant that ultimately men would arrive at scientific thinking, *i.e.*, a way of thinking which, based upon ordered information, checked its conclusions against any new information that might come to hand. The second potentiality meant that some day men would demand that they be allowed to follow facts wherever they led, regardless of an existing social and intellectual order. Thus writing made possible the development of that kind of reflective thinking which is the only essential intellectual difference between literate men and their preliterate forerunners. Needless to say, these potentialities were not realized by the inventors of writing; in fact, it is a fair question to ask whether or not they are realized even today.

Finally, by extending the area of social interaction and by making possible the transmission of material from person to person in clear-cut form, writing contributed to the assimilation of communities into large groups and their organization under a more complex culture. In these ways writing promoted both an expansion of culture areas and an enrichment of cultural traditions, serving to give stability to cultures that rested upon large populations and diversified economic activities. All early urban cultures produced and survived through literate traditions.

The High and the Low Intellectual Traditions.

Combined with economic, social, and political elements of the urban culture pattern, writing gave rise to the two intellectual traditions defined at the opening of this chapter: (1) the high intellectual tradition carried by those who knew writing and (2) the low intellectual tradition carried by those who, because they did not learn writing, retained, it may be assumed, the mentality of their

preliterate ancestors. It is important to realize, however, that the high intellectual tradition began with the writing down of orally transmitted knowledge and beliefs, so that, as a matter of fact, it too carried primitive materials. But, because of the intellectual potentialities writing gave rise to, it developed in ways quite different from the low intellectual tradition.

1. *The High Intellectual Tradition.* Since the original literate men were priests, the religious outlook developed from primitive beliefs was the starting point of their thinking; for this reason the high intellectual tradition became very early a compound of myths, occult speculations, epic poems, and didactic compilations filled with theories of daimonic control over men. Even literate learning was conceived in such terms, for it was regarded as "the gift of the gods." It is not to be wondered at, therefore, that the main achievement of ancient-oriental literates in the field of ideas was a systematization of primitive concepts:

> The most significant contribution of the Ancient Near East to our social heritage is the systematization and generalization of primitive thought. Spirits were arranged in a hierarchy; magical powers were ordered in categories relative to significant natural phenomena such as stars and seasons; forms of divination were excogitated in terms of variations in organs and other ominous data. Generalization of the supernatural was the result of a wider experience of the natural processes, a development largely incidental to the practice of agriculture. Thus came the elaboration of astrology, a system of finding supernatural meanings in natural phenomena of the heavens; and thus great supernatural beings came to be seen in the heavenly bodies, the seasons, storm, growth, and fertility.[1]

And this systematization of primitive beliefs provided the point of departure for the speculations which became the typical intellectual products of later literate intellectuals.

Closely bound up with this rendering of primitive beliefs were the social attitudes that bound the masters of writing to the interests of the ruling and possessing classes. There is evidence that individuals of several social classes were permitted to acquire a knowledge of writing, but these individuals by virtue of their achievement were attached to the ruling and possessing classes and separated from the working masses. "In entering the school the pupil turned his back on the plough and the bench; he had no desire

[1] C. W. McEwan, *The Oriental Origin of the Hellenistic Kingship* (Oriental Institute Studies in Ancient Oriental Civilization, No. 13, 1934), p. 3. By permission of The University of Chicago Press, Chicago.

to return to them."[1] Thus the masters of literate learning, regardless of social origins, were imbued with the priestly and aristocratic outlook. They were "respectable." And they were above labor. These attitudes are expressed in the words of an Egyptian scribe to a negligent student:

> Put writing in thine heart, that thou mayest protect thyself from hard labour of any kind and be a magistrate of high repute. . . . I am told, thou forsakest writing, thou givest thyself up to pleasures; thou goest from street to street, where it smelleth of beer, to destruction. . . . Be not a foolish man, that hath no instruction. . . . The scribe, he directeth the work of all people. For him there are no taxes, for he payeth tribute in writing, and there are no dues for him. Prithee, know that.

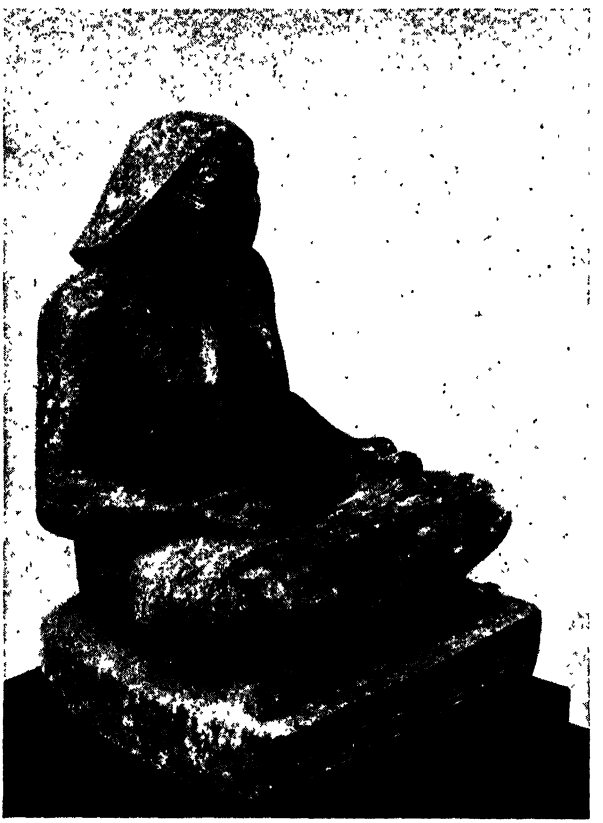
From its origin, therefore, the high intellectual tradition accepted existing economic, social, and political institutions as the necessary basis of orderly life, and literate learning was identified with the social controls that bound the masses into their position in urban cultures.

An analysis of the written materials of the ancient-oriental urban cultures indicates that four types of learning—not clearly distinguished from one another—were carried in their high intellectual traditions:

1. Liturgical learning consisted of a knowledge of those ceremonies and performances carried on by rulers, priests, and officials upon which depended the winning and retaining of the favor of the spiritual overworld. Inasmuch as these rituals must be exact, this learning was highly repetitious and turgid. Bound up with it, of course, was much of the poetry, especially hymns and psalms, of the ancient-oriental cultures. It bulks extremely large in the written materials surviving from these cultures, for according to the beliefs of the time it was the most socially useful of all knowledge.

2. Meditative learning dealt with knowledge as if it were something apart from the ordinary workaday world, as if it were valuable for its own sake. Thus the Babylonian and Egyptian scribes came to regard an old work as having great authority and limited their scholarship to copying it. Closely connected with this early traditionalism in literate learning was the correlative belief that words had special significance for the spiritual overworld. This belief was fostered in the practice of treating the various bodies of knowledge as "secrets." From these notions came ultimately the view that "the spiritual life" or "the higher things of life"

[1] V. Gordon Childe, *Man Makes Himself* (1936), p. 213. C. A. Watts & Co. Ltd., London. Also Alan H. Gardiner, *Egyptian Grammar: Being an introduction to the study of the Hieroglyphs* (1927), p. 1: "The art of writing was always reserved to a conservative and tradition-loving caste of scribes." The Oxford University Press, Oxford.



By the courtesy of the Metropolitan Museum of Art

AN EGYPTIAN SCRIBE

The position of the scribe suggests that conception of literate learning which found its value not in applications that ameliorated the physical conditions of common life but in contributions to meditation, class distinction, and social control. This conception permeated the high intellectual traditions of the ancient-oriental urban cultures.

are nurtured by mere attention to words, *i.e.*, in contemplation; in extreme form this conception of learning led to the abandonment of all physical activity in favor of a life completely devoted to meditation.

3. Insofar as the carriers of the high intellectual tradition made a significant contribution to the general development of scholarship, their main achievement was decorative learning, *i.e.*, those refinements and amenities whose possession had been looked upon generally by ruling classes as evidence of "breeding" and "culture." Except as meditative and decorative learning combined to foster mental discipline among the

literate few, a discipline which became "the ideal of scholarship," the carriers of the high intellectual traditions in early urban cultures added little to the body of knowledge possessed by neolithic men.

4. The fourth form of learning—operational learning—appeared in two branches. The first branch consisted of the elementary mathematics and natural sciences which were useful in manipulating the physical environment. As previously noted, they grew very slowly and were disentangled from religious ideas and superstitious beliefs only with great difficulty. There is little evidence that the carriers of ancient-oriental high intellectual traditions ever understood the significance of this learning either for intellectual activity or for technological procedures. The second branch was developed in judgments on social affairs useful in directing and controlling men, which took form in laws and in aphorisms and wisdom literature; together these materials were the "social sciences" of the ancient-oriental cultures. As words for the guidance of action, much of this learning was valid, but as a contribution to an understanding of the processes of economic, political, and social behavior it was largely without worth. Indeed, inasmuch as it was developed almost entirely from the point of view of the individual's moral behavior or self-advancement, it may be said that the carriers of the ancient-oriental high intellectual tradition never distinguished that aspect of life which modern Western men designate as *social*. As the carriers of law, however, they understood well the role of social control in the relations of the social classes.

At the heart of the high intellectual tradition was the emotional orientation which expressed the contrast, if not the conflict, between the peasantry and the urban dwellers; this orientation was summarized in the conviction that life in the country was not life; life and the city were identical. In its worst form the high intellectual tradition fused superstition and ruling class prejudice with pedantry; at best it was a little knowledge encrusted with literary erudition.[1]

2. *The Low Intellectual Tradition.* Inasmuch as the documents of the ancient-oriental cultures give only fleeting glimpses of the masses, the character of their intellectual life must be inferred from the economic, technological, and political circumstances of their lives.

First among these circumstances is the highly probable fact that, because they were illiterate, they possessed the beliefs, attitudes, and knowledge of their preliterate ancestors. This inference,

[1] On the hatred of the peasants for the urban dwellers in ancient-oriental times see M. I. Rostovzeff, "The Prehistoric Cities and the Cities of the Ancient Orient," in Richard T. Ely, *Urban Land Economics* (1922), p. 18.

if correct, has profound significance: since in all urban cultures until the nineteenth Christian century the far greater proportion of the population has been illiterate, it means that the intellectual outlook of the masses has long remained primitive in orientation and content. The known conditions among the masses in all urban cultures support this conclusion. Indeed, the persistence of primitive beliefs among the masses may be regarded, it seems, as a primary intellectual characteristic of all traditional urban cultures. The fundamental content of the low intellectual tradition was, therefore, the lore, the folk medicine, and the superstitions which even today form the chief elements of the mentality of illiterate peoples. To identify these materials as the fundamental content of the low intellectual tradition does not mean that they have not endured among the carriers of literate learning; it only means that for the masses there were, except under rare circumstances, few other intellectual materials.

These primitive materials were bound up with others derived from the occupations of the people and the social controls under which they lived. Several aspects of the mentality shaped by these circumstances may be noted. (1) The masses possessed a considerable body of factual knowledge which was embodied in their several occupations. (2) They believed that the use of force against recalcitrant beasts or men was the right way to enforce obedience and obtain justice. (3) They distrusted strangers and commonly exhibited a fervid loyalty to their in-group. (4) Lacking the factual information necessary for an understanding of their suffering, they allowed emotion to control their behavior, either enduring misery patiently or breaking out in wild anger and blind violence. (5) They accepted poverty and drudgery as a normal aspect of life. (6) They desired most of all to own a bit of land from which they could win subsistence; thus they saw in the right of property the way to social security. (7) They recognized a "good neighbor," for his qualities were evident in face-to-face relations, but they lacked an understanding of the social and economic institutions by which men whom they did not meet face to face wrought injustice upon them. (8) They accepted social inferiority as part of the universal scheme of things. (9) Above all they believed that, since daimonic influences everywhere intervened in human affairs, there was little or nothing that men could do to lessen their suffering or improve their lot.

The statement of these aspects of the low intellectual tradition should not be taken to mean that the mentality of the masses was

systematic or, in any way, coherent; it was undoubtedly an indescribable jumble of superstitions, bits of useful information, prejudices, fears, and homely sentiments.

The effect of this combination of materials in the low intellectual traditions was to keep the masses—mostly peasant-villagers, it should be remembered—socially and intellectually inert; tradition established for them the fixations which, as acceptances of the conditions under which they lived, were the psychological supports of the regimes ruling them. Except in times of severe disorganization of the villages the peasants never showed any tendency either to resist their rulers or to promote change of any kind. And no institution but the temple or the shrine or the church ever made the slightest contribution to the instruction of the illiterate masses. The priestly ministrants of these institutions, it may be believed, gave instruction which either re-enforced the low intellectual tradition or inculcated the social attitudes ensuring obedience to the social controls under which the masses lived and worked.

The Obstacles to Intellectual Advance in Early Urban Cultures.

The weight of both the high and the low intellectual tradition of early urban cultures was against intellectual advance. In this connection it is important to note that after the period of formulating the methods and conceptions of early urban literate learning came to an end, about the close of the third millennium B.C., intellectual development virtually ceased until late in the imperial age, when new peoples acquired a knowledge of writing. The chief obstacles to intellectual advance in early urban cultures appear to have been four: (1) the failure to recognize that the collecting and classifying of factual information was a necessary intellectual activity, (2) the failure to understand that urban life rested upon technical procedures which were effective because they were based on factual information, (3) the feeling that a knowledge of writing ought to be restricted to the possessing and ruling classes, and (4) the persistence of the belief that all knowledge was a gift from the gods, *i.e.*, had a divine source. These obstacles effectively checked the growth of secular knowledge but did not hinder the multiplication of religious speculations. In this fact lay the chief cause of the stagnation which settled upon the early urban cultures, for the checking of the advance of science halted the further development of the technology which, after all, was the chief means of increasing the

economic surplus so necessary to the growth of urban cultures. This fact, in turn, accounted for the social conservatism of the early urban cultures, because the technological basis of production was not adequate to the creation of an economic surplus great enough to support a more equitable regime than the original social pyramid. Thus intellectual stagnation and social rigidity were correlative aspects of the ancient-oriental cultures until contacts with new peoples disturbed them.

THE SIGNIFICANCE OF THE ANCIENT-ORIENTAL URBAN CULTURES IN THE GENERAL DEVELOPMENT OF CIVILIZATION

The significance of the ancient-oriental urban cultures in the general development of civilization is twofold: (1) They originally organized the technological procedures, the economic institutions, the social controls, the intellectual forms, and the emotional fixations which everywhere have distinguished "civilized man" from "primitive man"; and (2) they were the centers from which many of these elements of urban culture were diffused over Asia and Europe. Thus, while their emergence marked a fundamental change in the structure of life, their passing was merely incidental to the spread of their achievements. They disintegrated—only to survive in a far greater world.

Long after the Egypto-Babylonian group at the nexus of the two continents had gained metal, writing and highly developed government, the surrounding peoples far back into Africa and Eurasia had not yet gained these fundamental elements of civilization and were still in a primitive stage of cultural development. As we move out from the Egypto-Babylonian group the culture level declines. . . . In the midst of this far-reaching wilderness of primitive life there was a single oasis from which the forces of civilization gradually diffused a higher type of life among surrounding peoples. The movement of such influences and the detachment of the group which eventually carried agriculture and cattle-breeding into China lie so far back in the prehistoric age that the practices of milking and weaving wool had not yet developed. Of such movements we shall never learn much. . . . Today it is easy to survey in its main outlines the gradual emergence of Europe from prehistoric savagery as the light of civilization, dawning slowly in the southeast, after 3000 B.C. passed gradually westward across all Europe, till its further westward advance was halted for many centuries by the broad barrier of the Atlantic. Much of the culture drift from the Egypto-Babylonian group also took place in the full light of the historic age. . . . In this vast cultural synthesis, embracing the whole known career of man, the

civilizations of the Near Orient are like the keystone of the arch, with prehistoric man on one side and civilized Europe [and Asia] on the other. We have thus articulated with the career of man as a whole the great nucleus of civilizations around the intercontinental bridge.[1]

The contributions of the ancient-oriental urban cultures to their successors in Asia and Europe were seldom direct; they came by way of intermediaries so that, since the traits were broken away from their patterns, they entered into the new urban cultures in many different ways. Materials from the ancient-oriental urban cultures were assimilated into the succeeding urban cultures of Asia and Europe, but the social processes which produced these new urban cultures were independent in both origin and action.

[1] J. H. Breasted, *The Oriental Institute* (1933), pp. 8–11 *passim*. By permission of The University of Chicago Press, Chicago.

Part Two

THE TRADITIONAL EUROPEAN AND ASIATIC URBAN CULTURES

Chapter VII

THE FOUNDING OF URBAN CULTURES IN SOUTHWESTERN ASIA

During the first age of imperialism, when the ancient-oriental urban cultural traditions were either disintegrated or transformed, new urban culture centers arose in Palestine, Persia, India, China, Greece, and western Mediterranean lands, and in them were shaped traditions which gave form to both Eastern and Western urban cultures until the opening of modern times and which have been the backgrounds of developments in modern times. The period of origin of these new urban cultural traditions was from the middle of the second millennium B.C. to a little after the middle of the first millennium B.C. Although each tradition developed independently, all of them received materials from underlying peasant-village cultures and were influenced by somewhat similar external circumstances, namely, conquest or threats of conquest and the growth of extended commerce. Materials from the ancient-oriental urban cultures were far more important in Palestine, Persia, and Greece than in India, China, and the western Mediterranean lands.

In this period of development the four hundred years from the ninth to the fifth century B.C. brought an intellectual revolution that gave the urban cultural traditions of both Asia and Europe their enduring religious and philosophical elements. The significance of these centuries in this respect is made clear by merely mentioning the greatest figures—among the Hebrews, Amos (*ca.* 760 B.C.) and Isaiah (*ca.* 724–680 B.C.); among the Persians, Zoroaster (*ca.* 660–583 B.C.); among the Aryas, Yajñavalkya (*ca.* 650 B.C.) and Gautama (*ca.* 563–483 B.C.); among the Chinese, Confucius (*ca.* 551–478 B.C.) and Mo Ti (*ca.* 470–391 B.C.); and among the Greeks, Pythagoras (*ca.* 572–497 B.C.) and Socrates (*ca.* 469–399 B.C.). These men mark the divide between bodies of thought largely mythological in character and systems of thought informed by some moral idea or intellectual principle. With them the human mind attained a new level of abstract thought.

Although local factors, which will be noted, gave a distinct turn to the body of thought developed by each of these men and their contemporaries, the various bodies of thought derived certain similar characteristics from situations having the same fundamental elements, whether in Palestine, in Persia, in India, in China, or in Greece. Briefly these elements were: (1) an ancient tradition embodied in writing, such as the earliest of the Hebrew sacred writings, the Pentateuch, the Aryan Vedic Hymns, the Chinese work of divination, *I Ching* or "Book of Changes," and the Greek epics, the *Iliad* and the *Odyssey*, (2) the passing of a knowledge of writing from a priestly group to a secular nobility or, more important, to a growing merchant class, and (3) the disruption of a body of primitive social controls under the impact of the class antagonisms of urban social structures. Under these circumstances men of the new literate groups undertook to find some way out of the conflict between tradition and the new circumstances of life; furthermore, they tried to discover for the new circumstances the right way of conduct for individuals and the just mode of action for governments. These efforts produced religious, moral, and philosophical judgments which, although rendered by individual thinkers in highly original forms, were ultimately systematized in ways that justified the dominance of whatever social classes won ascendancy in the several new urban class structures.

The solutions of the problems of individual moral responsibility and social stability embodied in the cultural traditions of the Eastern and Western worlds were largely determined by these circumstances.

The accompanying map of the Eastern Hemisphere about the middle of the first millennium B.C. shows the centers from which radiated the main cultural influences of the next two thousand years.

THE BEGINNINGS OF HEBREW CULTURE

Hebrew culture was merely an elaboration of the Semitic cultural tradition which the Akkadians and Babylonians, under Sumerian influence, had shaped. The Hebrews shared the work of this elaboration with the Aramaeans and Phoenicians, who also penetrated the western area of the Fertile Crescent during the second millennium B.C.[1]

[1] For the general history of the Hebrews and their culture see A. E. Bailey and C. F. Kent, *History of the Hebrew Commonwealth* (rev. ed., 1935); A. T. Olmstead, *History of Palestine and Syria to the Macedonian Conquest* (1931); A. L. Sachar, *A History of the Jews*

THE FORMATION OF THE HEBREW NATION.

The Hebrew nation was formed during the fierce conflicts of the first age of imperialism, and its culture never ceased to reflect the circumstances of its origin.

1. *The Hebrew Conquest of Palestine.* As previously noted, the Habiru appeared during the invasions of the ancient-oriental culture areas after 2000 B.C. They are now known to have led a precarious wandering existence along the western edges of Mesopotamia for a considerable time before this date. Some were bandits, and some sold themselves into slavery. In the period of the invasions their contemporaries knew them as plunderers, brigands, nomads, and soldiers of fortune. They were often employed as mercenaries. The Habiru were not an ethnic unit, although it may be supposed that the Semitic element was prominent among them. Some of them, however, were Indo-Europeans.[1]

Apparently the Hebrews entered Palestine in two waves. The first wave came with the Hurri at the end of the eighteenth or the beginning of the seventeenth century B.C. Its members penetrated northern Palestine not as conquerors but as immigrant settlers. The second wave came during the disorganization of the Egyptian empire in the fourteenth and thirteenth centuries B.C. Probably its first representatives were called in by the princes of the revolting cities. But they stayed to become conquerors, at least

(1934); J. Kastein, *History and Destiny of the Jews* (1933).

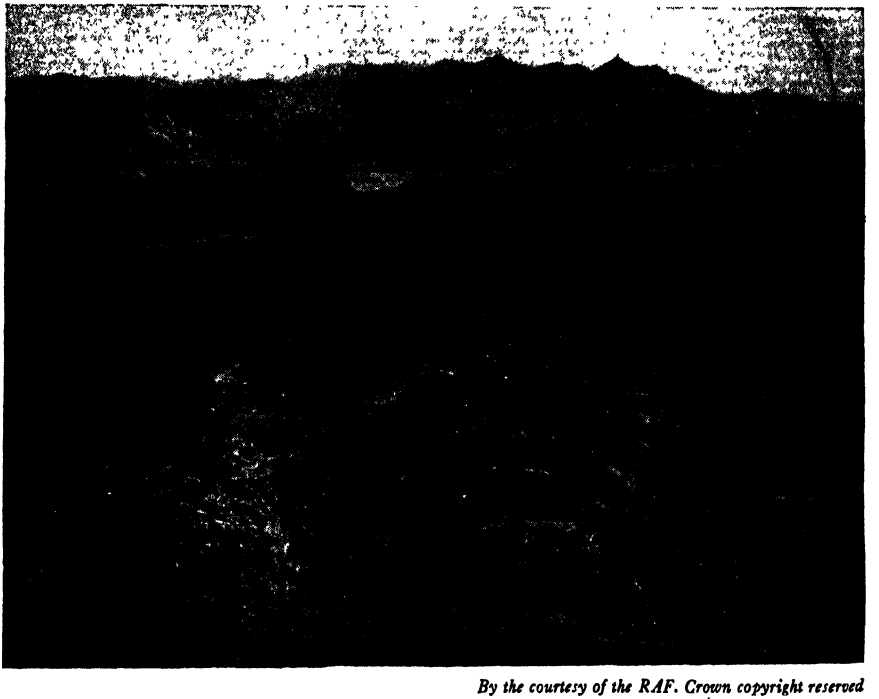
Of the more extensive histories of Hebrew culture the most recent and best is Salo Wittmayer Baron, *A Social and Religious History of the Jews* (3 vols., 1937). See also G. H. A. Ewald, *The History of Israel* (trans. from the German, 8 vols., 1878–1886); H. Graetz, *History of the Jews* (6 vols., 1898); E. Renan, *History of the People of Israel* (trans. from the French, 5 vols., 1905).

On the archeological evidences for Hebrew history and cultural development see G. A. Barton, *Archaeology and the Bible* (*ca.* 1937); Charles Marston, *The Bible Comes Alive* (1937); W. F. Albright, *Recent Discoveries in the Bible Lands* (*ca.* 1936); W. F. Albright, *Archaeology of Palestine and the Bible* (*ca.* 1935); J. Garstang, *Foundations of Bible History: Joshua, Judges* (1931); J. G. Duncan, *Digging up Bible History* (1931); I. Benzinger, *Hebräische Archäologie* (1927); I. M. Price, *The Monuments and the Old Testament: Light rom t he Near East on the Scripture* (*ca.* 1925).

The standard historical geography of Palestine is G. A. Smith, *The Historical Geography of the Holy Land* (25th ed., 1932). On the geography of Palestine see G. F. Kent, *Biblical Geography and History* (1911).

[1] On the origins of the Hebrews see E. A. Speiser, *Ethnic Movements in the Near East in the Second Millennium B.C.* (1933); Theophile J. Meek, *Hebrew Origins* (1936); W. F. Albright, "The Present State of Syro-Palestinian Archaeology," in Elihu Grant, ed., *The Haverford Symposium on Archaeology and the Bible* (1938); and Peter Thomsen, "Palästina und seine Kultur in fünf Jahrtausenden," *Der Alte Orient* (1931).

For a discussion of the culture of Canaan before the coming of the Hebrews see p. 248.



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MOUNT SINAI

From these barren highlands the early Hebrews looked down on fertile valleys where men, armed with iron chariots, successfully resisted even the onslaughts of their war god, Yahweh. On the distant summit, according to Hebrew tradition, Yahweh revealed the Ten Commandments to Moses.

in the areas east of the Jordan River and in the Jordan valley. Jericho fell sometime in the thirteenth century B.C., and a little later—after the capture of Shechem in the highlands—Joshua gave the tribes a code and a ritual, probably on Canaanitish models. This confederacy was that part of the Hebrew nation known later as Ephraim or Israel.[1]

While these events occurred in northern Palestine, other Hebrew tribes fought back and forth, without winning a homeland or establishing a confederacy, in the hill and desert country between the southern end of the Dead Sea and Egypt. Only a few of the Hebrews, it should be noted, were ever in Egypt. In the Egyptian

[1] See Theophile J. Meek, *Hebrew Origins* (1936), p. 25; A. T. Olmstead, *A History of Palestine and Syria* (1931), p. 104.

reaction against foreigners that followed the overthrow of the Eighteenth Dynasty, these few were oppressed and, under Moses (fl. *ca.* 1200–1165 B.C.), made their escape. Their flight occurred about 1165 B.C. To them and tribes living about the oasis of Kadesh, Moses gave a ritual and a code. This confederacy was the core of that part of the Hebrew nation known later as Judah. After the Mosaic reorganization these tribes pushed slowly northward between the Dead Sea and the coastal plain. Some time in the twelfth century B.C. they reached Jerusalem, the Canaanitish city which dominated the central Palestinian highland.

The military advance of the Hebrews was slow because they were attacking peoples with a superior material culture; the Hebrew sacred writings are eloquent on this point, for they record that Yahweh, the tribal war-god, had little success when he fought against men who went into battle in iron chariots. When victorious the Hebrews slaughtered the males of the invaded area and seized the women; when defeated, they became the slaves of the people they had sought to conquer. The result of this process was a mingling of the tribes with the natives, so that as time went on the Hebrews became always a more mixed people. They were, it has been well said, a melting-pot nation. From the first the Hebrews were two peoples, and so they remained throughout their national career. The unity of these two peoples rested in the ancient feeling of hostility between nomads and peasants. This feeling was shaped into an intense in-group loyalty by the harsh experiences of the period of invasion and conquest of Palestine. It was given poignancy by the setting up of Egypt as the symbol of national oppression.[1]

2. *The Economic and Social Development of the Hebrew Nation.* Except in the roughest parts of its central mountain range, Palestine had been a settled land of villages and cities long before the appearance of the Hebrews; in these communities the urban social structure existed. At the edges of the desert and in the unsettled central area a sparse nomadic population found homes. The Hebrews brought with them the traditions of a nomadic culture. Their economic and social development was, therefore, the result of interaction between a nomadic tradition and the urban social order. Environmental factors necessarily conditioned this interaction.

Palestine lies between the Arabian Desert and a narrow coastal plain bordering the southeastern end of the Mediterranean Sea. Down its center runs a low mountain range which ends in broken

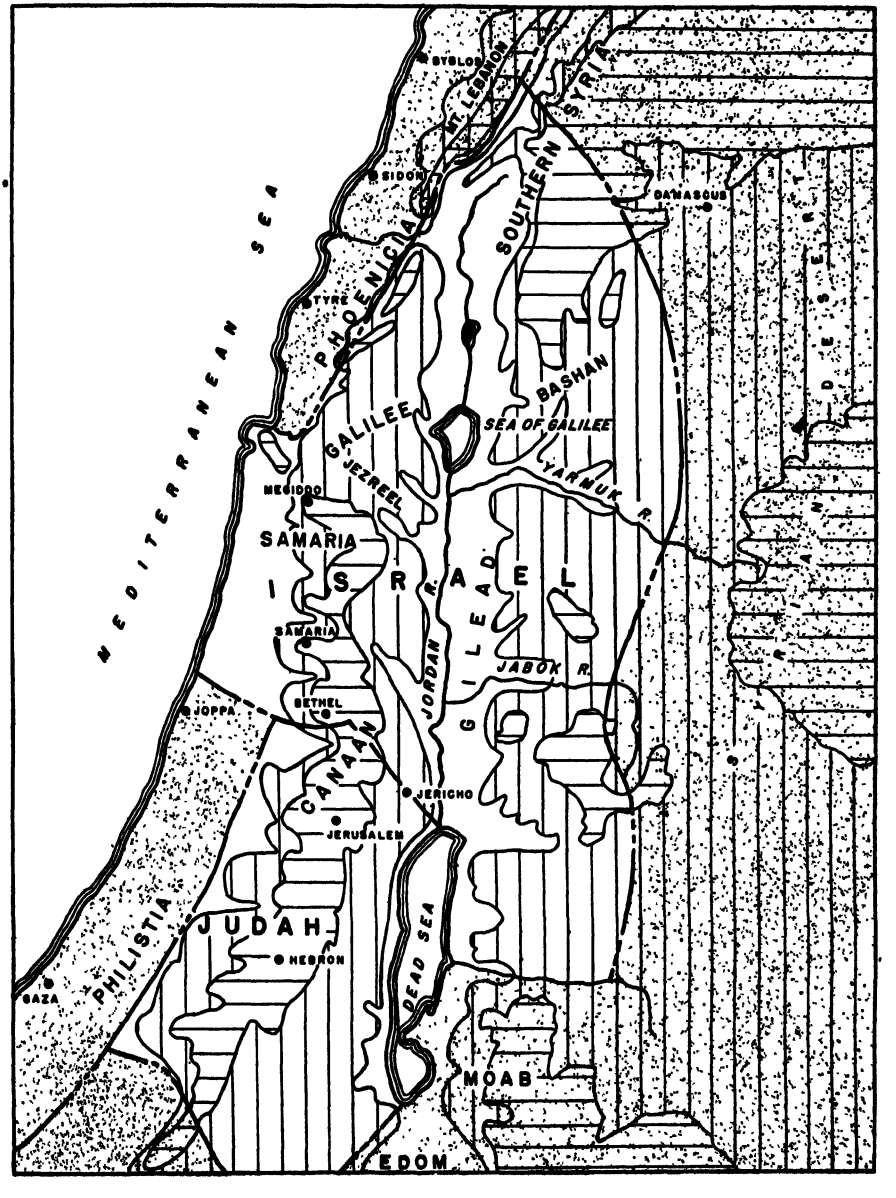
[1] See Salo Wittmayer Baron, *A Social and Religious History of the Jews* (3 vols., 1937), Vol. I, pp. 34 *ff.*

uplands south of the Dead Sea. On the west this range falls into hills at the edge of the coastal plain. Between the central range and the desert highlands are the land's most remarkable features—the Dead Sea and the valley of the Jordan River. Between the central range and the plateau of Galilee to the north is Esdraelon or the Plain of Jezreel. East of the Jordan River is Gilead, a land of forest ridges, fertile meadows, and luxuriant pastures. Galilee, a land of springs, is also fertile and well vegetated. The Plain of Jezreel is the heart of the country, bountiful and beautiful. Across it in ancient times ran the trade route leading from the coastal plain over the plateau of Galilee northward to Damascus. The climate of the country is almost as varied as its topography. In winter it is watered by rains from the Mediterranean Sea. In summer it is parched by desert winds. It is a land of two well-defined seasons. On the mountainous area west of the Dead Sea the winter rains sometimes turn to snow. No larger than the state of Vermont, Palestine has about forty recognizable local areas, each distinguished by some peculiarity of climate or vegetation.

These diverse environmental conditions intensified the interaction between the several social and economic groups among both the Hebrews and the native peoples. In the north the first wave of Hebrews became peasants; they remained the heart of Israel. When the tribes under Joshua conquered the Jordan valley and penetrated the northern part of the central mountain range, some tribesmen became peasants, others remained herdsmen, and a few entered the cities that ringed the Plain of Jezreel. In the south by far the greater part of the tribesmen were poor farmers and nomads.

As peasants and nomads the Hebrews occupied the villages and took up the ways of the Canaanitish countryside. But they retained, it is important to emphasize, the social attitudes and ideals of their desert ancestors. Among them "the value of persons far outweighed the value of things." They loved freedom and independence, and the personal qualities—insight, honor, loyalty, courage, and wisdom—not wealth or inherited position, gave prestige. In time of crisis they accepted the leadership of one of their number. But they knew neither organized government nor class distinctions as normal social facts. Especially did they not know that combination of these social forms that was implicit in urban culture, namely, aristocratic rule. Men were brothers, equal persons, and bound to the service of their tribe by an intense in-group loyalty. The Hebrews exemplified well the clan democ-

THE HEBREW UNITED KINGDOM



racy that was common among primitive peoples, especially nomads.[1]

The effect of this tradition was to set the peasants and herdsmen—the Hebrew masses—against the legal and economic practices of urban culture which endangered the clan democracy, the patriarchal family, and the customary tenure of lands. Animated by an intense in-group loyalty and deeply sensitive to supernatural power, the carriers of this tradition reacted with highly emotional religious responses to the conditions that arose as urban economic practices spread.

Because the Canaanitish cities long remained independent the Hebrews bore toward them a deep hostility. But the countryside and the cities tended to grow together. Intermarriage among the rural and urban families having similar occupations contributed much to this closer union. At the same time, as trade developed, the economic practices of urban culture began to differentiate the Hebrews into social classes, and the ancient system of family land tenure was disturbed by buying, selling, lending, and mortgaging. The effect of these developments was undoubtedly to fuse the nomadic antipathy to townsmen with the hostility of the economically weak toward the economically strong. At the same time the cities, not the tribes, became the centers toward which men looked. Men thought of themselves as belonging no longer to a family and a tribe, but to a family and a city, and expected to be buried in their city. The town population, although mixed, became constantly more homogeneous, and its feeling fixed on the nation, not on the tribes.[2] As centers of contacts with foreign peoples, the cities were, of course, less likely than the villages to hold fast to traditional religious beliefs and rites. It was possible, therefore, for all of the elements of disagreement between the agrarian and urban sections of the nation to be oriented in religious feelings.

Thus a new and an old nation came to face each other. The new nation centered in the town, was interested in trade, industry, and international politics, and consisted mainly of property owners, many of whom, it is important to note, were members of old families. As "elders" they rendered justice at the gates of their cities. The old nation was pastoral, agrarian, village, and plebeian. Calling attention to the Mosaic tradition of the enslavement of the Hebrews in Egypt, it cried, "We are all plebeians." Besides

[1] See Theodore H. Robinson and W. O. E. Oesterley, *A History of Israel* (2 vols., 1932), Vol. I, p. 105; also Alfred Bertholet, *A History of Hebrew Civilization* (1926), p. 122.

[2] See Johannes Pedersen, *Israel: Its life and culture* (1926), p. 45.

small landowners the new nation came to include also the "sojourners," mainly natives who had been brought to penury, and Hebrews reduced to selling their labor for a wage. Neither of these two groups was much better off than slaves, and economic pressures forced continually more and more of the small landowners into their ranks. The slave population, although never large, increased slowly, chiefly from two sources—captives in war and defaulting debtors. No matter how severely a master punished his slave, if the slave lived two days after the chastisement, the master was not regarded as having treated him unjustly. Slaves were not allowed an independent family life.

These internal developments, togetner with external circumstances, forced a reorientation of national life about a central authority; the result was the formation of the monarchy.

3. *The Hebrew United Kingdom.* In the face of the Philistine thrust inland in the middle of the eleventh century B.C. the Hebrew tribes united.

Fierce and courageous Saul (*ca.* 1028–1013 B.C.), the first king, was little more than a military chieftain. He had neither a standing army nor a capital city. His army consisted of a body of retainers from his own tribe, re-enforced from time to time by the militia of other tribes. Besides repelling the Philistines he aimed to annex the independent Canaanitish cities. He seems to have owed his position not so much to valor as to "fits of ecstasy," in which he learned the will of Yahweh. In the last years of his reign he was opposed by Samuel, leader of the priests, who saw in his capricious behavior the loss of Yahweh's favor. He died in battle against the enemy from the coastal plain.

Tricky and poetic David (*ca.* 1013–973 B.C.), originally attached to Saul as a musician, rose to power by virtue of military successes, intrigues, and perhaps even the aid of the Philistines. He was supported by the priests, who had deserted Saul. His first capital was at Hebron in Judah; later he seized Jerusalem, on the border between Judah and Israel, and made it not only his capital city but also the center of the Yahweh cult. The core of his fighting force was a body of "mighty ones," mainly foreigners, who formed a professional army. The social basis of his power consisted of the landholding, slave-owning peasant proprietors, who had become the aristocrats of the countryside. Although David had the support of this group in both Judah and Israel, its two divisions never were united. In the Canaanitish cities, which passed at last under Hebrew rule, the rich property owners turned toward the king,

as did also the foreigners, who, of course, had no loyalty to the Hebrew tribes. In fact, the tribes practically disappeared, leaving the relation of the classes as the essential social fact in national life. Although the "elders" still rendered justice at the gates of the cities, appeals to the king were permitted, and he could set aside tradition. Besides making military and judicial innovations, David introduced the conscription of labor. His financial resources were limited to plunder in war and tribute levied on conquered peoples. The Hebrews, it seems, paid no taxes. After expelling the Philistines from Esdraelon, he established trade relations with Tyre and extended his sway over many upland tribes and several cities along the road from Damascus to Egypt. Recent excavations have identified a city at the head of the Red Sea, east of Sinai, as the center of Solomon's activities toward the south; the most complete smelting and refining plant in the ancient Near East was found in its ruins. By seeking the ark—a symbol of the covenant believed to have been made in Moses' time between Yahweh and the Hebrew tribes—and bringing it to Jerusalem, he united the nation, the state, and the cult. This act assured him the continued support of the priests of Yahweh. David was, in fact, a priest-king. Many works credited to him were not actually accomplished, it seems, until later times, when the successors of the priests whom he had favored advanced their interests by making the sacred texts read as if David had been the ideal ruler.

Solomon (*ca.* 973–933 B.C.) succeeded to the throne of his father only after the successful termination of a plot to murder rival claimants. He organized the nation as a full-fledged oriental monarchy, creating a civil bureaucracy and a standing army of charioteers and infantrymen, fixing districts for collecting taxes, and maintaining a luxurious court on the Egyptian model. The tax collectors moved through the twelve districts in rotation. The taxes were paid in installments, sometimes as frequently as every day. In war women and children were counted with cattle as booty. Forced labor was also an important economic support to the state. The chief officers of the central government were the "tribute officer," who supervised the tax collection, the commander of the army, and the high priest of the cult of Yahweh. Around the high priest the tribe of Levi became a state-supported priesthood charged with the duty of performing the rituals of the state religion. Although no new code of laws was issued, the centralization of power in the king and his court brought to an end the old tribal regime.



By the courtesy of the Oriental Institute, University of Chicago. Photograph by Mr. Charles Breasted

MEGIDDO

During the last 4,000 years at least twenty cities have occupied this site. It dominated the ancient road across Palestine. The city shown in this photograph was Solomon's; here he built the stables for his chariotry.

Trade was carried on as a monopoly by merchants attached to the king. Through their hands passed the ancient traffic between Mesopotamia and Egypt. High profits were made, especially in the commerce in horses and chariots. Roads were improved, caravansaries established, and the means of transport well organized. Tolls were levied on caravans passing through the country. As a result of the alliance with Tyre, Solomon became a partner in the then world's greatest commercial organization. Gold and silver, measured by weight, were regularly used in trade, even in country villages, and moneylending, with the normal consequences of unpaid debts, expropriation of property, and enslavement of

debtors, became an established calling. Agricultural production increased, probably as the result of the introduction of iron implements. The population grew rapidly in the old cities, and new cities were founded. Urban industry was largely carried on by foreigners, although the king was the greatest entrepreneur. These developments widened the social gap between the agrarian and the urban population, turned the urban population toward the king, and augmented the economic power of the well-to-do, whether they lived in city or in village.

Firmly established astride the historic route from Egypt to Mesopotamia, the Hebrew monarchy occupied a position of great importance in international trade and politics. But its strength lay more in the weakness of its great neighbors—Babylonia, Assyria, and Egypt—than its own power. For a time, however, at least in Hebrew eyes, it seemed that Jerusalem was a world city and the kingdom might attain the position of world dominion to which all oriental states aspired. The ancient tribal loyalties were fused in an intense national feeling. But the glory of Solomon was hollow. For the very gold whose accumulation proclaimed prosperity set in motion economic changes that intensified the internal social antagonism dangerous to national unity, and soon Assyria advanced to threaten national existence itself.

The Fundamental Elements in Hebrew Culture.

Just as Hebrew social development was the product of an interaction of complex factors, so its culture was a fusion of materials from many sources. Its distinctive element was a religion—the cult of Yahweh—which expressed the social experiences of the tribes as they fought for and won dominion among peoples having a more advanced material culture than their own.

1. *The Primitive Base of Hebrew Culture.* As previously noted, the Hebrews carried the nomadic social outlook into Palestine; associated with this outlook were primitive religious beliefs and customs. They explained "nearly all phenomena by the direct action of superhuman and invisible persons and powers, resembling the human spirit. Like the 'primitives' they recognized no essential difference between the spiritual and the material. Like them, too, they conceived of a solidarity, or more accurately, a practical identity, between many beings, events, and things which we regard as absolutely distinct."[1] There were numerous local gods,

[1] Alfred Lods, *Israel from Its Beginnings to the Middle of the Eighth Century* (1932), p. 217. By permission of Kegan Paul, Trench, Trubner & Co., Ltd., London. On the primitive

without names or traditions, around whom clustered a multitude of good and evil spirits. The "burning ones," like flies, became ultimately angels. The "hairy ones" lurked in high places and deserted ruins. Lilith, believed to be sometimes a beautiful woman and sometimes a hag, wandered about at night. The "pest daimon" also went abroad at night. Lilim, who preyed on children, lay in wait for them in the desert. Trees, springs, caves, mountains, the moon, and some stars were either spirits or the homes of spirits. They were worshiped and consulted as oracles. Dreams were messages from heaven. When the sacred lots—Urim and Thummim —failed to reveal the will of heaven, the dead, who lived in a shadowy underworld like the Babylonian Arallu, were consulted. The displeasure of the dead was a constant terror. The chief festivals were the Sabbath and the Passover. The Sabbath, it seems, was not originally a day of rest; nor was it borrowed from the Babylonians or the Egyptians. The Hebrews brought it from the desert into Canaan. Passover was celebrated on the night of the full moon nearest to the spring equinox. The blood of the sacrificial animal, usually a lamb or a goat, was believed to provide protection against the daimons. Magic and exorcism were normal practices, and men with shamanistic powers were prominent among their tribal leaders.

At the base of Hebrew culture was a primitive social order of the pastoral type and a primitive religious system in which the sense of the relation of the overworld of spirits to the human world was especially keen.

2. *The Hebrew Assimilation of Foreign Cultural Materials.* As invaders of a land in which Babylonian and Egyptian materials had entered into a long-established urban culture, it was inevitable that the Hebrews should borrow many foreign traits.

The technological basis of Hebrew culture was, of course, the industrial and agricultural practices of Canaan. The arrival of the second wave of invaders was almost contemporaneous with the introduction of iron, but there is no evidence that its members made more than ordinary progress in adapting the metal to either military or economic uses. Parallels between the code of Hammurabi and the Hebrew law indicate that the tribes took over

base of Hebrew culture see also W. O. E. Oesterley and Theodore H. Robinson, *Hebrew Religion: Its origin and development* (2d rev. ed., 1937); W. R. Smith, *Lectures on the Religion of the Semites* (1927); Samuel I. Curtiss, *Primitive Semitic Religion Today* (1902); and Charles W. Harris, *The Hebrew Heritage: A study of Israel's cultural and spiritual origins* (1935).

many elements of the Babylonian legal system, especially concerning property rights and business practices. The existence of a Canaanitish urban law probably accounts for the fact that the monarchy did not issue a legal code. In the intellectual field the Hebrews received from Babylonia the worship of Ishtar—Ashtoreth—with its practice of sacred prostitution, numerous traditions concerning the Creation, the Flood, and the Tower of Babel, the style of their hymns—the "psalms"—the theological conception of sin, and a dislike of making images of supernatural beings. It is clear also that all there was of science in Hebrew culture was largely Babylonian in origin. In the course of the assimilation of these traits the Hebrew god, Yahweh, assumed the attributes of Marduk, becoming the conqueror of the universe and creator of man.

In thought, at least, the Hebrew debt to Egypt was as great as to Mesopotamia. Moses, the national hero, had an Egyptian name as well as an Egyptian education, and his tribesmen, the Levites, became the hereditary members of the priest class of the nation. This fact suggests the great dependence of the Hebrews for intellectual leadership upon the imperial masters of Sinai and Palestine. Further evidence of this dependence is found in the proverbs, many of which seem to have been taken from the apothegms of Egyptian authors of the Middle Kingdom. Perhaps it is not incorrect to see the advanced ethical content of Hebrew in-group morality as set forth in the Mosaic commandments as due partly to the absorption of the Egyptian social outlook. Recently the argument has been advanced that the prophetic assertion that divine intervention alone would save the nation from distress was also derived from Egyptian sources. The rite of circumcision was undoubtedly Egyptian in origin. The temple worship as organized by Solomon followed Egyptian precedents, and the temple was built in the Egyptian style. The Egyptian influence was especially strong during the period of conquest and settlement.[1]

When the Hebrews settled among the Canaanites they adopted many Canaanitish customs and beliefs, especially those of the countryside. The Hebrew tribal celebrations were merged with the spring and harvest festivals of the native peasants, and the worship of the local gods—Baals—drew many Hebrews away from their traditional religion. Above all the Hebrews borrowed the language

[1] See Allan Rowe, "A Comparison of Egyptian and Babylonian Civilization and Their Influence on Palestine," *Proceedings of the American Philosophical Society*, Vol. 68 (1929), pp. 313–319.

of the Canaanites, and with it words from almost every ancient-oriental land.

In broad outline Hebrew culture can be understood as the product of an amalgamation of the Babylonian world outlook with the Egyptian social outlook in terms of a religious ideal which had origin in the social experience of the Hebrew tribes. Its background was the intense cultural interaction of the first age of imperialism.[1]

3. *The Cult of Yahweh.* The political conditions of the imperial age determined the social experience which gave rise to the religious ideal to which Hebrew culture owed its unique element. This ideal was organized in the cult of Yahweh.[2]

Two aspects of the social experience of the Hebrew tribes were especially significant in this respect. (1) As invaders of a settled land the Hebrews continually resisted the temptation to surrender their identity in order to gain material advantage, and (2) the long-drawn-out wars of conquest subverted every element of tribal life to the achievement of victory. Thus on the individual as well as on the tribal side of life the circumstances of survival intensified in-group loyalty. This feeling was given a religious expression in the belief that Yahweh had *chosen* the Hebrews as his people and had *promised* to them the land they were invading. Between him and them was a moral bond which bound them to obey his commandments, for such obedience was necessary if his promise was to be fulfilled. In the concepts "chosen people" and "promised land" the Hebrew in-group feeling was given a supernatural orientation; the Hebrew in-group, not the individual Hebrew, was the object of Yahweh's affection.

The origin of the Yahweh cult is obscure. Certainly the god Yah, or Yahu, or Yahweh was known in the western Semitic lands before the rise of the Hebrew nation. He seems to have been the storm-god of a desert, not a settled, land, perhaps in southern Arabia. In the course of the Semitic migration his worship became localized around the oasis of Kadesh south of Palestine, and there

[1] On the contribution of other cultures to Hebrew culture see Edward H. Sugden, *Israel's Debt to Egypt* (1928); W. L. Wardle, *Israel and Babylon* (1925); and Charles W. Harris, *The Hebrew Heritage: A study of Israel's cultural and spiritual origins* (1935). See especially Ludwig Keimes, "The Wisdom of Amen-em-ope and the Proverbs of Solomon," *American Journal of Semitic Languages and Literatures*, Vol. 43 (1926–1927), pp. 8–21.

[2] On the development of the cult of Yahweh see Theophile J. Meek, *Hebrew Origins* (1936); W. L. Wardle, *The History and Religion of Israel* (1936); W. O. E. Oesterley, *Hebrew Religion: Its origin and development* (2d rev. ed., 1937); Bruno Balscheit, *Alter und Aufkommen des Monotheismus in der israelitischen Religionen* (1938); Alfred Bertholet, *Die Religionen des Alten Testaments* (1932); Adolphe Lods, *Israel, from Its Beginnings to the Middle of the Eighth Century* (1932); R. A. Aytoun, *God in the Old Testament* (1922).



Photograph by Professor CLAUDE F. A. SCHAEFFER, *Associate Curator of the French National Museums*

YAHWEH

This unfinished monument, found at Ugarit, is regarded as a representation of the Deity who came to be known, after the Hebrews conquered Canaan, as Yahweh. It is dated shortly after the middle of the second millennium B.C.

Moses recognized him as the god of the southern confederacy. During the trials of the southern tribes Yahweh became a war-god, who ruled over sky and earth. He was identified as the god of the patriarchs of the various tribes and was elevated to the lordship over all supernatural beings. His home was an encampment of the "host of heaven." His chief symbol was a box, probably filled with stones, which, as required by nomadic life, could be carried from place to place. His chief sanctuary was Zion in Judah. He appeared to men in a pillar of cloud and in fire.

When Moses recognized Yahweh as the god of Judah, the union between him and the tribes was sealed in the promise which made them the recipients of his care and obligated them to obey his commandments. Thus Yahweh and Judah began to move together through time, or, in other words, the social life of the Hebrew people became the chief field of divine action. In the life of the nation Yahweh's will was revealed; to renounce belief in him was to lose identity as a Hebrew. But Yahweh became the god of the nation only as the power of Judah was extended: "Thus when Judah came to dominate all the Hebrew tribes, as it did in the time of David, then and only then did Yahweh become the god of all the people."[1] When the monarchy was established the Hebrew in-group feeling was exalted, for national success was proof of Yahweh's supremacy; the root of Hebrew monotheism was in the social exclusiveness fostered by a highly intensified in-group loyalty.

The significant element in the cult of Yahweh was not monotheism, for it did not embody this concept until long after the time of Moses or of David, but the orientation of divine purpose in the social experience of the Hebrew in-group. Thus the Hebrews took a step not taken by any other people: they found the chief manifestation of the divine will in the experience of the social process, not in the experience of physical nature. The effect was to give *history* religious meaning, not only as tradition but also in the living present. Whatever happened at any time to the Hebrew people had significance in terms of Yahweh's purposes. Of course, other peoples had believed that they were ruled by a god or a representative of a god, but they did not find in their history any moral guidance. The later development of Hebrew religion was implicit in this shift in emphasis from physical nature to the social process as the chief field of divine action, for it inevitably set problems of discovering the religious meaning of changing social conditions.

[1] Theophile J. Meek, *Hebrew Origins* (1936), p. 114. By permission of Harpers & Brothers, New York.

4. *The Formation of a Priest Class and the Rise of Literate Learning in Hebrew Culture.* From earliest times the Hebrews possessed men who received messages from divine sources and performed magic—the usual rudiments of a priest class. Some of them, like Saul, were "ecstatics," who had fits of divine inspiration; others were like Samuel, who was a *nabi*, *i.e.*, an announcer of the will of Yahweh. From the time of Moses two groups of priests had descended: (1) the Levites, the heirs of the Mosaic tradition, and (2) the Aaronites, descendants of Aaron and the priests of the cult of Adad or the bull. Originally the Levites had carried on a serpent worship, but during the struggles of Judah their aspiration to political power led them to espouse the god of Judah. In Saul's time they opposed not only the emerging military class but also the ecstatics, who spoke for it; Samuel, the leader of the Levites against Saul, desired the establishment of a thoroughgoing theocracy, *i.e.*, a priestly government. But with the rise of David in Judah they became partisans of the monarchy and were rewarded with the priesthood of the state cult. The Aaronites continued to be the priests of local shrines, as did a section of the Levites. Judah, Yahweh, and the Levites rose together.

Under Solomon the temple priesthood was organized with Zadok as high priest, and from him descended a hereditary priestly family which held its position for a thousand years. Attached to this family were the temple priests, known as the Zadokites, who never ceased to oppose the country Levites and the Aaronites. The Hebrew priest class was continually beset with factionalism. Originally the Levites possessed no lands, but in time they had visions of holding forty-eight cities exclusively for themselves. Because Solomon's foreign wives brought the priests of their cults to the court, the priestly group around the throne became a throng in which the spokesmen of the traditional faith of the people tended to become lost.[1]

The formation of a literate intellectual group among the Hebrews was entwined with political and ecclesiastical developments. Canaan, it must be remembered, had long known writing and literate learning. The Hebrews, in fact took over the north Semitic alphabet of twenty-two consonants sometime in the eleventh century B.C., for late in this century the earliest writings—songs celebrating military victories—were made. The poems, such as the song of Moses (Exod. 15) and the song of Deborah (Judg. 5),

[1] On the Hebrew priesthood see Theophile J. Meek, "Aaronites and Zadokites," *American Journal of Semitic Languages and Literatures*, Vol. 45 (1929), pp. 149–165.

had been handed down from the preliterate nomadic age. In David's time official scribes appeared, and Solomon, according to tradition, had literary leanings. His age probably brought the first recording of several portions of the oral tradition. Parts of the second Book of Samuel and the first Book of Kings seem to have been the first prose works. Somewhat later brief biographies of Saul, Samuel, and David were composed, and portions of the Mosaic tradition, chiefly the rules of in-group morality, were set down. Sometime after 850 B.C., a Judean storyteller knit the oral traditions together into an account of Yahweh's creation of the world, the origins of culture, and the consequences of violating the in-group moral code; this work became known as the *J* portion of the Old Testament. The *J* document takes its name from the fact that in it the deity is called Yahweh (the Germans, who invented the designation, spell the name Jahweh). A little later, perhaps about 760 B.C., an Israelite writer made another compilation of this material. Inasmuch as he used the name Elohim (the plural form of the word *el*, *i.e.*, god or spirit) for the divine power, his work is now known as the *E* portion of the Old Testament. His compilation harks back to the polydaimonistic beliefs of the early Hebrews. These authors, who, it is easy to see, represented the two main divisions of the nation, were probably members of the priesthoods of different local shrines.

Literate learning in Palestine, however, was never confined to priestly groups. Recent archaeological finds indicate that a knowledge of writing was rather widely diffused. By 760 B.C., when Amos, the first of the social prophets, appeared, writing was known outside the circles of scribes and priests, for he—a "rustic"—recorded his message in a book which later took its place by the side of the compiled oral tradition. Amos's familiarity with urban life, as well as his knowledge of writing, was probably acquired in the course of visits to cities, which as a trader he frequented from time to time. The peasants and nomads undoubtedly remained illiterate, while merchants, traders, and perhaps, a few craftsmen acquired some knowledge of writing. There is no reason to believe that the great body of the priests of the Yahweh cult could read or write.

The Prophetic Movement and the Development of Ethical Monotheism in Hebrew Culture.

The decisive development of Hebrew culture occurred as the United Kingdom felt the full impact of the internal and external

forces of the urban social order. The class antagonisms, luxury, debauchery, and religious controversy which arose as wealth increased and contacts with neighboring peoples, especially the Phoenicians, multiplied stirred deeply the traditional religious feelings. In a similar manner the threat of foreign conquest, especially as Assyria advanced toward the Mediterranean coast, raised questions as to the nation's position under Yahweh. The prophets, who, as these circumstances became critical, voiced the feelings of the masses, found inspiration in the traditional Hebrew belief that social phenomena are evidences of divine action.

1. *The Division of the Hebrew United Kingdom.* When Solomon's son, Rehoboam, arrogantly attempted to conscript labor in Israel, the tribes revolted and made Jeroboam their king: This man was originally a lowborn boss of Solomon's conscript laborers. As director of building operations he gained prominence, surrounded himself with charioteers, and plotted to kill Solomon. When the plot failed he fled to Egypt, where he married the sister-in-law of the pharaoh. After Solomon's death he returned to Samaria, the fortress city of the northern tribes, and took the lead in the agitation against Rehoboam, whom he displaced shortly, becoming the first king of Israel (*ca.* 933 B.C.). Although he had the support of the Levites, who had been disturbed by the building of the Temple at Jerusalem, his religious reforms, it seems, favored the Aaronites, for he re-established bull worship, setting up golden calves as images at two different shrines. He also forbade pilgrimages to Jerusalem. The priests reinterpreted tradition in order to justify the establishment of an independent Israel. Chief among their inventions were a line of descent from Jacob and the theory that the tribes of Israel were the true bearers of Yahweh's blessing.

The foregoing events indicate that the division, although reflecting the cleavage between the northern and southern tribes, was also brought about by antagonism between social classes. To the military aristocracy and the mercantile oligarchies of the cities went the lion's share of the growing wealth. In the country the nobles, taking advantage of the financial difficulties of the peasants, built up large estates, while in the cities judges, drawn from the nobility, used their position to despoil orphans, widows, and the defenseless poor. The merchants gave bribes in the courts, adulterated their goods, and cheated with the balance in the markets. Moneylending became a business, and slavery grew apace. Free-born Hebrews, as well as captives taken in raids along the borders of the kingdom, were sold to the Phoenician slave

dealers. And landless Hebrews, poor and sometimes starving, flocked to the towns. These developments ran counter to the popular traditions which, not recognizing the new business of moneylending, gave to the family of an impoverished man the right to purchase his property. Between the urban poor and the shepherds of the hills there was a bond of understanding, for both were advocates of the traditional equality of the pre-urban social order; against them stood the landed aristocrats and mercantile oligarchs.[1] At the same time, owing to the increasing contacts with foreign peoples, strange cults spread, and the native worship degenerated into formalism as the priests grew rich on gifts from wealthy merchants and nobles. Thus the cities became centers of class animosities and intense religious feelings.

Under these circumstances religious and social movements tended to fuse. The chief manifestation of this development was the appearance of professional prophets, who spoke with Yahweh's inspiration. Among these men, who at their worst were mere diviners and fortunetellers for a fee, were some of deep religious feeling and social vision. Elijah (fl. *ca.* 875 B.C.) protested against King Ahab's introduction of the Tyrian cult of the god Melkart and cried out against the sensuality of the cities, the greed of the rich, and the misery of the poor. King Ahab's murder of Naboth, the owner of a vineyard, by judicial action is illustrative of the methods by which the rich and the powerful were using government to dispossess the owners of small properties; sanction for such proceedings was found in the foreign cults whose gods had long been associated with urban rather than nomadic practices.[2] The struggle of Yahwism against foreign cults was, therefore, also a

[1] Louis Finkelstein, *The Pharisees; The sociological background of their faith* (2 vols., The Jewish Publication Society of America, 1938), Vol. I, p. 293: "Only in the large metropolitan center of Jerusalem and, under its influence, among plebeian shepherds of the Judean desert land did the concept of individual freedom develop. In the city, a man's status was fixed not by previous generations, but in part at least by his own efforts and good fortune. Working with his own hands and selling with his own cunning, he attained a sense of independence which the peasant, bound to the soil like his ox, could never achieve. To be subject to a master seemed to the city man the lowest possible degradation. He might have little or much, but what he had was his own.

"Those shepherds who brought their beasts for sale in the market place of Jerusalem were easily infected with this freedom and individuality. . . . As soon as the individual became conscious of himself, he also became conscious of discrimination against himself. The sheep-tender knew well where the real power of the state lay—in the hands of the landed patricians."

[2] See Salo Wittmayer Baron, *A Social and Religious History of the Jews* (3 vols., 1937), Vol. I, p. 57. See also J. W. Jack, *Samaria in Ahab's Time* (1929), p. 151: "It was out of the soil of Tyrian baalism that the judicial murder of Naboth and his family grew." T. & T. Clark, Edinburgh.

struggle against a legal system which left the poor at the mercy of the rich and powerful.

The full reaction against the new social and religious conditions took form in the Nazirite and Rechabite movements, which found adherents chiefly among the dispossessed peasants and nomads. The Rechabites refused to build houses or plant vineyards; also they seem to have opposed private property in land. Against the licentious life of the wealthy urban groups they set a stern puritanism. In their unyielding loyalty to Yahweh they seemed to be resisting the spread of superstition. In fact, however, like reactionaries at any time, they desired a revival of old superstitions as a means of escaping from living problems. The Rechabites probably kept aloof from politics on the grounds that political action was only another urban evil.

Elijah may have incited his followers to murder many of the foreign priests; his successor, Elisha, stirred up a bloody insurrection, chiefly among the peasants, which raised Jehu, a military adventurer, to the throne. Thus Phoenician Baalism was overthrown in Israel. But Yahwism absorbed bull worship, the Aaronites accepted its god, and palliatives for the social abuses—a declaration against the bribery of judges, a condemnation of the kidnaping of free Hebrews, and some provision for aid to the poor —were introduced. Aid for the poor was justified on the grounds that Yahweh was more pleased by charity than by gifts to priests and the performance of rituals. The evils which distressed the small landowners and wage earners, however, continued to spread.

The rise of a foreign menace to national existence complicated both the social and the religious situation. In the late ninth century B.C., when Assyria set out on a career of world conquest, the Hebrew kingdoms found it advantageous to enter into alliances with neighboring states—a policy which had a temporary reward in military victory and economic prosperity. But Assyria was not long to be denied. In 722 B.C., after a siege of three years, Samaria, the capital of Israel, fell, and the greater part of its population—some twenty-seven thousand persons—was deported. An unsuccessful revolt two years later was followed by more deportations. For a time Judah avoided a similar fate by adopting a conciliatory policy. Israel never recovered from the disaster.

There was a definite connection between these threats against national existence and the prevalent social injustice within the nation. When, from time to time, tribute was paid to the foreign master, it was obtained by taxes and requisitions which fell

unequally upon the rich and the poor. Some of the rich escaped the burdens entirely by helping the foreign master in the evil work of despoiling the people, while the poor found it necessary, at times, to sell their children into slavery in order to raise their share of the levy.

2. *The Teachings of Amos, Hosea, Micah, and Isaiah.* The teachings of the great eighth-century B.C. Hebrew prophets embodied the second attempt in history (the Egyptians had made the first attempt at the end of the third millennium B.C.[1]) to deal with social problems of urban culture. "The 'true' prophets . . . were primarily those whose minds were open to the meaning of the new historical experience from which they could deduce the will of God."[2] For them the cause of the people's distresses was the corruption that followed the abandonment of the ways of the nomadic past; with Isaiah, it may be believed, they saw the golden age of the future as a time when vines would no longer be planted and the sole means of livelihood would be the keeping of cattle. And they saw a foreign menace, Assyria, as Yahweh's instrument of punishment for the wayward nation.

Whereas Samuel, Elijah, and Elisha, and other early prophets, concerned themselves largely with the sins of kings and other individuals whose conduct outraged tradition, Amos (fl. *ca.* 760 B.C.) and his successors proclaimed that the sins of the nation were social injustice and oppression:

> Hear this, you who trample upon the needy,
> And would bring the poor of the land to an end.
> Saying, "When will the new moon pass
> That we may sell grain,
> And the Sabbath that we may offer corn for sale,"
> Making the measure small and the price great,
> And changing false scales;
> Buying the poor for silver,
> And the needy for the sake of a pair of sandals,
> And selling the worst of the grain.
>
> The Lord has sworn by the pride of Jacob,
> "I will never forget all their deeds!"[3]

[1] See p. 185.

[2] Salo Wittmayer Baron, *A Social and Religious History of the Jews* (3 vols., 1937), Vol. 3, p. 19. By permission of the Columbia University Press, New York.

[3] *The Bible: An American translation*, p. 1551 (Amos 8: 4–7). By permission of the University of Chicago Press, Chicago.

Amos protested against the evils inherent in the urban class structure; his successors echoed it again and again. "They were the opponents of a whole social system. They were the champions of the oppressed classes against the privileged."[1] After the fall of Samaria, which seemed to be the fulfillment of Amos's prophesy of the doom of Israel, this conviction became stronger, and Isaiah pronounced the desolation of Judah:

> Ah! sinful nation, guilt-laden people;
> Brood of evil-doers, children who deal corruptly
>
> * * * * *
>
> Your land is a desolation, your cities are burned with fire;
> Your soil—in your presence aliens devour it:
> It is a desolation like the overthrow of Sodom.[2]

Hosea (fl. *ca.* 750 B.C.), after bitter experience with a faithless wife, whom he forgave, announced the belief that at the eleventh hour Yahweh would forgive the nation he loved and bless it again. But this salvation, said Hosea, was possible only if the people, seeking social justice, would love God reverently. Micah (*ca.* 740–700 B.C.), longing for a return to the nomadic past, called upon the members of the nation to live together in kindness and humility:

> You have been told, O man, what is good:
> Yet what does the Lord require of you,
> But to do justice, to love kindness,
> And to walk humbly with your God![3]

Isaiah (*ca.* 724–680 B.C.), even as Micah, saw the nation after many purifications reborn from a remnant which would become the seed of a united humanity.

For the achievement of this great purpose these prophets envisioned the coming of a new prince—

> For a child is born to us, a son is given to us;
> And the government will be upon his shoulders;
> And his name will be
> "Wonderful counsellor, Godlike hero,
> Father forever, Prince of peace."
> Of the increase of his government, and of peace
> There will be no end,

[1] T. G. Soares, *The Social Institutions and Ideals of the Bible* (1915), p. 202. By permission of the Abingdon Press, New York.

[2] *The Bible: An American translation*, p. 1133 (Isa. 1: 4–7). By permission of the University of Chicago Press, Chicago.

[3] *Ibid.*, p. 1570 (Mic. 6: 8). By permission of the University of Chicago Press, Chicago.

Upon the throne of David, and over his kingdom,
To establish it, and to uphold it,
In justice and in righteousness,
From henceforth, even forever,
The zeal of the Lord of hosts will do this.[1]

This prince would overthrow the enemies of the nation, extend its territories, render justice to the poor, and bring together the nations of the earth in a universal peace. Thus the hope for the future, which Hosea found in Yahweh's forgiving love for the nation, became finally the expectation of a Messiah—a savior-king, who would raise the in-group to the proud position of the overlordship of the nations and make it the leader in the achievement of social justice. But before the coming of the reign of peace would be "the day of vengeance":

For the Lord is in anger against all the nations,
And in fury against all their hosts;
He has doomed them to utter destruction, he has given them up to the slaughter,
And their slain shall be cast out;
The stench of their corpses will rise up,
The mountains will run with their blood,
And all the hills will flow with it.[2]

Micah and Isaiah shared the vision of the great future wherein in-group supremacy would be the means of rendering a universal justice:

For from Zion shall the law go forth,
And the word of the Lord from Jerusalem.

And he shall judge between many people,
And arbitrate for great nations, at a distance.
And they will beat their swords into plowshares,
And their spears into pruning hooks.
Nation shall not lift up sword against nation,
Nor shall they learn war any more.

And they shall sit each one under his vine,
And under his fig tree, with none to alarm them.[3]

[1] *Ibid.*, p. 1148 (Isa. 9: 6–7). By permission of the University of Chicago Press, Chicago.
[2] *Ibid.*, p. 1192 (Isa. 34: 2–3). By permission of the University of Chicago Press, Chicago.
[3] *Ibid.*, p. 1566 (Mic. 4: 2–5). By permission of the University of Chicago Press, Chicago.

Viewed as a religious development, the eighth-century B.C. prophetic movement elaborated profoundly the traditional Hebrew beliefs. First, it clarified the belief in Yahweh as the national god; second, it gave him universal power; third, it declared him continually interested in national affairs; and, fourth, it identified his rule with the achievement of social justice within the nation. Before the individual, who, according to both the doctrine and the practice of the prophets, could have a personal experience of Yahweh, was set the ideal of righteousness which called upon him to conduct himself so that he contributed directly to the achievement and maintenance of social justice. Furthermore, Yahweh was no longer to be pleased merely by the performance of rituals, the giving of rich gifts, and the making of sacrifices; nothing less than "righteous living" was pleasing in his sight. Man, however, was free to choose between the way of righteousness and the path of sin. These monotheistic and theistic tendencies of the prophets were merely developments of the old beliefs about Yahweh; the new form of these beliefs was largely the result of their reorientation in terms of those external circumstances which seemed to threaten the very life of the in-group. The messianic hope was a clear response to these threats.

The identification of Yahweh's law with a just society was the truly original element in prophetic thought. From what source did the prophets develop their conception of social justice? The answer to this question does not seem to be complex. On the one hand the prophets, as men of the people, knew well the distress of the masses under the new circumstances of urban life and oriental despotism; on the other hand, also as men of the people, they were bearers of that tradition of nomadic democracy, as well as the peasant ethics of neighborliness, which the masses had received from their ancestors.[1] In the conflict between the conditions of the people and this tradition the prophets arrived at the profound conclusion that under a just God social injustice cannot exist except through the fault of men. Hence, it seemed to them that the sufferings of the people were the result of the sins—the greed, violence, luxury, debauchery, and heathenism—of the wealthy and powerful classes; furthermore, it seemed that the dan-

[1] Theodore H. Robinson and W. O. E. Oesterley, *A History of Israel* (2 vols., 1932), p. 325: "The prophets were socially and politically insignificant, save in so far as they were spokesmen of the great mass of the people. They were in a very real sense the inheritors and guardians of that democratic principle which Israel had inherited from nomad days. . . ." By permission of the Oxford University Press, New York.

ger of foreign conquest was only God's punishment for these unrepentant sinners. Salvation then lay in ending these sins by a return to the traditional democracy of the agrarian or semi-nomadic economy and the pure worship of Yahweh. Only Isaiah caught the vision of the reformed society as the "city regenerated," and even his vision lacked the clarity necessary to make it a guide for any movement toward social amelioration.

As "revolutionaries"[1] the prophets failed. Their program consisted only of a return to a primitive social order. Their achievements were a few palliative measures. But as "religious visionaries" they reached supreme heights: the synthesis of Yahwism with social idealism. Thus from the primitive Hebrew *nabi* sprang seers —in every instance men of the people—who, by projecting a deep sense of suffering in supernatural terms, gave ethical attributes to deity. From the evils which the people felt ought not to exist the prophets developed a conception of justice that ought to exist; as Hebrews it was inevitable that they should define justice as the reign of Yahweh's law. The prophets' sublime conception of Yahweh was merely the focus of their social vision.

3. *The Political Victory of the Prophets: the Reforms of Josiah.* When Isaiah, who prophesied the failure of Assyria to overthrow Judah, was vindicated by the sudden dispersal of Sennacherib's army (*ca.* 701 B.C.), probably by an outbreak of disease, the prophetic movement, which from the first had political as well as religious aims, gained strength in priestly and court circles. King Hezekiah (*ca.* 720–692 B.C.) undertook a religious reform along the lines of the prophetic teachings. But, under the influence of the old aristocracy, King Manasseh (*ca.* 692–640 B.C.) fell back upon the policy of accepting foreign gods and making foreign alliances; such action led, of course, to the persecution of the members of the prophetic party. The official priests and professional prophets,

[1] Hermann Schneider, *The History of World Civilization from Prehistoric Times to the Middle Ages* (2 vols., 1931), Vol. I, p. 262: "Amos was the first great revolutionary in human history." By permission of Harcourt, Brace & Company, Inc., New York. See also Jacob Hoschander, *The Priests and Prophets* (The Jewish Theological Seminary, N. Y., 1938), pp. 164–165: "Thus while formerly the basis of Judah's and Israel's social structure was *equality*, it was now the contrary. Inequality was the very fundament of these states. Any return to their former principle meant the uprooting of their very foundations. This could be effected only by a thorough-going revolution. Yet equality was the very principle upon which the prophets insisted. No wonder that the leading class who had everything to lose and nothing to win by such an overturn refused to listen to these prophets. They actually trembled for the existence of the state, if the prophetic demand should be realized. They clearly perceived that the prophets aimed at the destruction of the state and its restoration upon new foundations, the laws of Israel's religion, which meant the ancient principle of equality, the fundament of justice."

among whom the king had many supporters, argued that, after all, Jerusalem was not such a bad city and upheld "convention" as the guidance of personal behavior. Needless to say, men of these opinions held no brief for the poor. When Jeremiah (*ca.* 625–586 B.C.) took up the prophetic cry that Judah would be destroyed unless there was reform, they answered that Zion—the fortress at Jerusalem—was indestructible and denounced him as a traitor. But his treason consisted actually of finding the danger to the nation in the oppressive rule of the aristocracy rather than in a foreign menace. The land, he proclaimed, was more virtuous than the city, where superstition and flattery mocked religion and corrupted justice. But against the city's economic power the villages were defenseless. For a time, at least, the shifting international forces which weakened both Assyria and Egypt belied his fulminations.

The repression of the prophetic movement only drove it underground, where sympathetic priests kept alive its aims. They compiled the literature of exclusive Yahwism in a new declaration of law and faith which a little later Josiah (*ca.* 638–609 B.C.), who fell under their influence, issued (*ca.* 621 B.C.) as the code of the state cult. This compilation is now known as the Book of Deuteronomy. Because they persuaded Josiah to play the role of the princely savior whose coming the prophets had foretold, he undertook the conquest of Samaria and the recovery of the "ten lost tribes of Israel." To purify the worship of Yahweh he carried out the prophets' admonitions to destroy the foreign cults and centralized the worship of Yahweh in the Temple at Jerusalem. This centralization necessitated the abolition of many local shrines, the transfer of their priests to Jerusalem, the reorganization of the priesthood of the Temple, and the making of new provisions for its economic support. Modifications in line with prophetic social teachings were introduced into the law. The old prohibition against usury was reiterated, and a new prohibition was laid against the removing of the boundary stones of a neighbor's land, one of the worst evils of the time. The expropriation of the small peasant was cursed but not declared illegal. After six years an enslaved Hebrew was to become free, and his former owner was to provide him with the means to start a new life. An effort was made also to mitigate the lot of insolvent debtors and impoverished foreigners. The effects of these reforms were far-reaching. Prophesy came to an end. The sacred writings became more important than ever as the guide of life. The priesthood was divided into two castes, the priests and the Levites. National life became identified with the

centralized worship of Yahweh, which was possible no longer except in Jerusalem. Thus the ancient Hebrew peasantry lost their familiar worship, and the cult of Yahwism became in a peculiar sense the religion of a city people. And the state was transformed into a priestly monarchy. Priestly control of the king was established by regulations which not only forbade him to collect many horses, to have many wives, and to hoard much gold, but also charged him with musing upon and enforcing a code of laws which had the approval of the priests. And the king, just as other men, was obliged to obey this code.

4. *The Babylonian Conquest and the Prophets of the Exile.* The life of the reformed monarchy was short, for soon the foreign menace reappeared. In 609 B.C. Josiah died in a skirmish with the Egyptians, and in 586 B.C. Nebuchadnezzar II of Babylon captured Jerusalem after a terrible siege and carried the greater part of the population into exile. Only a few peasants and the Aaronite priests who lived among them remained in Palestine.

With the deportation of the Hebrews to Babylonia the dispersion—the Diaspora—of the nation, which had already begun, mainly through trade, was greatly stimulated, and for the future it was to have great significance. Many of the exiles were enslaved, but probably the larger number of them lived as free peasants and craftsmen. Some of them became well-to-do traders. Under these circumstances national existence was preserved by the development of a communal religious life in which priests and law became the central facts. And learning in the national tradition displaced inspiration as the source of right teachings.

The exile (*ca.* 586–538 B.C.) had a profound effect upon the evolution of the religious thought of the Hebrews, for, having developed their beliefs in terms of in-group feeling, they were now confronted with the problem of in-group survival under the most difficult of all circumstances. The overthrow of Judah, the destruction of the Temple, and the carrying away of the utensils of Yahweh's worship to Babylon weakened the old fixation on a single land and shrine as the seat of a collective worship. To compensate for this weakening of the national cult, the worship of Yahweh, as developed in the teachings of Jeremiah and the two prophets of the exile, Ezekiel (fl. *ca.* 600–570 B.C.) and an unknown figure, now frequently called the Second Isaiah (fl. *ca.* 550 B.C.), became a matter of individual feeling and faith.[1] Each Hebrew built an altar

[1] The teachings of the Second Isaiah, which have been the subject of much controversy, are to be found in Isaiah 40–55.

to Yahweh in his heart. Against this refined conception of the individual's relation to God was balanced a rigorous observance of ritual in domestic life, notable in the emphasis on the rite of circumcision and the keeping of the Sabbath, which preserved the identity of the in-group. At the same time a knowledge of ritual, the moral law, and prophetic teachings spread among the people, who regularly assembled to hear the reading of the sacred works. Thus Yahwism was finally stripped of the physical paraphernalia of a cult—temple, altar, and images—and became essentially a subjective faith, and as such it could live wherever the Hebrews found a home. Ezekiel caught a vision of a nation, purified by righteousness, which, living as a church rather than as a state, would, through each individual's sense of sin, abhor wickedness and attain holiness. The responsibility for this regeneration he placed upon the individual, who, if he did not love his neighbor whom he could see, certainly could not love God whom he could not see. The test of moral righteousness was a daily conduct in which justice—the love of men—was proof of piety—the love of God. Thus the prophetic social ideal of justice was transformed into the personal ideal of "righteous living." The second Isaiah, who observed the rise of Persia, foresaw the restoration of the Hebrews to their homeland. But this restoration was not to be for any mere political purpose: it was the mode of universal regeneration.

> Bend your ear and come to me;
> Listen, that you may live!
> For an everlasting covenant will I make with you,
> The covenant of love which I faithfully promised to David.
> As once I made him witness to peoples,
> A leader and commander of peoples,
> So you shall call nations you know not,
> And nations you know not shall run to you
> For the sake of the Lord your God,
> The Holy One of Israel, because He has shed glory on you.[1]

The Hebrew Religion of World Salvation.

The prophets of the exile taught that the Hebrews, because they had suffered, had been purified in order that they might be the messengers of God to all nations. In achieving their own moral redemption, the Hebrews had become the instrument of the universal redemption of mankind. Earlier prophets had caught the

[1] *The Bible: An American translation*, p. 1236 (Isa. 55: 3–5). By permission of the University of Chicago Press, Chicago.

vision of the final triumph of the Hebrew in-group as the supreme moral overlord of the nations; the prophets of the exile saw in the suffering Hebrew in-group the means of the moral redemption of all suffering mankind. Thus the role of the Hebrew in-group as mediator between God and mankind was conceived in even more spiritual terms than it had been by the pre-exilic prophets. On the one hand these teachings bound the individual firmly to his faith; on the other hand they gave his faith significance as a service to God's greatest purpose, the redemption of mankind. Through misfortune the Hebrews finally came to conceive "One God," whose concern is the moral regeneration of mankind; a religion having such a conception of the deity is an *ethical monotheism.* The Hebrews preserved their nationalism in the belief that through their relation with this One God all humanity would be brought to righteousness.[1]

THE RISE OF IRANIAN CULTURE

Like Syria and Anatolia, Iran was the home of a peasant-village culture in very early times, and by the opening of the fourth millennium B.C. it was spreading eastward. It reached Baluchistan at an unknown date. From the first it possessed a fine painted pottery and small bits of copper. In fact, more remains of the earliest copper-using culture are known in Iran than in any other part of southwestern Asia. In the southern Zagros Mountains, where the Karun and Kerkha rivers formed a wide valley, this culture gave rise to an urban development perhaps as early as that of Mesopotamia. This area, known as Elam, was closely connected with lower Mesopotamia throughout ancient-oriental times. Its chief cities were Susa and Awan.

About the middle of the third millennium B.C. a bronze-using culture spread into northwestern and western Iran, and a little later the hill peoples of the western Zagros ridges, such as the Gutians, turned covetous eyes toward the Tigris-Euphrates flood plain. Their intermittent invasions were little more than raids. Sometimes, too, the rulers of Sumer and Akkad brought these hill peoples into their loosely organized kingdoms. Sargon of Akkad,

[1] The incipient monotheism of the Hebrew religion of this phase of the development of Hebrew culture is discussed in Jacob Hoschander, *The Priests and the Prophets* (1938): See p. 39: "We must remember that the transition of Polytheism into Henotheism and finally into Monotheism was essentially due to the idea of identifying a deity with various other deities and assigning to it all their powers, functions, and attributes"; and p. 53: "The only proponent of a rigid Monotheism was the unknown exilic prophet, and he did not have any follower who propagated his doctrine. There was no belief in Jahweh in a monotheistic direction." The Jewish Theological Seminary.

whose capital, Eshnunna, was east of the Tigris, may have been the first monarch to accomplish such an extension of his rule. Rock sculpturing and writing became known in western Iran about this time. Raids and counterattacks between the valley and the hill peoples were only incidents in a conflict which had origin partly in national differences (the Zagros Mountains were the eastern limit of the Semitic peoples), in the rivalry of mountaineers and peasants, and in the interaction between urban peoples seeking raw materials and less advanced peoples desiring to plunder their richer neighbors. The by-product of this conflict was a slow spread of urban culture among the hill peoples. By the end of the second millennium B.C. cities were scattered along the western Zagros ridges from Erbil to Susa.

A new era in the relations of Iran and Mesopotamia began when the Indo-European peoples swept into the ancient-oriental lands after the beginning of the second millennium B.C. These invaders imposed the rule of aristocratic warrior minorities upon the old peasant-village and nomadic peoples; they also introduced horse raising and an improved metal industry, which together promoted an increase of wealth and, consequently, a growth of cities. Among the products of the new metal industry, which was notable for its fine bronze work, was the horse's bit. In the cultural amalgamation of the new rulers with their subjects the traditional religious beliefs of both groups seem to have survived. Under the leadership of sorcerers the peasants worshiped the dark forces of nature, kept sacred fires, awaited a life after death, and looked forward to a regeneration of the world when all the mountains would be leveled. The gods of the warrior-rulers became, of course, the lords of the universe. Toward the close of the second millennium B.C. fortified cities dominated local areas from Lake Urmia to the Persian Gulf. The kings of the great ancient-oriental empires coveted the products of these highland areas, particularly their horses and iron, and their princes, in turn, were not unwilling to fish in the troubled waters of imperial politics.[1]

The Coming of the Medes and the Persians.

After the middle of the second millennium B.C. new Indo-European peoples, known later as the Medes and Persians, ap-

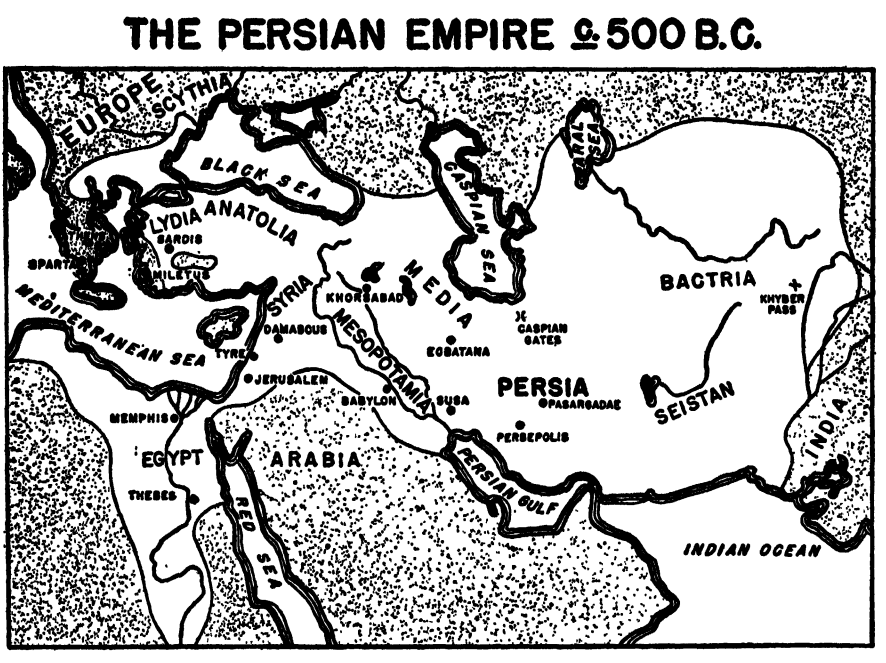
[1] On the beginnings of culture in Iran see Jotham Johnson, "Archaeological Outlines in Prehistoric Persia," *Scientific American*, Vol. 156 (1937), pp. 308–310; E. E. Herzfeld, *Archeological History of Iran* (1935); Georges Contenau, *L'Archéologie de la Perse des origines à l'époque d'Alexandre* (1931); Georges Contenau, *La Civilisation de l'Iran au millénaire avant notre ère* (1936); George G. Cameron, *History of Early Iran* (1936).

peared in northwestern Iran—perhaps they came from the Caucasus region—and pushed southward and eastward. In the eleventh century B.C. the Medes seem to have occupied the region between Lake Urmia and the plain of Hamadan, where they established their capital, Ecbatana. They advanced at the expense of the chieftains of the ancient Iranian peoples. By the opening of the eighth century B.C., certainly, they dominated the northern Zagros ranges and threatened Assyrian communications with the horse-raising region of northern Iran. In the early seventh century B.C. forty-six Median towns, it is said, paid tribute to the Assyrians. The Persians first held lands to the west of Lake Urmia and, following the valleys southward, penetrated the countries bordering ancient Elam. About the opening of the seventh century B.C. their leader, Hakhamanish (or, in Greek, Achaemenes) founded a kingdom in Parsumash along the upper Karun River. His son, Chishpish, or Teispes (*ca.* 675–640 B.C.) conquered part of Elam and seized Parsa, later Persia, where the first Persian capital, Pasargadae, was built. Throughout these centuries the Persians were vassals of the Medes.

When the Cimmerians and the Scythians poured through the Caucasus passes early in the seventh century B.C., they struck the Medes as well as the Assyrians. In fact, their overrunning of Media gave the Persians the opportunity to seize Parsa. In resisting Assyrian raids for horses in northern Iran, the Medes established a kingdom and reasserted their rule over the Persians. During the death struggle of Assyria both the Medes and the Persians were allies of the Babylonians; after its termination the Babylonians supported the Persians in a revolt against the Medes. Cyrus II (*ca.* 550–530 B.C.) defeated the Median king, who did not have the full support of his own people, before the walls of Pasargadae, seized his capital, and looted its treasure. This success laid the foundations of the Persian empire, with Media and Elam as its original satrapies, and opened the career of conquest which soon brought all of the ancient-oriental lands into it.

About 546 B.C. Cyrus defeated a coalition of powers—Babylonia, Egypt, Lydia, and Sparta—and swept over Asia Minor. Sardis, the capital of Lydia, fell about 546 B.C. and the Ionian Greek cities about 540 B.C. Babylonia was conquered about 538 B.C. While campaigning in eastern Iran Cyrus died.

Cambyses (*ca.* 530–521 B.C.), the son and successor of Cyrus, occupied Syria and advanced on Egypt. About 525 B.C., after reaching an understanding with the priests of Amon, he ascended



the Egyptian throne as the pharaoh. He then undertook what proved to be an unsuccessful campaign into Nubia. On a return journey to Persia he died, under circumstances which indicate that he may have committed suicide.

The death of Cambyses seems to have brought into the open a conflict between the Magi, the priests of the popular faith, and the Persian nobles. Gaumata, a Magian priest, headed a conspiracy to seize the throne; in order to win popular support he undertook to decrease taxes and ease the military burdens. The nobles set up Darius (*ca.* 521–485 B.C.), the heir of one branch of the royal line, as emperor; he quickly put down the almost universal insurrection and made the faith of Zoroaster—the worship of Ahura Mazda or, later, Ormazd—the state religion. Then he struck at the Scythians, an Indo-European people which, since the overthrow of Assyria, had been raiding the northern borders of the urban culture areas from Bactria to Phrygia. The campaign against the Scythians took Darius into Europe as far as the lower Danube valley. In other campaigns Darius pacified eastern Iran and penetrated northwestern India. His efforts and those of his successor, Xerxes (*ca.* 485–465 B.C.), to bring the eastern part of

the Mediterranean Basin into this vast empire were defeated by the European Greeks.[1]

The Bases of Iranian Culture.

Iran was a land of forested mountains, fertile valleys, grassy plains, sandy deserts, and salt marshes. East of the Zagros ranges the deserts and marshes divided the plateau into two habitable areas. In the north, plains led away toward the arid highlands of Afghanistan and the grasslands of central Asia; in the south, scattered fertile regions strung out toward the mountains of eastern Baluchistan. The Medes held the northern plains; the Persians occupied the more diversified southern lands. In the west the Zagros valleys provided avenues of communication between the two areas. Access to Mesopotamia in the south was by way of ancient Elam. In the north a narrow trail led over the Zagros ranges from Ecbatana to the upper Tigris valley, and mountain passes opened into the Armenian Highland. As conquering peoples the Medes and Persians did not displace the ancient peasant and pastoral population; they became the lords of the soil and the builders of new cities—Ecbatana, Pasargadae, and Persepolis—from which radiated the power that for the first time gave political unity to Iran.

1. *The Economic and Social Aspects of Iranian Culture.* The economic life of Iran was as diversified as its environmental aspects. Agriculture, based on the field cultivation of wheat and barley and the garden culture of fruits and vegetables, was carried on in the well-watered valleys and oases. The irrigation of small areas was widely practiced. Great herds of horses and cattle ranged the grassy plains, especially in the north; in the southern mountainous areas goats and sheep, as well as horses, donkeys, and cattle, were numerous. In the southern Zagros ranges timber was plentiful; in the north mining and metalworking were ancient occupations. In Persian times ironworking became an industry of international importance. The ordinary crafts were practiced everywhere, leatherworking and gold- and silversmithing with distinction.

Political unification gave the security which made the ancient trails leading to India, by way of Baluchistan, and to central Asia and The Pamirs the highways of an expanding commerce. Just as the horse gave the rapidity of military movement that established political unity throughout Iran, so the camel was the means of

[1] See p. 474.



By the courtesy of the Aerial Survey of the Oriental Institute, The Mary-Helen Warden Foundation, University of Chicago

THE CASPIAN GATES

Through these gates pushed many of the invaders that penetrated western Iran from the central Asiatic grasslands. The remains of an old fort that guarded the gates can be identified. The landscape is evidence of the desiccation that has stripped parts of Iran of vegetation.

transport that wove its diverse regions into an economic web which the routes leading east and west bound into the growing world economy. Under the Persians Iran became the channel of an ever wider intercourse between central and eastern Asia and the Mediterranean lands.

Persian social and economic organization was a blend of primitive and urban elements. At the base of the social pyramid were peasant villagers and nomads, who had more or less independent rights of tillage and pasturage. In the village communities cultivation was regulated under elaborate rules, and property was held jointly by the male members of a family. The patriarchal principle prevailed in domestic relations. The nobles—a military aristocracy—held a shadowy power over the masses. On their estates the land was tilled by tenants who paid fixed shares of the

crops and by slaves. The chief forms of wealth, besides land, were slaves, cattle, and horses. A hereditary priesthood of uncertain origin, known as the Magi, was supported by gifts of food, clothing, grain, and animals from both the peasants and the nobles; its claim to wealth and power rested on the belief that its members possessed a secret knowledge of spells that warded off the daimons. Government was organized on a tribal basis. Justice was administered according to clan rules. The army was the chief support of Persian rule. The peasantry formed a body of archers; the nobles a cavalry. In battle the infantry showered the enemy with arrows, and the cavalry rode him down under hard charges. The Persians were skillful in using advantageously the mobility of their forces.

2. *The Composite Character of Iranian Culture.* Iranian culture embodied materials from three sources: (1) the ancient Iranian peasant villagers, (2) the Indo-European conquerors, and (3) the urban peoples of Elam and Mesopotamia.

Except for the slight alterations caused by the establishment of Indo-European rule, the life of the masses, it may be believed, went on in the manner of the ancient peasants and nomads. The Medes and Persians did not greatly disturb their economic, social, or religious organization. The peasants tilled the scattered areas of watered soil and, the herdsmen watched over flocks and herds as had their ancestors for at least two thousand years. In the villages patriarchs enforced the ancient customs. The Magi kept sacred fires and protected men and their property from a daimonic host. The Medes and Persians brought with them gods of the heavens—Varuna, Indra, and Mitra—like those of the Greeks and the Aryas of India. Above all the gods ruled a supreme deity, Ahura Mazda, the "wise god." The gods, it should be observed, were benevolent; the daimons were the source of evil.

These materials were organized in an urban culture under influences from Elam and Mesopotamia. Cities appeared in Iran largely as a result of economic penetration by the peoples of the ancient-oriental urban lands. The Persian writing system was developed from Semitic sources. A cuneiform alphabetical script of thirty-six signs, probably invented by the Medes, was used for royal inscriptions. Such documents were usually recorded in three languages. The great Behistun inscription, the deciphering of which yielded the key to the Old Persian language, was recorded in Persian, Babylonian, and Elamitic. It proclaimed the good deeds of Darius (*ca.* 521–485 B.C.), who saved the empire from internal



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PERSEPOLIS

Persepolis was a cluster of palaces, enclosed by a wall nearly fifty feet high. On one side it faced a precipitous mountain; on the other it rested on a great stone substructure sixty feet high. At its foot on the plain was a city. The square structure in the lower left-hand corner of the palace platform was the entrance tower; it was reached from the outside by a double stairway. The large columned area in the lower center of the picture was the audience hall of Darius and Xerxes. The oblong building at the right center was the harem of Xerxes. Alexander the Great burnt these structures.

disruption. In ordinary governmental business the Persian language was written in Aramaic characters on skins. Aramaic, it should be remembered, was the language of commerce throughout Asia west of Iran. Babylonian astrology, mensuration, and medicine were absorbed without amendment. Assyrian and Egyptian architectural forms were adapted to the needs of the court. The Medes borrowed square-stone masonry from the Assyrians about 800 B.C.; Persian royal building did not begin until the sixth

century B.C. The basic motifs of the Iranian arts, probably more native than foreign in origin, were animals in action. All learning, if not all art, centered at the court, which was organized on the Assyrian model.

Probably the most distinctive pattern of Iranian culture was the designing of gardens, practiced alike by nobles and peasants, which brought together the constructive and artistic elements of urban culture in an adaptation to an environment that, although it provided a diversity of products, limited the area under tillage.[1]

The Reorientation of the Traditional Religious Beliefs of the Iranian Peoples: Zoroastrianism.

The intellectual result of this cultural assimilation was a reorientation of Iranian religious beliefs commonly known as Zoroastrianism, from the prophet Zoroaster, or Zarathustra. Although tradition represented Zoroaster as having made his first converts in Bactria, he was, it may be conjectured, a member of the first small literate group that formed about the Persian royal court. His probable dates are 660–583 B.C. Fragments of his poems, the Gathas, the oldest known Persian literary materials, survive in the Zend-Avesta, the sacred work of a later rendering of his teachings. His earliest followers, it is said, created a considerable body of religious writings. Zoroastrianism, which is probably best understood as an orientation of the interests and ideals of the Persian warrior aristocracy in terms of the daimonic universe, seems never to have displaced the traditional religious beliefs of the native peasant villagers and nomads.[2]

1. *The Teachings of Zoroaster.* Zoroaster taught the absolute supremacy of the god Ahura Mazda, the lord of knowledge and the creator of the world; arrayed against him were the daimons—*daevas*—originally conceived as the gods of peoples other than the Persians. It is not difficult to interpret this dualism as a projection of the in-group–out-group conflict into the spiritual overworld; at the same time, of course, the dual alignment was correlated with the obvious physical opposition of light and darkness. With slight development this dualism became the qualities of goodness, piety, righteousness, power, health, and immortality arrayed against

[1] For general discussions of the development of Iranian culture and of the history of Persia see Clement Huart, *Ancient Persia and Iranian Civilization* (1927); R. W. Rogers, *A History of Ancient Persia* (1928); and Sir Percy Sykes, *A History of Persia* (2 vols., 3d ed., 1930).

[2] See A. V. W. Jackson, *Zoroaster, the Prophet of Ancient Iran* (1899).

untruth—"the lie"—folly, injustice, disease, and death. As the creator of the universe Ahura Mazda destined men to be his co-workers in achieving "the renovation of the world." But men were free to choose to fight with or against him. Thus Zoroaster brought the ethical struggle directly into each man's life and, in fact, raised all human existence to the level of ethical endeavor.

To fight with Ahura Mazda meant to live righteously and purely; the reward was health and prosperity on earth and immortality in the next world. Zoroaster abandoned both the magical and the ritualistic conception of religion; as with the Hebrew prophets, religious faith became the motivation of righteous living, *i.e.*, a matter of right thinking and vigorous acting in the service of justice and truth. Zoroaster called upon the Persians to serve as the warriors of Ahura Mazda's world-kingdom.

2. *The Influence of Zoroastrianism upon Iranian Culture.* Although Zoroastrianism expressed the social supremacy of the warrior aristocracy, it called upon the Magi and the masses to join in the battle for righteousness and justice. Thus it united the social classes under ideals which, as given a fourfold expression in (1) a simplified worship, (2) an idealization of agriculture, (3) an aristocratic education, and (4) a theory of just government, became dominant in Iranian culture.

Ahura Mazda had no temples, idols, or ornamented altars; his shrines were high places open to the sky where priests or rather pious scribes kept sacred fires burning. The chief symbols of the god were fire and light. Ahura Mazda could not be worshiped as an idol, although images of him were made. Since the four elements—air, fire, water, and earth—were sacred, they were not to be defiled in any manner. Hence corpses were not buried but exposed on high towers, refuse was not thrown into streams, priests covered their mouths when near the sacred fire, and the sick who gave off odors and effluvia were generally avoided.

Agriculture and cattle raising were honorable occupations; trading was a low calling. "Whosoever cultivates the corn," said Zoroaster, "cultivates righteousness; he follows the Mazda-worshiping religion as well as with a hundred feet, he suckles the Mazda-worshiping religion with a thousand breasts, and strengthens it with ten thousand sacrifices." When the corn grew, the daimons writhed; when it was harvested, their jaws burned as though pressed with hot irons. The peasant was indeed a valiant warrior for Ahura Mazda. Fasting was denounced because it lessened physical strength. The dog, which aided the

husbandman, was cherished; killing a dog was as great a crime as murdering a man. The cock, whose crowing waked the slothful, was praised. Marriage and the begetting of children were encouraged. The king rewarded couples who reared large families. Ahura Mazda ensured that the good husbandman's cows would always bear calves. His aristocratic followers were charged never to plunder the village of the peasants who believed in him. The Persian word "paradise," meaning a well-kept park, suggests the Zoroastrian ideal of the world—ordered and made fruitful by labor —which men should enjoy.

If the peasants were called upon to labor, the nobles were urged to acquire military skills and virtues. From his fifth to his twentieth year the young aristocrat, brought up in the royal court, learned just three things: to ride, to shoot the bow, and to tell the truth. His education was considered complete when he mastered a knowledge of the tribal code and learned to be kind and gentle in dealing with his fellows regardless of class distinctions. For practical purposes he learned about clearing land and caring for cattle, especially the bull, the lord of the herds. Courage was the absolute virtue—the highest form of piety; cowardice was the greatest sin. Anyone who shirked or sought to escape the performance of his military duty was executed, usually in a horrible way, as an example to others. Truthtelling was the soul of honor, lying a base evil. The Zoroastrian aristocrat had no zeal for romantic love; his passion was for "the good thought, the good word, and the good deed":

> The first step that the soul of the faithful man made, placed him in the Good-Thought Paradise; the second placed him in the Good-Word Paradise; the third step placed him in the Good-Deed Paradise; the fourth step that the soul of the faithful man made placed him among the Eternal Lights.

The Persian monarchy was the world-dominion of Ahura Mazda, and the king and the nobles, who enjoyed divine favor, were engaged in renovating the world. As a patriarchal ruler, the king was charged with maintaining order and promoting the well-being of his subjects. The nobles were his chivalrous and duty-bound helpers in government and war. In their victories over other nations Ahura Mazda triumphed over lesser gods and daimons.

The Optimistic World View of Iranian Culture.

Although the Iranians regarded life as struggle, they found it good. Men thirsted for life. To overcome obstacles was the way to

nobility. If men were strong, aggressive, and ambitious, they were worthy; if they were weak, humble, and merciful, they were ignoble. The beauties of the earth, the pleasures of the senses, and the joys of victory were proper to men. If men made the earth more fruitful, the harvest was not more to be enjoyed than the labor that brought it forth. If victory was sweet, it was no sweeter than the pain of winning it. God and men were allies in well-doing that had an earthly, as well as a heavenly, reward.

Iranian culture embodied the optimistic view that the comfort and happiness of men on earth are pleasing to the supreme god of the universe. In industry, the pursuit of knowledge, and warfare men performed the feats of strength and courage which, overthrowing the daimons, proclaimed their virtue and assured Ahura Mazda's triumph. To leave wild nature better than it was found—better tilled and better governed—was to become worthy of eternal life in Paradise, the garden of the lord of the universe.[1]

[1] See N. D. Manekji, *Zoroastrian Civilization* (1922).

Chapter VIII

THE FOUNDING OF URBAN CULTURES IN EASTERN ASIA

The historians of India and China long placed the beginnings of their literate cultures as early as the fifth or fourth millennium B.C. But archaeological research has not confirmed this view in the case of either country.

From the disappearance of the early Indus-Valley urban culture after the middle of the third millennium B.C. until the appearance of the Aryan tribes—perhaps a thousand years later—almost nothing is known of the land now called India. If Aryan tradition is to be believed, northwestern India was sparsely settled when the Aryas arrived, but in central India there lived a cattle-keeping people, who built stockaded villages. The Dravidians, as this people is now called, may even have had towns. But most of India was inhabited by more primitive folk. Present evidence suggests that when the Aryas penetrated the land, India was a country of mixed races and jumbled hunting, nomadic, and hoe cultures. This diversity, it may be noted, never disappeared.

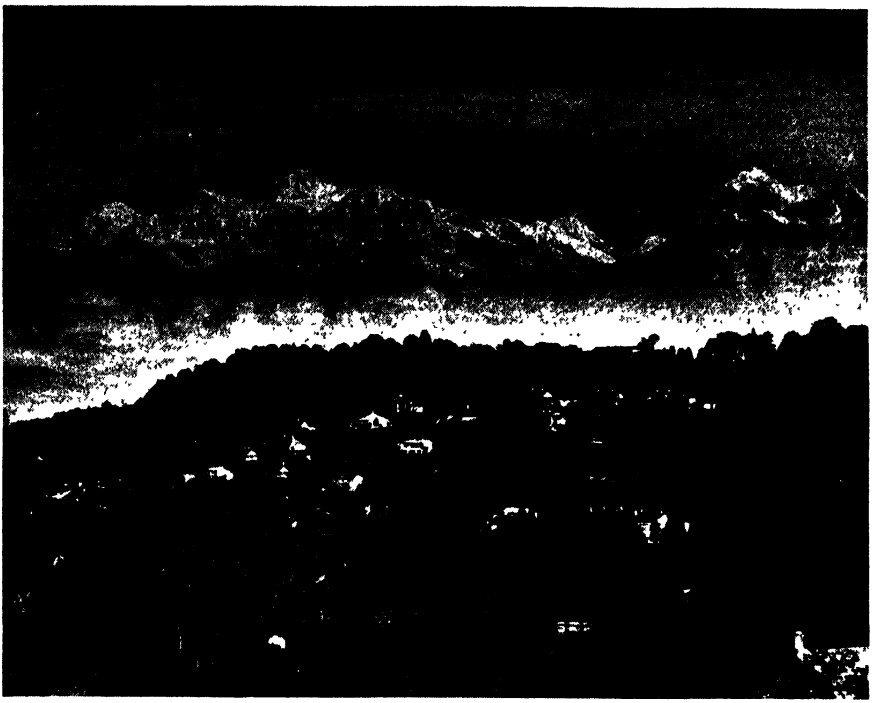
As indicated by Peking man, the human race has lived in China for a very long time, and recently it has been suggested that the Chinese of historical times may be descended from the type of which Peking man is a representative. However this may be, it is clear that northern China, especially the Huang valley, has been the site of a continuous cultural evolution since its loess deposits were laid down at the end of glacial times. Everywhere the sites of paleolithic culture have been found beneath the loess, while neolithic artifacts are found on or near its surface. The roots of the Chinese cultural tradition are in the developments evidenced by these neolithic materials, but their sources are uncertain. Apparently some of them were native, some of them came from the south, and some of them reached the Huang valley from the west. No invasion similar to that of the Aryas in India occurred in China;

the basic population was derived from the native peoples of neolithic times, who were, it seems, closely related to the inhabitants of Tibet, Burma, and Indo-China. It may be that the movement of peoples outward from the early centers of Chinese culture has been as great as has been the movement of other peoples toward these centers. At any rate the expansion of China has been not so much the result of the migration and settlement of peoples as of the growth and diffusion of a culture.

The archaeological evidence now at hand does not permit the tracing of the urban cultural traditions of India and China to a period before the middle of the second millennium B.C., nor does it allow the identification of these origins with earlier developments in areas outside either land. Both cultural traditions appear to have been in the main independent growths, at least in their earliest phases. In general, however, they bear signs of kinship with the urban cultures of southwestern Asia and the Mediterranean Basin which, as time went on, influenced more and more the urban cultures of India and China and, in turn, were influenced by them. There is no reason, therefore, to regard the cultural traditions of India and China as peculiar, separated by time, space, and outlook from the cultures of southwestern Asia and the Mediterranean lands.

THE INDIAN CULTURAL TRADITION

India is a subcontinent, suspended from the central mountain core of Asia. To the north are The Himalaya—"abode of winter"—the greatest mountains in the world. In the east they pass into the tangled ranges and jungles of Burma. Along a 1,500-mile arc they project spurs and foothills to the south, from which snow-fed streams draw a never-failing supply of water. Only at their western end are they open, and from that direction have come the invasions that have given India a very mixed population. On the west are the dry highlands of Afghanistan and Baluchistan, inhabited by nomads quick to turn raiders of settled peoples. Below the northern and western mountains are the great valleys of the Indus and the Ganges rivers. Between them in the north is the narrow divide—the cockpit of India—where the supremacy of the land was fought for, over and over again. As the Indus moves to the sea it passes to the west of the Thar Desert, which extends inland from the Indian Ocean for a distance of 400 miles. Although crossed by caravan routes and settled in spots, it is a barrier between northwestern and southern India. As the Ganges moves to the sea it



Underwood and Underwood

THE HIMALAYA

Just as the climate of India was influenced by atmospheric conditions over The Himalaya, so was the thought of the country affected by their towering massiveness. They were the center of the world. The fountain of life and purity—Lake Manasarowar—was hidden in them. The snows on their summits were the petals of the world-lotus, and there the gods had their thrones.

sinks into jungles, unites with the Brahmaputra, and spreads into a delta which was originally an impassable area. Between the Ganges and its greatest tributary, the Jumna, is a low plain, called like other areas between rivers, "Doab." Although originally a jungle, it became very early the most heavily populated area in India. To the south of the river valleys are the Vindhya Hills and below this range the plateau known as the Deccan. Along the western side of the Deccan are the Western Ghats; along its eastern side are the Eastern Ghats. The Deccan is drained eastward by long rivers with relatively broad valleys. The Narbudda, the only important river in southern India to flow into the Indian Ocean, drains the Vindhya mountain area.

India has a monsoon climate. From June to November the southwest monsoon brings heavy rains that wash the country from the Western Ghats eastward. Northwestern India, not watered by the monsoon, has a continental climate with the heaviest precipitation in the winter months. From December to May the northeast monsoon carries cool temperatures over most of the land. In the south the variations of the temperature from season to season are slight; in the north and, especially, the northwest, they are very great. Diversities of climate and soil make for great variations in flora and fauna. In the northwest are deserts, open plains, and wooded hill lands. In the northeast and south are jungles, forests, and open woodlands. The great alluvial plain of the Ganges throbs with life—vegetable, animal, and human. No country in the world offers men such a variety of environments, each in its own way likely to make life difficult. Drought, flood, and locusts are the parents of famine, malaria is an insidious menace, and death as prey of the great beasts of the jungle lurks constantly near.

The history of India has been greatly affected by these environmental circumstances. Northwestern India has been repeatedly invaded, but only two peoples, the Aryas and, much later, the Moslems, crossed from the Indus into the Ganges valley. They, of course, greatly influenced cultural development. Across the broad alluvial plains of these valleys native military forces also had relatively free movement, so that on their fertile soil have risen always the great Indian states. In the Deccan the mixed topography promoted the formation of numerous small states. Above all, those powerful natural facts—the towering Himalaya, the intense heat, the monsoon pulse, the desert, and the jungle—have made men feel their insignificance, a feeling which, in spite of the great diversity in Indian culture, has pervaded it.[1]

The Aryan Penetration of India.

When Indo-European tribes first reached India is not known;[2] their oldest records, the *Rig-Veda*, tribal songs, throw no light on their arrival or the fate of the early Indus-Valley culture. Nor do they contain memories of the western connections of the tribes. The tribes, who called themselves Aryas, from the word meaning noble,

[1] See Shamsi Ghani Khan, *The Influence of the Geography of India on Its History* (1927); *The Indian Antiquary*, Vol. 62 (1933), pp. 236 *ff.*; *The Hindustan Review*, Vol. 51 (1928), pp. 314 *ff.*; and Charles Joppen, *Historical Atlas of India* (1914).

[2] See p. 225.

were organized in compact family units under the leadership of warrior-priest-fathers, who ate beef, drank beer, used metal weapons, went to battle in chariots, and allowed their women a great deal of freedom. They kept cattle, cultivated a cereal, probably barley, wove cloth, tanned hides, worked some metals, and lived in villages called "cattle pens," which they moved frequently. Their chief amusements were gambling, hard drinking, and horse racing. They were a semi-pastoral, not a peasant-village, people, and their superiority over the Dravidians lay chiefly in their possession of the horse.

The Aryas are certainly to be numbered among those Indo-European peoples, such as the Hittites and Iranians, who appeared on the edges of the ancient-oriental urban culture area about the beginning of the second millennium B.C. At least they spoke related languages and worshiped the same or similar gods. Perhaps in the outward movement of the Indo-Europeans from the western homeland the Aryas reached Bactria, where, under the pressure from other Indo-Europeans, they crossed the Hindu Kush mountains into the Kabul River valley which they descended into India. The Rig-Veda, which contains no record of their crossing the Indus River, describes them as holding northwestern India from the Kabul valley to the Saraswati River—the land of "the five rivers," now usually called the Punjab. Apparently the Aryan tribes came in five waves, the dates of which cannot be fixed. The period of invasion probably ended about the beginning of the first millennium B.C.[1]

1. *The Clash of the Aryas and Dravidians in Central India.* When the Aryas occupied the divide between the Indus and the Ganges rivers they encountered for the first time an opposition which made movement difficult. The effect was to force the tribes to coalesce, so that those penetrating the Ganges valley, especially the Ganges-Jumna Doab, were organized under kings. At the same time they became a settled agricultural people. As they pushed southward, they mixed more and more with the Dravidians, and sometime in the eighth century B.C. the northern group and the southern body, a more mixed population, became involved in a bitter struggle for the control of the Doab. The result was a victory for the southerners, who consequently took political leadership; in

[1] On the history of ancient India see Vincent A. Smith, *The Early History of India* (1924); E. J. Rapson, editor, *The Cambridge History of India*, Vol. I (1922); P. Mitra, *Prehistoric India: Its place in the world's cultures* (2d ed., 1927); and F. G. Pargiter, *Ancient Indian Historical Tradition* (1922).

the north, the princes having been greatly weakened by the defeat, leadership passed to the priests. Thus the upper Doab became especially the land of the Brahmans, *i.e.*, the Aryan priests. At the time these events were occurring, adventurers and holy men were spreading Aryan influence southward into the Chambal valley.

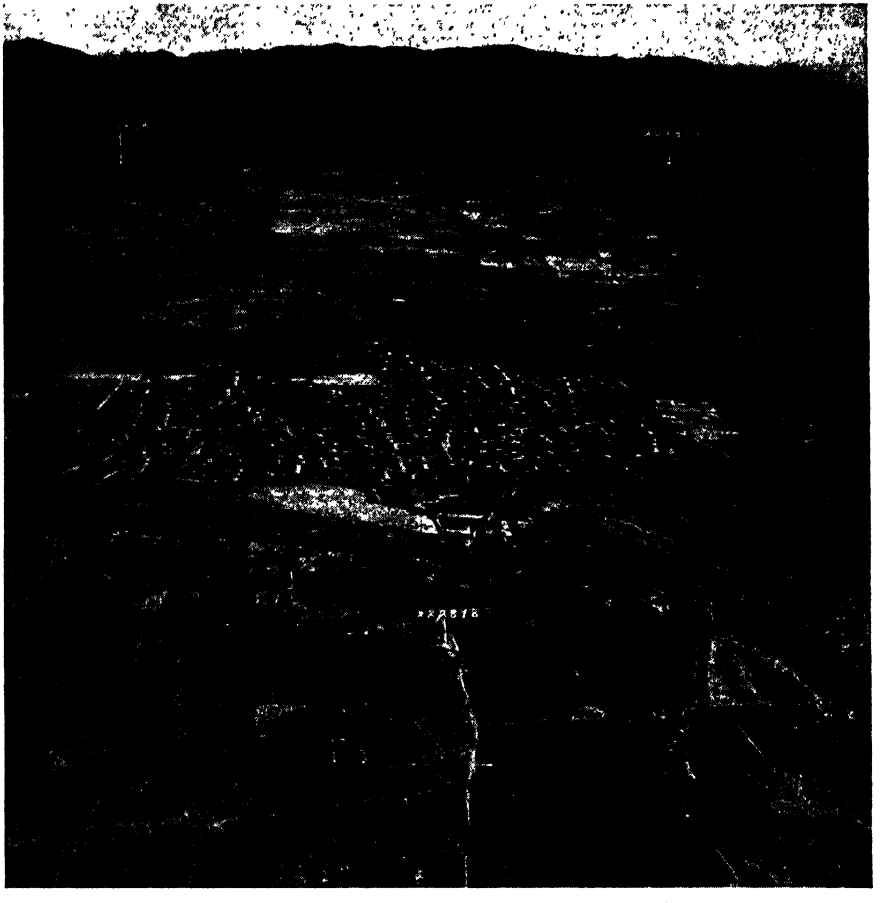
Meanwhile another movement carried Aryan influence beyond the Doab into the lower Ganges valley. Aryan tribes that were still leading a pastoral life pressed eastward along the foothills of The Himalaya, crossed the Gandak River, and occupied lands on the lower Gangetic plain. Less numerous than their forerunners who settled the Doab, they mixed more freely with the Dravidians.

Everywhere in the Ganges valley, it may be believed, the Dravidians so outnumbered the invaders that they were neither destroyed, enslaved, nor converted. Peace between the two peoples came only in an adjustment which involved the cultural reorganization of their lives. Throughout the period of Aryan-Dravidian conflict Mongolian hill peoples made their way into the Ganges valley, where they became a not unimportant element in the new population.

2. *The Rise of Cities in India.* The social milieu of the cultural reorganization into which these peoples entered developed in the cities which rose mainly on the Gangetic plain.

The economic support of urban life in India as in other countries was a settled agriculture. In this case it was based on cattle, wheat, and barley. The Aryas brought the plow, and during the period of expansion into the Ganges valley made it heavier and gave it a sharp point. These improvements adapted it to wet soils. At the same time the field cultivation of cotton and rice began, and iron-working was introduced. These technological innovations made possible the production of the wealth necessary for the support of an urban population. In this connection it is pertinent to note that the Gangetic plain yields two crops a year. During the rainy season rice grows, during the cool season barley, wheat, legumes, and many vegetables.

As previously noted, the peasant-village culture of northern India was probably influenced by early Indus-Valley materials, while the peasant-village culture of southern India was undoubtedly a native development. To what extent the new village system of central India was based on native communities is not known. Aryan tradition describes an ideal village, patterned on the "cattle pens," which spread throughout the lands the Aryas occupied. Each village consisted of a walled rectangular enclosure, two streets



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AN INDIAN VILLAGE

In this air view of an Indus-Valley village can be seen the historic pattern of the Indian countryside. Outside the closely built village are the tilled fields, the pasture lands, and the wastes. There are abandoned fields in the eroded areas beneath the mountains. The jungle, of course, was absent in ancient times as now in the arid parts of India.

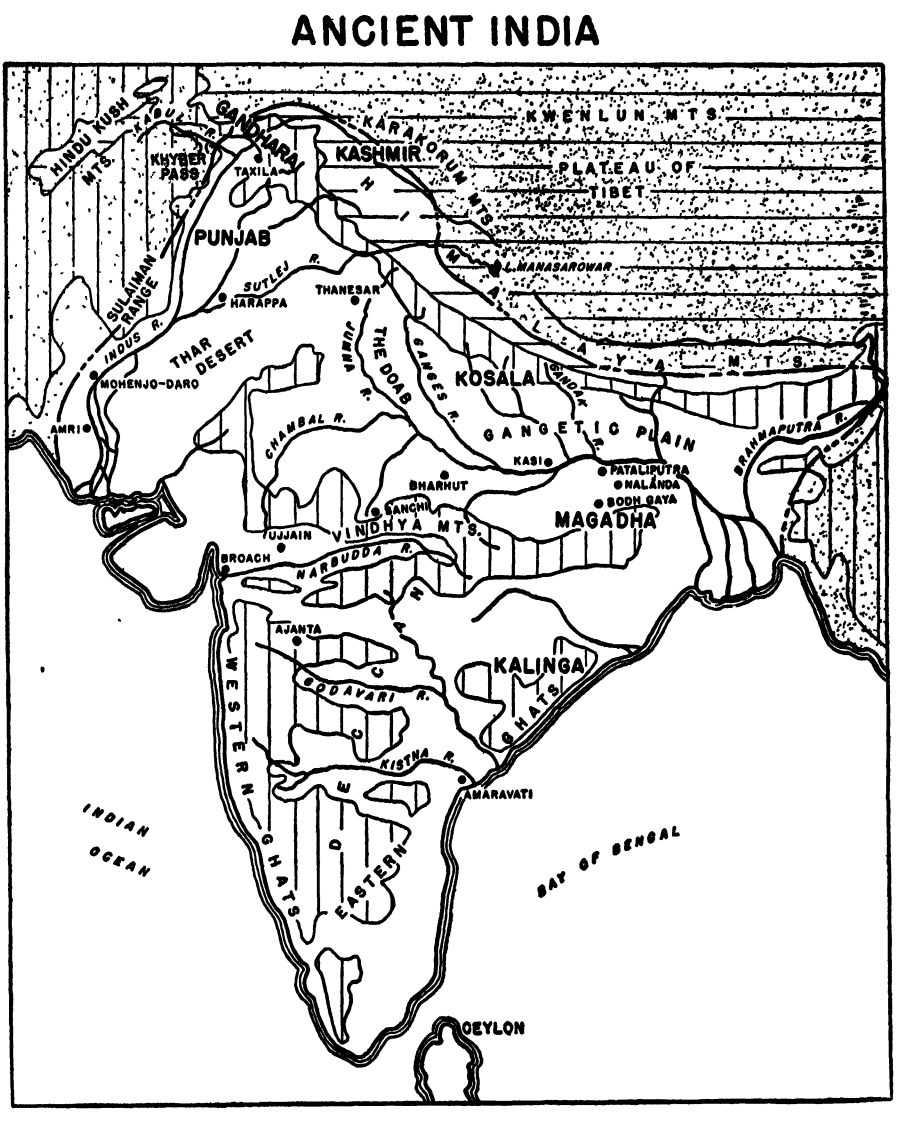
that crossed at right angles, and a public square where a shrine stood and the village elders met. The houses of the village, arranged along the streets, were the private possessions of the heads of families, who could not alienate their property without the consent of the community. Between the houses and the wall was an open space dedicated to the god of war and used for defense. The community maintained public bathing places, parks, orchards, and

sacred groves. Around each village was a broad belt of land, which, although it belonged to the village, was parceled out to the heads of families and cultivated in individual fields. The cattle, also individually owned, grazed on communal pastures. At the outskirts of the village lands were posted guards; in the towers over the four main village gates stood sentinels. The council of village elders, which was elected yearly, had charge of sanitation, defense, and the administration of law. Law, it should be remembered, was only the custom observed in the villages. Although there is no reason to believe that the Indian village ever conformed to the ideal pattern, there can be no doubt at all that a community performing the functions ascribed to it became the fundamental communal unit of Indian life.

However organized, the villages, it may be judged, were primitive republics ruled by patriarchs. The smallest probably contained about two hundred families, the largest perhaps eight hundred. Except for a few craftsmen and the village priest or magician, who, beside performing the ordinary ceremonials of domestic life, also charmed away fierce beasts and such disasters as drought, locusts, and hailstorms, there was little social specialization.

Such communities, it can be seen, were difficult to break up. In the face of attacks the families drew together for defense; in case of drought or flood they assisted one another; and if dispersed they easily came together again, perhaps on a new site. They were the kind of community suited to a rural world which, in spite of man's labors, retained a wild and unsettled aspect—a world where no roads connected the villages, where cattle and other domestic animals roamed about freely, where forests, pastures, and fields were intermingled, and where all attempts to clear the wild growth yielded only imperceptible results.

The formation of cities was a natural outgrowth of the spread of villages, especially after the introduction of iron. Probably as early as the eighth century B.C. an Aryan city stood on the site of modern Taxila. In the seventh century B.C. other cities arose in the Indus valley, on the divide between the Indus and the Ganges, and on the Gangetic plain. Early Buddhist tradition knew fifteen cities, among which the most important were Mathura, Baranasai (near the site of modern Benares), Saketa, Ujjain, and Rajagriha, Champa, and Kosambi. Pataliputra which later became the capital of the most important state on the Gangetic plain, Magadha, was founded about the middle of the sixth century B.C. These early cities were political capitals, fortresses, seats of great shrines, and centers of a



slowly developing commerce. Their princes drew revenues from the villages, which, grouped together in tens, fifties, and even thousands, paid taxes and furnished men and cattle upon demand. The princes managed defense, looked after roads and irrigation works, and maintained resthouses along the roads and assembly halls and groves about the great shrines. In the traditions that describe the palaces, palanquins, flowery parks, and lotus beds of the cities may

be seen records of the luxury which everywhere characterized urban culture.

Around these cities came in time the formation of states. Almost nothing is known of their development. By 600 B.C. some sixteen states had appeared between The Himalaya and the Narbudda River. Some were kingdoms; others were tribal republics. Centralized government existed primarily for the collection of revenues and the making of war, for the customary law governed life. The cities and states floated uncertainly on the vast sea of villages. The princes monopolized the military profession; some early records tell of peasants continuing their work while battles raged near by. Gandhara in the upper Indus valley, Avanti in the upper Chambal valley, Kosala on the Gangetic plain, and Magadha on the southern bank of the lower Ganges were the earliest states to aspire to wide dominion; they slowly swallowed their lesser neighbors:

> The capitals of these states developed from villages into cities, and with this concentration of the population agriculture was extended, and trade flourished. Caravans of merchants, armed and able to protect themselves, traversed the country. The traders embraced every class, from the Brahman to the Sudra; and the people of Magadha in especial seem to have been famous traders. Indeed, much of the trade seems to have been in Dravidian hands.[1]

The Bases of the Indian Cultural Tradition.

The Indian cultural tradition originated in the interaction between the Aryas and the Dravidians. The phases of this interaction are darkly hidden from view, for the Aryan tradition, the sole account, contains little historical material. And the archaeological exploration of India has barely started. If foreign materials had a place they came mainly from the Iranian culture area. Although the dated history of India begins in the seventh century B.C., the first authentic date—336 B.C.—is the year of Alexander the Great's

[1] James Kennedy, "The Aryan Invasion of Northern India: An essay in ethnology and history," *Journal of the Royal Asiatic Society*, 1919, p. 525; *ibid:* "This whole process of Aryanization had been elaborated in its fundamental outlines before the sixth century B.C. But one must beware of thinking that the whole Middle Ganges Valley was by that time Aryanized. The Aryo-Dravidian settlements were the centres of the new polity, and they were for the most part on the banks of the great rivers. Much of the interior was covered by forest and grass jungle, and was occupied by the wilder aborigenes. A great forest extended from Mathura to the Vindhyas; south of the Ganges from Rewa to Bihar was the region of the forest kings; a *dhak* [a flowering tree] jungle, which can still be traced, divided the Doab. . . . great forests stretched into Oudh, and there was much jungle between Buddha's birthplace and Benares. This condition of things lasted in some places down to the end of the eighteenth century A.D."

descent into the Indus valley. By that time the fundamental elements of the Indian tradition had been fixed.[1]

1. *The Mingling of Aryan and Dravidian Religious Beliefs.* Both the Aryas and the Dravidians were orientated completely toward the daimonic universe; the former, it has been said, believed in magic and the latter in even more magic.

The basis of Aryan thought, as evidenced by the Vedic Hymns, was a fundamental animism, which had been differentiated into a belief in three classes of deities, (1) the gods of heaven, (2) the gods of the air, and (3) the gods of the earth, and in hosts of daimons. The great god of heaven was Varuna, the omniscient upholder of the physical and moral order; all good things were the work of his magic:

> Wise are the generations through the greatness
> Of him who propped the two wide worlds asunder,
> Pushed back the great and lofty vault of heaven;
> The day star, too; and spread the earth out broadly.
>
> * * * * *
>
> This, too, is the all-wise god's deed of magic,
> A mighty deed, which none has ever challenged,
> That all the streams that pour themselves out quickly
> Do never fill the one sea with their waters.

Like the Iranian god Ahura Mazda, Varuna was identified with light and the good. For the sun he carved a pathway across the sky, and for men he pointed to the way of righteous living. Associated with him as rulers of various aspects of nature were the sky- and earth-gods. Indra, the mighty warrior, dominated the sky-gods; he fought and slew Vritra, the daimon of drought, who had stolen the cloud cows and imprisoned them in a cave. Indra's victories were evident in thunder, lightning, and rain. Agni, the god of fire, who raced, headless and footless, through the forest, was the chief earth-god; as the god of the hearth and of sacrifices he was closely associated with daily life. Just as Indra was the great warrior, so Agni was the great priest—the mediator between the gods and men. Identified with the cosmic power of growth, he was a great enemy of the daimons, especially those which brought sickness. Some of

[1] On the general history of India and its cultural development see H. G. Rawlinson, *India: A short cultural history* (1937); George Dunbar, *A History of India from the Earliest Times to the Present Day* (1936); J. Allen *et al.*, *The Cambridge Shorter History of India* (1934); Sri Ramakrishna Centenary Committee, *The Cultural Heritage of India* (3 vols., 1936); W. H. Moreland and A. C. Chatterjee, *A Short History of India* (1936); René Grousset, *The Civilizations of the East* (4 vols., 1931), Vol. 3, *India;* Charles Joppen, *Historical Atlas of India* (1914).

the daimons warred with the gods; other preyed on men. They killed horses and cows, devouring their flesh, obstructed sacrifices and prayers, and inspired lies. Like the daimons of the Iranian religion, they were identified with darkness.

The Aryan gods—the "Shining Ones"—drove chariots, drawn by spirited horses, across the sky. Toward nature they were powerful. Toward men they were benevolent. Although anthropomorphic, their forms and being were so vague that it was not difficult to identify them with one another or with other deities. Among the twenty or more important Aryan gods, first one and then another rose to prominence. Thus Vishnu, who became the great god in later Hinduism, had only a minor position in the Rigvedic religion.

The Aryas identified life with the breath; the soul—imperishable—was the seat of thought and emotion. After death souls went to live in a light heaven in the midst of the sky; there they shared in the feasts of the gods, enjoyed completely free movement, and had every longing satisfied:

They shall hunger no more, neither thirst any more;
Neither shall the sun smite them any more, nor any heat:
For the lamb that is in the midst of the throne shall be their shepherd
And shall guide them into the waters of life;
And God shall wipe away all tears from their eyes.

In contrast to heaven was hell, a deep and dark bottomless pit from which there was no exit; there Indra cast the daimons and there, too, men went who sinned. To win heaven it was necessary to die in battle, to practice rigorous austerity, to pay liberal sacrificial fees, or to make generous gifts. Such works built up a store of merit in heaven.

Like every other body of primitive belief the religion of the Aryas contained many elements which could be developed into things distinctly different from their original forms.

Originally Aryan worship centered in the family, where every father kept alive the memory of his ancestors and sacrificed to the gods.

In all probability the original form of the religious act, Karman, was a direct action by which a man, not yet a priest but the possessor of certain forms of words, could by efficacy of those words bind nature to the achievement of his purposes. . . . What the Aryans . . . sought to obtain in this way was the goods of this world—subsistence, a minimum of well-being, even wealth, a full life, not cut off by premature death, and male descendants, who alone were qualified to continue after the father's

death the offerings which supported the life of their ancestors. Now, protection against evil forces—devils, the hungry dead, plague, human enemies, wild beasts, and the provision of descendants are both to be secured by direct influence exercised on things.[1]

The offerings to the gods consisted of *ghi*, a form of butter, and *soma*, an intoxicating liquor which, when drunk by men, gave divine powers. Indra, who was capricious and immoral, drank great quantities of this sacred beverage.

The Aryas conceived morality as a "road" or "way"; this metaphor, probably derived from their early pastoral migrations, was significant because it embodied the idea of ethical direction and progress.[2]

The religions of the Dravidians and other native peoples reflected a jungle environment. Apparently their fundamental religious feeling was a sense of kinship with plants and animals, in which survived many elements of totemism. To most of their gods they gave animal forms. Thus when the Aryan and the Dravidian religions were mingled, Indra became the "Bull of Heaven." Also they conceived of the deities in pairs, a male and a female, which idea was expressed in life in the acceptance of sexual expression as a normal activity. The concept "polymorphism," *i.e.*, the same being having many forms, which the Aryas recognized in fire, was implicit for the native peoples in the exuberant growth of the jungle; the two conceptions became one in the belief in reincarnation. Moreover, the moral "way" of the Aryas became the fundamental idea of Indian religion and philosophy when it was conceived as a progress toward spiritual reality by reincarnation through innumerable forms of plant, animal, human, and spiritual forms; in other words, the ethical concept "moral way" was rendered in terms of the polymorphous aspects of universal existence. The use of idols and fetishes, never strong among the Aryas, which gave Indian culture its almost impenetrable exterior of material symbols, also came from the Dravidians.[3]

The supreme product of the merging of the Aryan and Dravidian cultures—the one at the level of a naturalistic polytheism, the

[1] Paul Masson-Oursel, *Ancient India and Indian Civilization* (1934), p. 123. By permission of Kegan Paul, Trench, Trubner & Co., Ltd., London.

[2] See H. D. Griswold, *The Religion of the Rigveda* (1923); P. S. Deshmukh, *The Origin and Development of Religion in Vedic Literature* (1933); and A. B. Keith, *The Religion and Philosophy of the Veda and Upanishads* (1925).

[3] Paul Masson-Oursel, *Ancient India and Indian Civilization* (1934), pp. 119 *ff.*; also *The Calcutta Review*, November–December 1932, p. 293; Gilbert Slater, *The Dravidian Element in Indian Culture* (1924), pp. 82 *ff.*

other at the level of totemic animism—was the hardening of the magical elements common to each of them in a tradition which made religiosity the overwhelming factor in Indian life.

2. *The Social Structure of Indian Life: the Caste System.* The social expression of this religiosity was the caste system and the ascendancy of the Brahmans, the Aryan priest class.[1]

A simple specialization, both social and occupational, existed among the Aryas when they arrived in the Punjab. Princes and priests, closely associated, were distinguished from the common tribesmen, but intermarriage was not forbidden. And no ritualistic regime ordered the life of the priest. At the same time, however, a rigid relation in terms of marriage was organized in the joint family, in which authority and the ownership of property were vested in the patriarch; his power over his wife, his daughters, his sons and their families was almost absolute. The joint family was the original expression of the principle which later became fundamental in Indian society, namely, the individual always exists as a member of a legal and religious group, never alone.

In the course of the penetration and settlement of the Ganges valley two factors combined to transform this simple society into the rigid structure of castes which has existed in India throughout literate times: (1) the interaction between the Aryas and Dravidians, in which the in-group feeling of the relatively few Aryas was greatly intensified, and (2) the formation of urban social classes, which united economic differences with racial distinctions.

The root of caste (the Vedas do not mention caste) was the color line between the invading Aryas and the dark-colored Dravidians. Their original relation is suggested by the fact that the Aryan word for enemy, *dasa*, in the feminine form, *dasi*, meant "slave girl"; in effect, therefore, the Aryas killed the Dravidian men and enslaved their women, who, of course, then became the mothers of children of mixed blood. In the emotions clustering about this relation were the prejudices which became the principle of the caste system. The antipathy to the enemy, the slave, and the half-breed became the basis of a rule against the intermarriage of the members of the social classes. But the social classes changed as urban life developed. The masses became a mixed population, closely attached to the primitive beliefs and customs carried in the village community. The growth of industry set apart from the

[1] On the caste system see N. K. Dutt, *Origin and Growth of Caste in India* (1931); G. S. Ghurye, *Caste and Race in India* (1932); article "Caste" in the *Encyclopaedia of the Social Sciences*.

peasants a body of craftsmen, who lived in their own quarter in the villages, in separate villages, or in the growing towns. Beneath this upper rank of the working population were wage earners, landless poor, and slaves; originally these were mostly natives, but with the development of money economy, probably in an incipient form in the sixth century B.C., and its normal consequences in debt and mortgage foreclosures, free peasant proprietors, princes, and even priests fell to their levels. At the same time, largely as a result of a growing trade with western Asia, especially after the rise of the Persian empire, a new group of well to do, recruited from all peoples and classes, arose in the towns. Under these circumstances the only mode of preserving the identity of the Aryas was a strengthening of religious distinctions of all kinds. In this activity the conservative elements, especially the priests, who tended to withdraw from the towns and identify themselves with the village masses, took the lead.

The original Aryan priest—Brahman—was a singer of songs in praise of the gods, an utterer of prayers, and a maker of sacrifices according to strict formulas. The name "Brahman" was derived from a root which, given another form, also meant magic spell. When the Aryan tribes reached the upper Ganges valley, the priests had developed complex rituals, but the heads of the families, now princes as the result of conquests, were still the dominant group. The priests emerged as a powerful group in the upper Ganges-Jumna Doab after wars had killed off many of the princes; there through religious rituals they organized a supremacy over the non-Aryan masses. Hints of rivalry between the princes and the priests are to be found in the poetical records of the conquest of central India. Princes who opposed the Brahmans were destroyed, while princes who won priestly support prospered. And occasionally, it can be believed, the priests led natives they had converted to the Vedic religion against recalcitrant princes. The conversion of the natives did not involve the abandonment of their customary beliefs, only the acceptance of the Aryan priests' magic. The efficacy of this magic was worked in sacrifices, which the priests elaborated for almost every purpose men might have. By sacrifice the world was created; by sacrifice the gods had attained their divinity. "By magic men harnessed the gods to their will, and this magic was the property of the Brahman. As a possessor of those secret charms his position was exalted."[1]

[1] James Kennedy, "The Aryan Invasion of Northern India . . . ," *Journal of the Royal Asiatic Society*, 1919, p. 41.

Since the evidence for these developments, faint though it be, is found in materials compiled and preserved by the priests, it is safe to assume that the record is prejudiced against the princes.

As the priests won ascendancy in the presence of the economic and social differentiations of the emerging urban culture, they extended to its groups the modes of rule implicit in their position; whereas the root of caste was the "color line" drawn in ritualistic terms, its development followed as differences of economic status and function were organized in terms of rituals. Thus occupation was made the test in regard to the caste status of the individual: the higher the caste, the more occupations open to its members. Agriculture and war were open to all members of the princely and priestly castes; however, a special tabu forbade the priests from guiding the plow. This prohibition, however interpreted, meant actually that the priests denied themselves the privilege of performing the most difficult agricultural labor.

The fundamental rule of the caste organization of society was endogamy, *i.e.*, marriage within the caste into which one was born. To marry outside one's caste was to commit the sin most dangerous to society. The basis of caste regulation was the religious tabu, defined by priests and enforced by assemblies within the castes. In effect, therefore, caste organization of society involved the assimilation of racial and class distinctions into religious tabus, which governed marriage, occupational, and communal relations. And the well-being of society depended upon the magic of the priests, who preserved their power to perform it only by living under a strict ceremonial regime that maintained their purity in the sight of the gods. In every detail of life the Brahmans followed a ritual; the other castes lived under less complicated rituals, which could be performed only with the aid of the Brahmans. Thus the social order became a theocracy, the pure lording it over the impure, and this division corresponded to the political and economic distinctions between the powerful and well to do and the powerless masses who labored.

Late Aryan tradition described four original castes. (1) The *Brahmans*, who studied and taught the sacred lore, were the "human gods" who supported the social order under the "divine gods." Among them there was absolute equality. (2) The *Kshatriyas*, or princes, formed the military class, whose function was to protect the social order. They had the right to study the sacred lore under the guidance of the Brahmans and also to wear the sacred thread, the symbol of spiritual rebirth. Their military code forbade

them to use barbed arrows, poisoned points, and concealed weapons —practices which, it seems likely, had been common among the Dravidians. (3) The *Vaisyas* were the free Aryan workers, including peasants, craftsmen, and traders; for them to practice any trade or craft for profit alone was a sin. They also had the right to wear the sacred thread symbolizing spiritual rebirth. (4) The *Sudras*, the lowest caste, was composed of non-Aryas who performed manual labor and menial service. Because they were denied the ceremonial purity of the Aryas, they kept the rites of their traditional religion. Their chief obligation was to work peaceably. Outside the castes was a group of individuals (how numerous it is impossible to guess) of uncertain status. Some were non-Dravidian, some were Dravidian, some were mixed Aryan and Dravidian, and some were mixed caste in blood. The *Sutas*, the offspring of Brahman-Kshatriya unions, were generally employed as heralds and charioteers.

The foregoing picture of the development and structure of the original caste system is probably greatly oversimplified, for certainly, owing to economic specialization and the diversity of religious rites, the multiplication and mixing of castes at the base of the social structure went on constantly. But however complex the process of development was, its central element was the imposition through rituals of the lordship of the priests on all other social groups.

3. *The Beginnings of Indian Learning.* In no other culture did an ancient oral tradition become so completely the basis of intellectual life as in Indian culture; this was, of course, the concomitant of the rise of the Aryan priests to a dominant position in Indian society. Although the phases of this development before writing was used to give intellectual activities new forms can be recognized, they cannot be clearly distinguished or dated; they corresponded, it seems, to the periods of the invasion, the penetration of the Gangetic plain, and the beginnings of urban society.[1]

At the base of Indian learning were the Vedic Hymns.[2] Probably the first of them were composed about 1500 B.C. and the last at the beginning of the first millennium B.C. The texts were fixed in unchanging form before 600 B.C. These hymns were believed to have been either taught by the gods or revealed to the sages, never composed by men. They were embodied in four collections: (1) the

[1] See S. V. Venkateswara, *Indian Culture through the Ages*, Vol. 1, *Education and the Propagation of Culture* (1928); Albert Schweitzer, *Indian Thought and Its Development* (1936).

[2] See F. Max Müller, editor, *The Sacred Books of the East* (1882), Vols. 32, 42, 46.

Rig-Veda, containing over a thousand hymns in praise of the gods, (2) the *Sama-Veda*, composed of selections from the *Rig-Veda* used as chants during the performance of sacrifices, (3) the *Yahura-Veda*, recording the lore of prayers and sacrifices, and (4) the *Atharva-Veda*, dealing with magic, witchcraft, and spells to charm away daimons. As literary works the Vedas show a fine feeling for nature and a deep sense of the dignity of man. The bards or priests who sang them believed that they sometimes entered into a state of ecstasy apart from the world of men, where they associated with the gods; this state was reached either in the intoxication that came with drinking the sacred beverage, soma, or as the result of self-deprivation or self-hypnosis. The mystical, not the ascetic, element is the stronger in the Vedas.

The primary elaboration of the Vedic lore was embodied in the theological treatises known as the *Brahmanas;*[1] although they contain materials on many subjects, they are mainly treatments of the ritualistic and legalistic procedures, under which the ascendancy of the Aryan priests was organized:

> They represent the intellectual activity of a sacerdotal caste which, by turning to account the religious instincts of a gifted and naturally devout race, had succeeded in transforming a primitive worship of the powers of nature into a highly artificial system of sacrificial ceremonies, and was ever intent on deepening and extending its hold on the minds of the people, by surrounding its own vocation with the halo of sanctity and divine inspiration.[2]

The great attention given to correctness of enunciation and purity of speech suggests that they were composed under the influences that were fixing the caste lines. They have been called "the most absurd and uninteresting prose literature in the world."

The chief elaboration of daimonistic beliefs in the Brahmanas is a clarification of ideas about the future life of the soul. Every man possessed a soul—*atman*—often identified with the breath; at death, when the body was cremated, the soul was purified by Agni and went straight upward to the eternal light. Once in heaven the soul entered its physical body, which, having recovered perfect health and vigor, never again knew disease or old age. In the Abode of the Fathers, as heaven was called, the soul lived with the two

[1] F. Max Müller, editor, *The Sacred Books of the East* (1882), Vols. 12, 26, 29, 30, 41, 42, 43, and 44.

[2] Julius Eggeling, editor, *The Satapatha-Brahmana* (Vol. 12, in F. Max Müller, editor, *The Sacred Books of the East* [1882]), p. ix.

kings, Varuna and Yama, and with the souls of warrior heroes, of bestowers of great gifts on the priests, and of the sages of song, *i.e.*, the priests. The gods granted the boon of eternal life only to the upper castes. Life in heaven was a continuous round of indolent pleasure; ghi and soma were plentiful, bright-colored cows numerous, and women perpetually young. Fig trees provided luscious fruit and shade. And superiors imposed no duties or exactions. To the delights of heaven were opposed the horrors of hell. In the Brahmanas the doctrine of future punishments for sins, chiefly violations of rituals, appeared, but no conception of a final judgment and the destruction and renovation of the world was combined with it. The worst torment was the suffering of death over and over again.

Attached to the Brahmanas were works known as *aryanakas*, or "forest texts"; as guides for aged Brahmans who retired to forest retreats to spend their final years in speculation and meditation they were the first departure from ritualistic learning and, as such, became the root of Indian philosophical thinking. In them the tendency was to place less emphasis on the performance of rituals and more on their symbolical meaning.

During the early phase of the rise of cities two further elaborations of the Vedic lore were made. The *Upanishads*—partly poetry, partly prose—which like the Vedas and the Brahmanas are regarded as inspired, are philosophical treatises or, more correctly, philosophical utterances; probably they originated in the assembly of bards that gathered in the courts of the early princes. It has been suggested that their leading doctrines actually originated with the princes as a kind of teaching opposed to the ritualism of the priests; however this may be, the priests made them the vehicle of a genuine philosophical development. The *sutras*, prose works in an aphoristic style, are systematic condensations of the Brahmanas, designed for popular use; they are not regarded as inspired. The types of learning they contain are known as *vedangas*, *i.e.*, the limbs of the Veda; beside ceremonies, sacrificial guidance, and law, they deal with phonetics, grammar, meter, etymology, astronomy, etc.—in fact, everything that may preserve, explain, and apply the inspired texts. The purpose of the sutras was to give the proper ritualistic guidance to the individual from birth to death. These elaborations can be understood as Brahmanical adjustments to the differentiations of the urban social classes; both types of works continued to be composed long after the early phase of the development of urban culture ended. The aphoristic style of the sutras

became the established form for the composition of philosophical, legal, and religious works in Indian culture.

In the course of the development of these kinds of learning the Brahmans established a monopoly over intellectual activities, especially in education; in fact, they carried into an urban culture the position, the outlook, and the function of the primitive medicine man. Their social supremacy rested in the acceptance of this position and outlook by other social groups. Every boy of the three upper castes was required to attend a brahmanical school or attach himself to a teacher—*guru*—in order to receive instruction in the duties of his caste. The Brahmans declared the duties of the castes, and the kings governed them accordingly. The primary method of instruction was repetition and memorizing; the objective of the teaching, beside fixing a knowledge of the sacred lore, was to develop a discipline under which the pupil would examine the *self*. Such examination was, of course, possible only by instrospection and meditation, which, it should be emphasized, were never to be carried on without reference to the sacred lore. This point of view permeated the Upanishads:

> Let man meditate on the syllable Om, called udgitha; for udgitha (a portion of the Sama-veda) is sung, beginning with Om.
>
> The full account, however, of Om is this:—The essence of all beings is the earth, the essence of the earth is water, the essence of water the plants, the essence of plants man, the essence of man speech, the essence of speech the Rig-veda, the essence of the Rig-veda the Sama-veda, the essence of the Sama-veda the udgitha (which is Om).[1]

The knowledge sought by the Brahmans and under their leadership by Indian culture was not the kind to be won either by sensory perception or by reason: it was an intuitional knowledge of reality, whatever that might be. Indeed, the subsequent development of Indian learning turned mainly on the point of defining reality and the modes of knowing it.

[1] F. Max Müller, editor, *The Sacred Books of the East*, Vol. I, *Khandogya-Upanishad* (1879), p. 1. "Om" was a sacred symbol pronounced at the beginning of each Veda and of every recitation of Vedic Hymns; it had various meanings in the mind of a devotee, the supreme meaning being Brahman, *i.e.*, the intelligent cause of the universe. Its repetition had a high place in Brahmanical meditation: "By the word alone is the non-word revealed. Now there is the word Om. Moving upward by it (where all words and all that is meant by them ceases), he arrives at absorption in the non-word (Brahman). This is the way, this is the immortal, this is the union, and this is bliss. And as the spider, moving upward by the thread, gains free space, thus also he who meditates, moving upward by the syllable Om, gains independence." F. Max Müller, editor, *The Sacred Books of the East*, Vol. II, Part II, *Maitrayana-Brahmana-Upanishad* (1884), p. 321.

It is important here to emphasize that this learning, both its methods and its outlook, was developed as an oral tradition and transmitted as such long after writing was known in India. The introduction of writing had less effect in shaping the Indian cultural tradition than in shaping any other in the world; this was, of course, only another aspect of the intellectual leadership of the conservatively minded priests. For them writing was not necessary; they had established their social ascendancy without it and, as experience proved, could maintain their position without it. The power of oral tradition was so strong in Indian culture that the early intellectual departures from priestly tradition—Jainism and Buddhism—seem long to have remained unrecorded; like the priestly tradition, they were organized and transmitted as oral learning.

Writing was introduced into India from the west in two forms: (1) the Kharosthi alphabet, which was based on the Aramaic script, and (2) the Brahmi alphabet, which has been traced to the Phoenician script.[1] The Indian word for writing was derived from the Persian word *lipi*. Apparently these scripts reached India through the channels of trade, probably as early as the eighth century B.C., and were used in commercial circles long before they were employed for intellectual purposes. Although the earliest written documents—the inscriptions of the emperor Asoka—date from the third century B.C., it seems clear that the knowledge of writing spread widely in the fifth century B.C. and was adapted to the expression of the sounds of Sanskrit in the next century. Then the Brahmi alphabet, from which have descended all existing Indian alphabets, displaced its rival. In the Brahmi alphabet there are forty-eight letters, fourteen for vowels and diphthongs and thirty-four for consonants. The distinctive feature of Indian writing is the position given to the consonant, namely, always following the vowel of the syllable. Vowels following consonants are written with special auxiliary symbols. There are evidences which suggest that the earliest writing was made on palm leaves. Written books probably became common only in the last century before the opening of the Christian era.

When the oral tradition of Indian culture began to be reduced to writing is not known. In the fourth century B.C., when the grammarian Panini gave enduring form to the Sanskrit language, he neither used nor recognized the use of writing, and a century

[1] See p. 262; also Hans Jensen, *Die Schrift in Vergangenheit und Gegenwart* (1935), Chap. XII.

later, when writing had been adopted for governmental and literary purposes, a strong disinclination to record sacred things still existed. Long before this time, however, Sanskrit had become the special language of Brahmanical learning, which, because of the desire to maintain ritualistic uniformity, was almost unbelievably pedantic. Early centers for the study of the lore recorded in Sanskrit arose at Taxila, in Gandhara, and at Ujjain, in Avanti. The reputation of Taxila for purity of speech was high; Panini is said to have studied there. At no identifiable time was Sanskrit the spoken language of the Indian people; its use in education, government, and literature was a result of the growth of the priestly intellectual monopoly.[1]

THE RISE OF PHILOSOPHICAL RELIGIONS IN INDIAN CULTURE.

In the early period of Indian urban life the supremacy of the Brahmans was limited to the Doab and closely contiguous areas; farther east, although the castes were recognized, social organization was not so rigid. There the Aryas and the Dravidians mingled, each adopting the ways of the other. There the casteless professions grew, traders pushed a brisk traffic and became prosperous, and princes ruled and aspired to intellectual accomplishments. And there Brahmans followed the plow. It may be believed, too, that Persian influences reached the land.[2] In this milieu princes and merchants joined the Brahmans in speculating on religious topics, and philosophical doctrines multiplied.

The immediate background of these intellectual developments was the aged Brahmans' practice of retiring to forests to spend their last years in meditation and under severe moral discipline. These forest dwellers were known as *rishis*, *i.e.*, hermits, because they lived outside settled communities, and *sannyasis*, *i.e.*, renouncers, because they abandoned the desires, comforts, and rewards of ordinary life. They drew inspiration from the Vedic concept "austerity or self-mortification"—*tapas*—which they developed into asceticism, and a pantheistic view of nature, for which there was also some basis in the Vedas. Since, according to the pantheistic view of nature, the divine is in all things, the conclusion that to harm anything is to sin is logical; this conclusion

[1] See John Mansion, *Esquisse d'une histoire de la langue sanscrite* (1931).

[2] See Paul Masson-Oursel, *Ancient India and Indian Civilization* (1934), p. 24; James Kennedy, "The Aryan Invasion of Northern India . . . ," *Journal of the Royal Asiatic Society*, 1919, p. 523; *The Hindustan Review*, Vol. 50 (1928), pp. 409 *ff.*; and Richard Fick, *The Social Organization in North-East India in Buddha's Time* (1920).

they embodied in the concept "non-injury" or "harmlessness"—*ahimsa*. By being harmless man could refrain from increasing further his moral degradation. By victory over sensual desires he could gain moral purity. The goal was release—*mukti*—in a desireless spiritual bliss.[1]

In northeastern India intercourse between the forest communities of rishis and the towns was more or less continuous. The students came from all social levels except the lowest, for the rishis, as Brahmans, taught only the three twice-born castes. This circumstance undoubtedly contributed to the development of systems of thought which offered release to all men regardless of social status; indeed the chief distinction between the Brahmanical teachings and the great heresies, Jainism and Buddhism, which alike emerged in this milieu, was on this point.

1. *The Brahmanical Philosophy of Brahman and Atman: the Universal One.* The Brahmanical speculations of this period, which are embodied in the Upanishads, sometimes called the New Testament of the orthodox Aryan religion, were filled with a passion for release.[2] Although no single individual originated the doctrines which expressed this passion, they may be considered as having been given the supreme rendering by Yajñavalkya (fl. *ca.* 650 B.C.), who may be, as is sometimes said, the first identifiable personality in Indian history. That he was not without human qualities may be judged from the answer he is said to have given to a king who asked him whether he desired cows or profound discussion: the answer was "Both." He taught that the human soul—*atman*—was *all;* as distinguished from the individual soul this *all* was *brahman.*

> Resting is he and yet restless,
> Afar is he and yet so near!
> He is within all,
> And yet yonder outside all!

Beyond all physical forms and conditions was this Universal One—incomprehensible, indestructible, undisturbed, and free. He did not know, for he was knowledge; he was not blissful, for he was bliss.

[1] On the general development of philosophical speculation in India see J. N. Farquhar, *An Outline of the Religious Literature of India* (1920); Surendranath Dasgupta, *A History of Indian Philosophy* (2 vols., 1922). M. H. Harrison, *Hindu Monism and Pluralism* (1932); and Sir Monier Monier-Williams, *Religious Thought and Life in India* (2d ed., 1885).

[2] See Paul Deussen, *The Philosophy of the Upanishads* (1908); S. C. Chakravarti, *The Philosophy of the Upanishads* (1935); Charles Johnson, trans. *The Great Upanishads* (1927); Shree Purohi Swami, and W. B. Yeats, *The Ten Principal Upanishads, Put into English* (1937).

To paraphrase Yajñavalkya's description, he was like a lump of salt, with no inner and outer, which consists through and through of savor. In terms of these concepts release was achieved only by the merging of the atman, which was identified with the breath, in the brahman, that is, by identifying the individual soul with the universal soul, so that all consciousness of the individual soul was lost in a consciousness of the Universal One. This was a state of "absolute infinitude of pure intelligence, pure being, and pure blessedness."

Under worldly conditions of existence individual souls were conceived as emanations of the universal spirit, each incorporated in a body which represented a step in the progress toward release. Souls, it was believed, were reborn many times, entering at each new birth that organism which represented its moral achievement in the preceding state of existence:

> Those whose conduct has been pleasing, will quickly attain a pleasing birth, the birth of a Brahman, or a Kshatriya, or a Vaisya; but those whose conduct has been abominable will quickly attain an abominable birth, the birth of a dog, or a hog, or an Outcaste.

The doctrines of rebirth and transmigration of the soul—*samsara*—and of moral determinism—*karma*—became fundamental postulates of all orthodox Indian philosophies.

On the surface these doctrines seem to imply that progress toward release was made only by moral conduct leading to incarnation in forms ever nearer to the Universal One; actually, however, as taught in the Upanishads, this progress was accomplished by winning, either by intuition or in a trance, a knowledge of self and divinity—they were identical—and the chief way to these experiences was by means of the practices which only those who had memorized the Vedas, the Brahmanas, and the Upanishads could undertake.

The social significance of these doctrines rested in the fact that they linked the achievement of eternal salvation with the caste system, whose orders were interpreted as steps in progress toward release, with the Brahmans occupying the last step. Indeed, the source of the ideas was an idealization of the Brahmans' social ascendancy projected into the universe as the Universal One:

> To have set up as their watchword . . . *brahman*, the Vedic word, and to have made it the absolute, was the final achievement of the *Brahmanas* and the triumph of the Brahmans. We must bear in mind that that entity, *brahman*, represented the essence of the Brahman caste as

kshatram did that of the Kshatriya caste. To raise the *brahman* to an absolute was to give a metaphysical justification to the necessary, eternal supremacy of the priesthood, the sole performer of religious operations which preserve the cosmic order and the sole heir of the Vedic knowledge (which was the same thing).[1]

Thus the Brahmans added to the defense of their supremacy, originally justified and maintained by a claim to the possession of the magic which alone gave salvation, metaphysical being, into which all individual souls merged only as they rose through the castes to the highest order, *i.e.*, the Brahmanical order. Between worldly existence and metaphysical reality the Brahmans were the sole connecting link.

The Brahmans were the first social group in the world to make metaphysical reality, conceived philosophically, as contrasted with the "gods" or "god," conceived in terms of the daimonic universe, the supreme support of their social ascendancy.

2. *An Indian Philosophy of Materialism.* Because Brahmanical thought declared that reality is a single nonmaterial entity or substance, it is classified among philosophical systems as an *idealistic monism;* because it held also that this reality is divine, it is classified among religious conceptions as a *pantheism.*

There is reason to believe that the intellectual forces of the sixth century B.C. in India found expression in many ideas opposed to these concepts. Both Jainism and Buddhism embodied contradictory views, although agreeing with Brahmanical ideas in some respects, and a few thinkers affirmed a directly opposite position, namely, that the material world is real and the satisfaction of earthly desires is rightful. A philosophy embodying these ideas is classified as *materialism.* Kapila (fl. *ca.* 580 B.C.) set up a fundamental dualism between nature—*prakriti*—and spirit—*purusha.* Nature, he argued, was governed by number, *i.e.*, its parts could be counted and listed, but, although there were separate souls, spirit was indivisible. The continuity of life, which all Indian thinkers came to symbolize as an ever-turning wheel, was due, he held, to powers in nature, the chief of which was blind ignorance. Although Kapila admitted a conception of spirit into a materialistic view of nature, it meant little more than pitting man—the human ego—against the hostile universe. Charvaka (fl. *ca.* 580 B.C.), under whose name a considerable body of doctrines survived, repudiated

[1] Paul Masson-Oursel, *Ancient India and Indian Civilization* (1934), p. 134. By permission of Kegan Paul, Trench, Trubner & Co., Ltd., London.

the quest for spiritual release. What man could not know through the senses, he said, did not exist, and the rites performed by the Brahmans were only tricks for getting fees. He advised men to live well—on borrowed money, if necessary.

3. *Jainism: a Religion of Asceticism.* Jainism sprang from the ascetic ideas of the rishis; Mahavira (d. *ca.* 475 B.C.), the founder, systematized these ideas and gave them a philosophical orientation. Jain tradition described him as one of a series of prophets who, reborn from time to time, had revealed the true faith. Some of these prophets were worshiped as gods. Actually he was a prince who took the way of Brahmanical "renouncers." At the age of thirty he abandoned his wife and daughter and followed the ascetic life. By unbroken chastity, uninterrupted meditation, strict regulation of eating, and infinite patience he sought to subdue the senses in order to win supreme knowledge. During this quest he never changed garments; when, after thirteen years, it culminated successfully, he laid aside his clothing entirely. Then he spent thirty years teaching his doctrines.[1]

The universe consisted of the living—*giva*—and the non-living —*agiva*. The elements—earth, air, fire, and water—as well as the living, possessed souls. The soul, which was to be perceived only by introspection, was regarded as perfect and eternal. Possessed of an indomitable will to win release, the soul moved toward the supreme goal through a series of rebirths. In this connection it should be noted that living things were divided into classes according to the numbers of the sense organs they possessed: plants had one sense organ, worms two, ants three, bees four, vertebrates five, and men, gods, and the denizens of hell six, of which the unique one was an inner organ which gave them rationality. Actions of mind, speech, and body created *karma*, in Jain thought a sticky substance, which by adhering to the soul determined its movement. Karma—produced in eight different ways and as many varieties—affected not only the soul's progress but also its weight and color. All suffering had origin in karma; release came only with the extinction of karma. To purify the mind of desires it was necessary to think about the impurity of the body, universal friendship, and the ten virtues—self-control, truthfulness, purity, chastity, absolute lack of greed, asceticism, forbearance, patience, mildness, and sincerity —which were believed to support the world order. Release was pure bliss, pure knowledge, and infinite perfection.

[1] See Mrs. Sinclair Stevenson, *The Heart of Jainism* (1915); Chiminal J. Shah, *Jainism in North India* (1932); B. C. Law, *Mahavira: His Life and Teachings* (1937).

The universe, the Jains believed, was full of minute beings composed of an infinite number of souls that hung in clusters and suffered great pain; whenever a soul won release, a new soul entered the world process. A tiny fraction of the souls of one of these clusters had been enough to replace all of the souls that had won release before Mahavira founded the true teaching.

Those who adhered to the tenets of Jainism belonged to either an order of monks or a body of laymen. Only the monks could win release. The monks lived under severe rules. Everything they possessed was obtained by begging, and begging was permitted only in the afternoon. Possessions were limited to clothes, a blanket, an alms bowl, a broom to sweep the ground, and a piece of cloth to cover the mouth in order to prevent insects from entering when talking. Sleep was restricted to three hours each day; the remainder of the time, when the monk was not begging, was spent in meditating and repenting. Harmlessness was the basic rule of life. Insects were carefully removed from body and habitation, but never killed. The greatest triumph of the spirit over desire was to commit suicide by slow starvation; this act was permitted, however, only in old age. The layman lived under rules much less severe but similar in intention. He abstained from intoxicants, flesh, and fruits likely to contain insects. Agriculture and soldiering were forbidden because they involved injuring living things; the musician's calling was condemned on the grounds that music stimulates the passions. Sexual feeling and its expression were to be avoided. Admiration for the pomp and prosperity of others was evil. Although lying was condemned, the telling of the truth was not required if it was likely to cause pain. Stealing and the adulteration of foods were sins, as was also the use of property without the owner's consent. Among the positive elements of the Jain code were the admonitions to observe the fasts and to be charitable daily, especially with gifts of comfort, knowledge, medical aid, and food. The close relation between the monks and laymen in spiritual enterprise was a prime factor in the survival of Jainism.

The social element in Jain ethics was not strong. Where evil was, there was *karma;* in this conception there was nothing that might be designated justice in the social sense. A "tender affection for a brother on the path to perfection" was the rule of Jain altruism. One's doing good to those who do one wrong was a recognized virtue, but certainly not an important one. Perhaps the most interesting social aspect of Jainism had origin in the prohibition against the practice of agriculture, for it led its adherents to con-

centrate in urban occupations, especially money lending. This fact testified eloquently to the lack of social concepts in Jain thought; another fact having a similar force was the denial that women can win release. Because of the nature of its teachings Jainism quickly became an urban sect, appealing most strongly to the well-to-do classes.

4. *Buddhism: the Spiritual Life of Reason.* The orthodox Brahmans taught that the phenomenal world is illusion behind which there is a single spiritual reality. The Jains took the common-sense view that the phenomenal world is real and defined karma as a subtle physical substance. Gautama (*ca.* 563–483 B.C.), also known as Buddha—"the enlightened one"—and Siddhartha—"the one who attains his aim"—not only declared the phenomenal world illusion but also denied the existence of any reality behind it. The corollary of this doctrine was that man has no soul, at least in the sense that the soul is an entity or a substance. The *self*, he held, was an ever-changing compound of psychological states—a part of a stream of universal consciousness—endlessly forming and endlessly changing. However, in this stream there was a partial continuity, so that an individual's present condition was always the product of a past. To this endless movement, which was conceived as the constant interplay of independent causes among which ignorance, birth, and desire were primary, Buddha gave the name "wheel of the law." Although conceived in psychological terms it corresponded to the Brahmans' and the Jains' cycle of rebirths. Release was achieved in a state of *nirvana*, probably best described as a state of selfless perfection, which Gautama refused to discuss.[1]

Regardless of this refusal, the main elements of the Buddha's philosophy are clear. Life was full of sorrow: birth was misery; disease was misery; old age was misery; death was misery. And the cause of suffering was desire, for it led to rebirth, passion,

[1] On the life of Buddha see Kenneth J. Saunders, *Gotama Buddha: A biography* (1920); A. F. Herold, *The Life of Buddha According to the Legends of Ancient India* (1927); H. S. Gorer, *The Spirit of Buddhism . . . : The life of the founder of Buddhism* (1923); Edward J. Thomas, *The Life of Buddha as Legend and History* (1927).

On the teachings of Buddha and the development of the Buddhist religion see T. W. Rhys Davids, *Buddhism: Its history and literature* (3d rev. ed., 1918); Alexandra David-Neel, *Buddhism: Its doctrines and methods* (1939); Edward J. Thomas, *The History of Buddhist Thought* (1933); Sir Charles N. E. Eliot, *Hinduism and Buddhism: An historical sketch* (3 vols., 1921); Hermann Beckh, *Buddhismus* (2 vols., 1919–1920); Th. Stcherbatsky, "The Doctrine of Buddha," *Bulletin of the School of Oriental Studies (London Institution)*, Vol. 6 (1932), pp. 867–896; A. B. Keith, *Buddhist Philosophy in India and Ceylon* (1923); B. C. Law, *Geography of Early Buddhism* (1932).

sensual pleasure, and ego satisfaction. Salvation was release from suffering by the extinction of desire: it was an "earthly tranquillity"—a "coolness and rest." For the old view of the universe as a chaos of gods and daimons at whose mercy men lived, he substituted a conception of a cosmos of ordered states of mind in which men, by rising above anarchic desires, could attain a selfless life. Not by ritual, not by sacrifices, not by ascetic practices, but by reasoned knowledge could man achieve the moral purity necessary for winning the state of blessedness which alone, in the midst of an ever-changing world, is permanent. He who realized this earthly ideal became a saint—*arhat.*

More important than this doctrine was the invention of an ethics for achieving the goal it set; this ethics was embodied in the eightfold way:

1. Right knowledge, which meant a knowledge of Buddha's teachings, especially about misery.
2. Right resolve, which meant the resolution to resist desires, to bear no malice, and to do no harm.
3. Right speech, which meant to abstain from lying, slandering, and talking aimlessly.
4. Right conduct, which meant not to kill or steal or live licentiously.
5. Right livelihood, which meant not to follow occupations such as slave-dealing, caravan-trading, butchering, dispensing liquors, and selling poisons.
6. Right effort, which meant the suppression of evil states of mind and the stimulation of good intentions.
7. Right contemplation, which meant the achievement of self-mastery by self-knowledge.
8. Right concentration, which meant the ordering of thought so that, purified of lust, temper, sloth, fretfulness, and perplexity, the sense of duty done gave a feeling of peace and freedom.

At the end of the eightfold way was the state of blessedness in which man, although still on earth, knew no more of birth, age, sickness, pain, defilement, or death: indifferent alike to the desires of life and the fear of death, man achieved the supreme goal—*nirvana*—annihilation by absorption into the divine.

The following excerpts from Buddhist writings suggest the spirit which pervaded the new faith:

> Not for the sake of my own well-being do I practice universal benevolence; but I love benevolence, because it is my desire to contribute to the happiness of living beings.

To give food to a simple honest man (in need) is infinitely greater in point of merit than to devote oneself to the study of questions relating to heaven and earth, spirits and demons, such as occupy so many.

To make an end of self-seeking, that is blessedness.

When any person does evil he lights the fire of hell and burns in his own fire.

The distinctive signs of true religions are good-will, love, truthfulness, purity, nobility of feeling, and kindness.

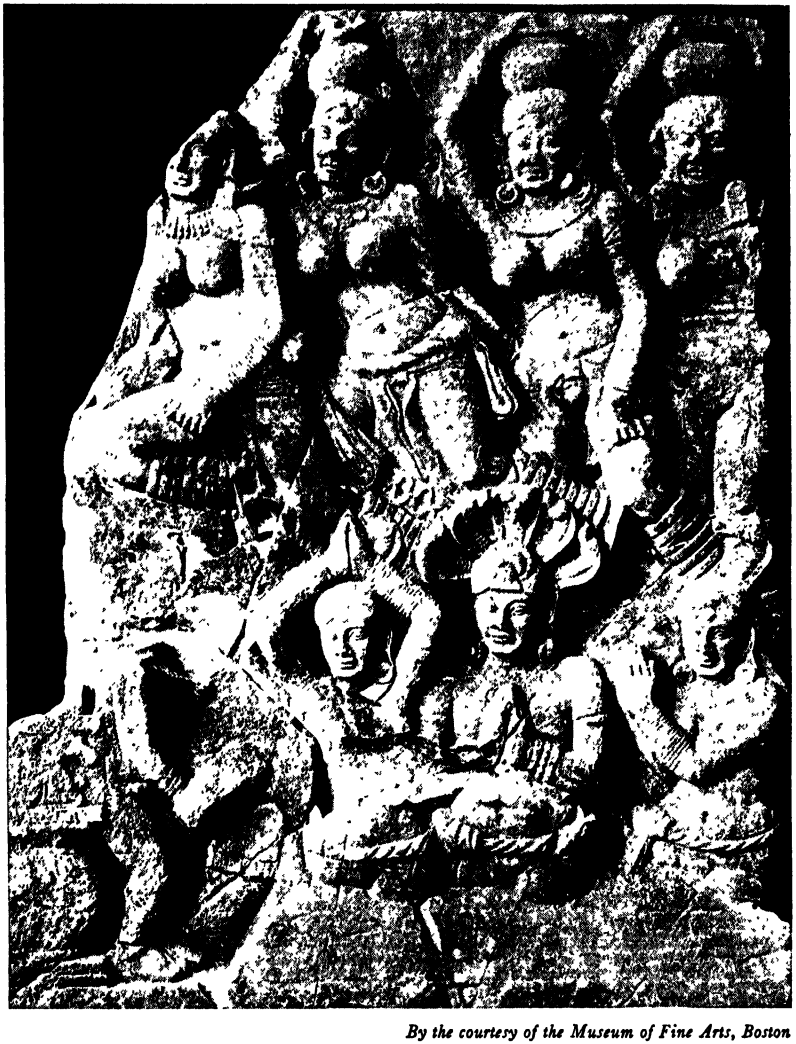
Even if a man has power over others, yet ought he be gentle with the weak. Whatsoever may be the cause of your suffering, do not wound another.

Follow the path of duty; show kindness to thy brothers and lead them not into suffering.

Go ye forth, filled with compassion, bringing salvation to all.

In practice Buddhist ethics had a dual expression: (1) in a simple way of life for the people and (2) in a monastic order—*sangha*—for the candidates for arhatship. Implicit in this twofold expression was the belief that the people, by supporting the monks, could advance themselves toward release. The commandments to the people were: (1) not to take life, (2) not to steal, (3) to refrain from unlawful sexual intercourse, (4) not to tell lies, and (5) not to drink intoxicating liquors. Actually, of course, this code meant little more than observing the customs of the times.

There were two levels of monastic life. The ordinary layman could rise to the lower monastic rank by observing, in addition to the five fundamental rules stated above, three additional ones: (1) to take food at specified times only, (2) to refrain from playing musical instruments, going to theatrical exhibitions, and dancing, and (3) to give up all adornments, such as jewelry, flowers, perfumes, and unguents. Sexual relations were prohibited to all monks. To those aspiring to the second monastic rank, the observation of two more prohibitions was necessary: (1) not to sleep on a high or wide bed and (2) not to possess either gold or silver. Obedience to these rules was not an end in itself, but only a discipline that nurtured meditation. In a preliminary phase meditation was concerned with the impurity of the body—the body, it was said, is like the carcass of a cow in a butcher shop—the virtues of Buddha and the monks, the rightfulness of making gifts, and the good effects of discipline; in a final phase, after viewing the impurities of the body as they were to be seen on cremation grounds, it turned about universal friendship, universal pity, indifference to preferment, and prosperity and happiness for all. While in this final



By the courtesy of the Museum of Fine Arts, Boston

THE BATH IN THE NAINANJANA

This Buddhist relief dates from the second century B.C. The figures are supernatural beings that have risen from the river to adore the Buddha. At this time the human figure was not used as a Buddhist symbol; the Buddha is represented by the sandals in the lower left-hand corner of the relief. The style, which reveals no Greek influence, is regarded as distinctly native.

state the candidate for arhatship counted his breathings, retaining, as he did, a consciousness of the impurity of the body. By meditation, so nurtured and guided, the candidate won the "eight attainments"—four trances and four states:

> The trances and states are described by the Buddha himself as follows: Of one who has entered the first trance the voice has ceased; of one who has entered the second trance reasoning and reflection have ceased; of one who has entered the third trance joy has ceased; of one who has entered the fourth trance the inspirations and expirations have ceased; of one who has entered the realm of infinity of space the perception of form has ceased; of one who has entered the realm of the infinity of consciousness the perception of the realm of the infinity of space has ceased; of one who has entered the realm of nothingness the perception of the infinity of consciousness has ceased; of one who has entered the realm of neither perception nor yet non-perception, the perception of the realm of nothingness has ceased; of one who has entered the cessation of perception and sensation, perception and sensation have ceased. Of the priest who has lost all depravity, passion has ceased, hatred has ceased, infatuation has ceased.[1]

Only freemen without debts could enter the sangha. Women were admitted as nuns, with the requirement that they salute in a reverential manner each monk they met. Inside the order the castes meant nothing; the laity was expected to live according to the caste rules.

Originally during the rainy season the Buddhist monks dwelt in forests, parks, or groves after the manner of the rishis or the Brahmans, but in time they became organized in settled communities—the first monasteries in the world. These establishments, which were ordinarily located in parks donated for the purpose by wealthy lay devotees, were fenced. At the entrance was a bathing tank. Inside the enclosure were rectangular buildings with cells where the monks lived. The cells were barely furnished with a bedstead on movable supports (which could be put aside during the day), a mattress, a mat, a pillow, and a stool. The monk's personal belongings were as simple—a yellow robe, often only rags, an alms bowl, a needle, a water strainer, and a toothbrush. The equipment of the monastery consisted of a storeroom, a refectory, a kitchen, a warehouse, a common room, an arcade for walking, a bath, a pavilion, and a well; its equipment was for the use of all members.

[1] H. Hackmann, *Buddhism as a Religion: Its historical development and its present conditions* (1910), p. 26. By permission of Arthur Probsthain, Oriental Bookseller and Publisher, London.

At each meal only a given quantity of food was provided, but leftovers might also be eaten. Any show of appetite was evil. To keep up the fiction of begging, food was commonly stored outside the fenced area or under the care of a layman. Although the monks were pledged to a life of poverty, the order was permitted to receive gifts of money and property in any amount. Each monastery was a self-governing republic; from time to time the order as a whole held councils. Great freedom of discussion and thought was allowed, so long as it did not give rise to willful schism. Any monk had a right to enter any monastery upon equal terms with its members, and the prosperity of a monastery was believed to rest on an absolutely impartial division of all things among its members.[1]

The social origins of the Buddhist movement seem to explain many of its characteristics. As a princely movement it repudiated not only the animistic conceptions of the Vedas and the ritualistic magic of the Brahmans (the claim to the possession of magical powers was a reason for expulsion from the sangha) but also the philosophical idealism of the Upanishads. It also abandoned the use of idols and symbols; its early shrines—*stupas*—were monuments to critical events in the lives of arhats. But in breaking with the Brahmanical thought Buddha did not bring forward any social program, except that, in contrast to Jainism, he did not set up restrictions on occupations his followers could pursue. He did not despise labor, for it was necessary in order to live, but he valued more highly a meditation which, when supported by a refined asceticism, made possible a supraconsciousness. At the same time, because he disregarded the principle of caste, he found reason to emphasize mutual dependence and friendliness. These tendencies were strengthened by the basic emotional attitude, namely, disgust with life: "Everything," he said, "is burning with the fire of lust, the fire of anger, the fire of ignorance; it is burning with the sorrows of birth, decay, death, grief, lamentation, suffering, dejection, and despair." It was to strengthen this feeling of disgust that the monks were directed to view carcasses in butcher shops, to visit cremation grounds, and to sit near skeletons along the roads. Against this disgust Buddha balanced love and compassion for all men: "Let me be a physician to the sick, a friend to all men, a very sweeper for humility." The limits of altruism were indicated in the ideal: "Benevolence to all, attachment to none." Like other teachers who

[1] See R. C. Dutt, *A History of Civilization in Ancient India, Based on Sanscrit Literature* (3 vols., 1889–90), Vol. 2, Chap. XVII; also Sukumar Dutt, *Early Buddhist Monasticism, 600 B.C.–100 B.C.* (1924).

defined the problem of salvation in purely individual terms, Buddha made difficult the formulation of measures having social objectives. The single social product of the movement, the sangha, nurtured intellectual quietism, not social service.

THE OTHERWORLDLY OUTLOOK OF INDIAN CULTURE.

In the emotions that pervaded Indian culture—a keen reaction to the suffering and futility of life and a yearning for release from this suffering and futility—was a profound world-weariness:

> In this decaying body made of bones,
> Skins, tendons, membranes, muscles, blood, saliva,
> Full of putrescence and impurity,
> What relish can there be for true enjoyment?

And such a feeling moved men to pursue as the ideal a life of inaction. By accepting misery as the basis for the quest for spiritual release, Indian culture became anchored in social conservatism. If, on the one hand, the problem set by the disintegration of primitive custom under the influence of urban culture was solved socially by a rigidity—*caste*—justified in religious terms, on the other hand, it was solved emotionally and intellectually by a compensation for rigidity—for such, indeed, was the *release* set as the goal of life by Indian religious teachers and philosophers. To seek release by meditation did not disturb the social order; to enjoy its achievement by loss of identity was to conform to the basic social principle of Indian culture, namely, the individual standing alone is nothing.[1]

THE CHINESE CULTURAL TRADITION

Beyond the great ranges and plateaus at the eastern end of the Eurasian mountain backbone lies the land now known as China. From these ranges and plateaus drop lesser ranges and uplands in ringlike terraces through which the great rivers—the Huang, the Yangtze, and the Si—spread fanwise to the sea. Today their valleys and flood plains merge with low coastal lands along the China and Yellow seas.

In ancient times wide marshes separated their flood plains from these seas, and behind their valleys were great forests, deserts, and sparse grasslands through which difficult routes led to central Asia and India. One passed through the Jungarian Gate between the Tian Shan and the Altai Mountains. Another crossed the Tarim

[1] See Prabhaker S. Shilotri, *Indo-Aryan Thought and Culture and Their Bearing on Present Day Problems in India* (1913).

Basin to the passes of the Pamirs. And a third penetrated mountains and jungles between the Yangtze valley and Burma. In times of drought which broke up the forests over the Tian Shan and the Altai range, the northern route through the Jungarian Gate was wide open. When rainfall was plentiful the central route leading through the oases at the edges of the Tarim Basin was easier than in times of drought. The route to the south was always difficult. Over the northern route, whenever the peoples of central Asia were disturbed, a few invaders seem to have entered northern China; on other occasions the nomads of the Mongolian plain swarmed over it to the central Asiatic grasslands. The central route—the "Great Silk Road"—became the regular channel of trade and diplomacy between China, India, and western lands. The intercourse with India and Burma by the southern route—the "back door" to China—must have always been indirect and intermittent; however, over it there may have come to the upper Yangtze valley, probably sometime in the second millennium B.C., the cultivation of rice and the domesticated fowl. The isolation of China was sufficiently complete to preserve the continuity of its cultural development. Newcomers, who reached its valleys mainly from the north and west, were finally submerged in the indigenous population, while foreign cultural materials were assimilated without altering the native cultural tradition.

In north central and northeast China, where loess deposits, floods, and droughts combined to break up the forests, a precarious agriculture was possible. In ancient times the Huang River wandered over a flat plain, leaving scattered patches of dry soil among shallow lakes, wide marshes, and stretches of coarse grass; to farm this rich soil required constant effort at reclamation. Loess deposits above flood levels were more easily tilled. But disaster was always near. The summers, hot and dusty, were likely to bring drought and sometimes the all-devouring locusts. Winters were cold. And spring was the time of flood. There were no true forests on the Huang flood plain; at its edges were found the plum, the mulberry, and the chestnut. The growing season of four to six months permitted the harvesting of only one crop. In the Yangtze Basin the monsoons brought torrential rains in the spring, a high humidity in the summer, and a cold wetness in the winter. Originally it was a land of dense forests and bamboo growths which, in time, cultivators reduced to a scrub confined mainly to hilltops. The rich alluvial soils and the long growing season, from six to nine months, fostered the development of an intensive agriculture.



Photograph by HANS KOESTER, *Pix Publishing Co.*

THE YELLOW EARTH

Chinese culture developed upon the loess deposits through which the Huang cut its valley. From the uplands the river carried the yellow earth and spread it over a vast flood plain. Against destructive erosion and dangerous flooding the Chinese contended constantly. Water control was the necessary support of their prosperity.

Floods were as destructive as in the Huang valley. The Si valley and the coastal lands as far north as the Shantung penninsula had a subtropical climate. The monsoon climate long preserved their jungles from men lacking efficient tools.

China was never and is not today a rich land. Only about 10 per cent of its area is plain, most of which is located in the north, where droughts and floods are recurrent. The minerals, except iron, have always been scarce. Bamboo rather than timber, even in early times, seems to have been the most widely available forest product. Plants thrive; at least half of all plant species, it is said, are found in China. But originally the domestic animals were lacking; in fact, if the animals domesticated in India, southwestern Asia, and central Asia had not reached China, it is doubtful if an urban culture could ever have developed there.

The combined effect of these environmental circumstances was to make China a land of peasants, who worked like beasts of burden

to win a bare subsistence from fields often threatened with devastation. In this fact, quite as much as in geographical isolation, was the basis of the enduring unity of Chinese culture.[1]

The Rise of Urban Culture in China.

Like other urban cultures, that of China rested on a peasant-village base, and like them also its early development culminated in a period of social conflict and intellectual disturbance in which was shaped an enduring tradition. Too frequently, however, the persistence of this tradition is permitted to obscure the fact that cultural development, as in other areas, was continuous.[2]

1. *The Peasant-village Base of Chinese Urban Culture.* The peasant-village cultures of China shared the fundamental patterns common to such cultures everywhere. But they also possessed peculiarities which persisted in the Chinese cultural tradition.

No date can be given for the beginning of settled life in China. Very recent archaeological investigations suggest that shortly after the opening of the third millennium B.C. several cultures appeared in various parts of the country, but none of them represented the earliest form of neolithic life. North of the lower Huang River a hunting culture, characterized, it seems, by a vigorous shamanism, developed into a hoe culture, especially on the loess deposits. Its main crops were millet, sorghum, and a few root and leafy plants. The dog and the pig were the first domesticated animals. A crude craftsmanship produced a coarse pottery whose distinctive trait was a pot having three hollow legs, which survived in urban culture as a ritual vessel. Settlements consisted of pit dwellings, eight to ten feet across, entered through the roof. The villages, which were unfortified, were moved frequently because the methods of tillage resulted in soil exhaustion. The chief deity seems to have been a goddess of fertility. This culture spread into the Wei and Feng valleys. In the upper Huang valley there may have been a pastoral culture based on the horse, and farther south

[1] See C. W. Bishop, "The Rise of Civilization in China with Reference to Its Geographical Aspects," *Geographical Review*, Vol. 22 (1932), pp. 617–631; Henri Maspero, "The Origin of Chinese Civilization," *Report of the Smithsonian Institution*, 1927, pp. 433–452; L. H. D. Buxton, *China, the Land and the People: A human geography* (1929); and G. B. Cressy, *China's Geographical Foundations: A survey of the land and its people* (1934).

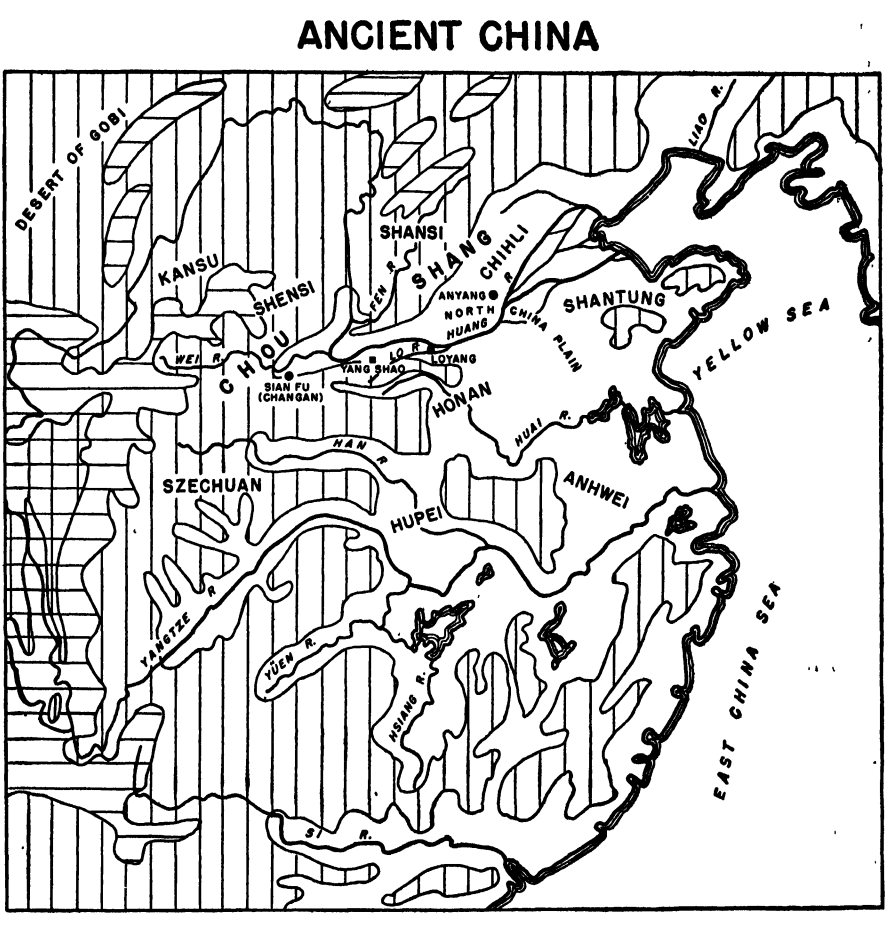
[2] On the general history of China and its culture see C. P. Fitzgerald, *China: A short cultural history* (1938); K. S. Latourette, *The Chinese: Their history and culture* (2 vols., 1934); E. T. Williams, *A Short History of China* (1928); Richard Wilhelm, *A Short History of Chinese Civilization* (1929); Albert Herrmann, *Historical and Commercial Atlas of China* (1935).

probably a similar culture spread over the great uplands. In the middle Yangtze valley another hoe culture, possessing the fowl, rice, and silk and practicing irrigation, developed in both plain and hill areas. In the hill areas its carriers built terraces of rammed earth to hold water on their rice plots. Along the coasts a food-gathering culture clung to low hills; its makers were fishermen. expert in pushing their boats through the marshes and shallow passages around the mouths of the great rivers. From very early times, it appears, these cultures influenced one another.

Early in the third millennium B.C., perhaps during the disturbances on the great Asiatic grasslands which sent the first Indo-European peoples southward, a peasant-village culture, now called the Yang Shao, penetrated the upper Huang valley from the west. Its earliest Chinese sites are found in Honan and Shensi, in Kansu, and in the plateau country, west of the great bend in the Huang River; its makers may have come through the Jungarian Gate. The distinctive remains of the Yang Shao culture are red pots with geometrical and naturalistic designs reminiscent of the painted pottery of southwestern Asia and southern Russia. Its makers lived in mud-walled villages of pit dwellings. They cultivated millet and kept the dog and the pig. It has not been proved that they possessed the sheep, or the horse, or wheeled vehicles. The chief implement was the hoe. The evidences of the western origins of the Yang Shao culture, which are not conclusive, should not be emphasized at the expense of other materials which prove continuity with earlier Chinese cultures. Among these materials are the pit dwellings, the tripod vessels, and shells like those commonly found at the sites of the early coastal culture. A few bits of copper are the first indications of metalworking in China. The Yang Shao culture spread down the Huang valley, into the Wei and Feng valleys, and finally to southern Manchuria or, in other words, through the area of the early settled life in northern China.[1]

Although the development is not clear, it may well have been that from the contact of this early north China culture and the Yang Shao culture sprang the black pottery culture found in the western part of the Shantung peninsula. As the name indicates, its characteristic artifact is a smooth black pottery which was wheel-made from the clay that was later used in producing porcelain. The makers of this fine ware did not possess metal,

[1] See J. Gunnar Anderson, *Children of the Yellow Earth: Studies in prehistoric China* (1934).



but they probably knew the horse. They lived in small earth-walled towns. There is reason to believe that this culture was in transition from the peasant-village to the urban type. It is dated immediately after the opening of the second millennium B.C.[1]

2. *"The Great City Shang": Early Urban Culture in China.* Ancient Chinese tradition recognized three early dynasties—the Hsia, the Shang, and the Chou. Archaeology has not found evi-

[1] On the early cultures of China see C. W. Bishop, "The Beginnings of Civilization in Eastern China," *Supplement to the Journal of the American Oriental Society*, Dec. 1939, pp. 45–61; C. W. Bishop, "The Chronology of Ancient China," *Journal of the American Oriental Society*, Vol. 52 (1932), pp. 232–247; C. W. Bishop, "The Neolithic Age in China," *Antiquity*, Vol. 7 (1933), pp. 389–404; C. W. Bishop, "The Beginnings of North and South China," *Pacific Affairs*, Vol. 7 (1934), pp. 297–325; Wolfram Eberhard, "Early Chinese Cultures and Their Development: A new working hypothesis," *Report of the Smithsonian Institution*, 1937, pp. 513–530.

dence of the Hsia but has identified the Shang as the rulers of the first Chinese urban culture. It appeared in the lower Huang valley in the fifteenth century B.C. and held sway until the eleventh century B.C., when the Chou Dynasty, from the Wei valley, displaced it. The earliest authentic date in Chinese history is 841 B.C.; from that date until 225 B.C., when the Chou Dynasty finally fell, China was ruled by warring princes, who, at least in the final phases, represented rival centers of urban culture.[1]

Archaeological work in the lower Huang valley has discovered at Anyang "the Great City Shang," which, it now seems established, was the first Chinese center of a bronze-using culture. Bronze working, it should be emphasized, appeared in China as a fully developed technique; the earlier phases of the advance of metallurgy have not been found at Chinese sites. The possession by the Shang of wheat, bronze working and the horse-drawn chariot suggests that they may have been influenced by developments in central and western Asia connected with the movements of the Kassites, Hyksos, Iranians, and Aryas. However, it seems also that the Shang were not entirely foreign to the northern Chinese plain. Perhaps they were a border people, relatively few in number, who established a rule over the ancient Chinese peasantry. They were, it can hardly be doubted, "bronze-using aristocrats" —rulers, fighters, landlords, and priests, all in one. The process of their emergence was probably not greatly different from that which produced similar groups in other early centers of urban culture:

> What really happened seems to be that a ruling, fighting class gradually separated itself out from the general Neolithic population. As fighting became more common, and Neolithic and early bronze-using people began to make raids on each other, it was necessary that some of the men of each village should specialize on defense and on fighting. Perhaps whole settlements sometimes found that it was easier to set up as warriors, and let the people around them work for them, than to labour in the fields. The chiefs and their groups of warriors, no doubt, provided the farmers with 'protection' whether they wanted it or not, and

[1] On the history of ancient Chinese urban culture see Henri Maspero, *La Chine antique* (1927); H. G. Creel, *The Birth of China: A study of the formative period of Chinese civilization* (1937); H. G. Creel, *Studies in Early Chinese Culture* (1937); Marcel Granet, *Chinese Civilization* (1930); W. Percival Yetts, "Recent Finds near An-Yang," *Journal of the Royal Asiatic Society*, 1935, pp. 467–474; C. W. Bishop, "The Chronology of Ancient China," *Journal of the American Oriental Society*, Vol. 52 (1932), pp. 232–247; and John C. Ferguson, "China's Earliest Culture," *The Chinese Social and Political Science Review*, Vol. 22 (1938), pp. 1–9.

in return for that service they took a share of the peasant's crop. The size of that share was fixed by the warriors, since they had the power to fix it and the peasants were helpless.[1]

The Great City Shang was located on a promontory some distance from the Huang River. Although evidences of a wall have not been discovered, it seems probable that the city was enclosed by an earthern rampart as a protection against surprise attacks, which its rulers greatly feared. The habitations of its people were almost identical with the houses of modern China. They were gabled and colonnaded structures, built on raised terraces; sometimes their walls of pounded clay were faced with brick. Timber and stone were used sparingly in the foundations, the frames, and the roofs. Although stone was available, ancient China never adopted it for general building purposes.

The economic base of early Chinese urban culture was a simple agriculture and a few well-developed crafts. Tillage was performed mainly by men, with the spade, the fork, and the hoe. The chief crops were millet and wheat, a relatively late arrival from the west. It has not yet been established that the Shang knew either rice or silk. The chief textile plant was hemp. The ox, the sheep, and the horse—not the central Asiatic breed—were kept, as well as the pig and the dog. Pork was the staple meat. The chicken was a newcomer from the south. Soy beans, leafy vegetables, and roots were the universal crops in the peasants' gardens. Among the crafts woodworking, weaving, pottery making, and bronze working were highly developed. The chief products of the woodworker were chariots, boats, and furniture. No actual example of early Chinese textiles has been found. Painted pottery disappeared in Shang times. Probably no metalworkers have ever excelled the Shang as bronze casters. The best-known examples of their work are ritual vessels of the ancient tripod type. They also produced socketed dagger-axes and spears, arrowheads, knives, adzes, and needles. But agricultural implements were still made of wood and stone. How widely irrigation was practiced in Shang times has not yet been determined.

The political results of Shang advances were (1) the creation of the ruling military class and (2) the rise of a political chief to a position of some authority over lesser leaders. The great use of oracles, as evidenced by Shang inscriptions on bones, suggests that

[1] H. G. Creel, *The Birth of China . . .* (1937), pp. 278–279. By permission of the John Day Company, Publishers, New York.

the military group either was not sharply differentiated from an embryonic priestly group or was, perhaps, quite dependent upon a small number of skilled diviners. Toward the end of Shang times, when there may have been as many as seventeen hundred villages scattered over the Huang flood plain from Shantung to the mountainous regions in the west, local areas seem to have become semi-feudal states, and the military chieftains felt strong enough to invade the northern lands, where nomads lived. On the east and south, from which directions certainly some cultural materials came to the Great City Shang, its influence, if not its power, was felt.

The Shang era, it seems clear, exhibits in shadowy outline the future Chinese polity.[1]

3. *The Chou Dynasty* (*ca.* 1122–225 B.C.) *and the Priestly State.* Toward the end of the second millennium B.C. westward migration carried settled life into the Wei and Feng valleys, especially to loess areas. Hill peoples soon found these areas ripe for plunder, and in the course of time the Chou, from the plateau land now called Shensi, established control over the Wei valley. Under their rule agriculture advanced, intercourse with the Shang developed, and the area of urban culture was extended. Finally they overthrew the Shang and united the urban areas of the Huang valley under a single regime. The center of their power was in the Wei valley, but to maintain their sway in the Huang valley they built Loyang. The traditional dates of the Chou Dynasty are 1122–225 B.C.; the first date is probably too early by almost a century.

By giving fiefs not only to their followers but also to the old military chieftains and the surviving Shang, the Chou rulers consolidated the military class which had been taking shape under the Shang. The Chou ruler was both king and priest, a patriarch whose authority descended by inheritance to his son. The rise of the Chou brought the transition from matrilinear to patrilinear descent. In the royal clan polygamy and concubinage tended to weaken the central power by engendering rivalries between the

[1] C. W. Bishop, "The Beginnings of North and South China" *Pacific Affairs*, Vol. 7 (1934), p. 313: "It was probably in connection with the appearance of a Bronze Age civilization in China that society became divided into two distinct classes. An urban aristocracy exercised seignorial rights over a peasantry composed, as it still is to a large extent, of the descendants of the old Neolithic population. This social stratification had become thoroughly established by the first half of the last millennium B.C. and probably far earlier. There is little reference in the records to the culture of the peasants; but there is no doubt that the archaic Bronze Age civilization of China was in reality the possession of a very small ruling minority."

several wives and concubines and their respective sons. By the ninth century B.C. the diverse elements of the original order of vassals was blended into a single aristocratic class which, although military in character, preserved the ancient priestly functions. Inasmuch as every member of the aristocracy had religious duties, whose performance was regarded as necessary to the well-being of the state, the Chou regime was as much a priestly as a secular monarchy. Although there was no priest class, a large body of praying priests, diviners, and sorcerers (*wu*) helped carry on and direct state affairs. The pronouncements of diviners had great influence.

The aristocracy, in fact, were as much priests as rulers and nobles. They, from the Son of Heaven down to the officers in charge of a district or of a ministry, had sacrifices to perform, not only on their own behalf, but in order to secure cosmic harmony, from which every living man benefited.[1]

The whole system was maintained by a wonderfully adjusted system of ritual. In the same way that the feudal lords were vassals of the sovereign, so was the latter subject to the Lord of Heaven, whom he worshipped as Son of Heaven. The Son of Heaven always turned his face to the south when he received the feudal lords as guests. Only at the mysterious ceremony in which he approached the Sovereign on High with sacrifices did he turn to the north in order to express the dependence of all things terrestrial on the ruler of the cosmos. . . . These sacrifices combined the worships of celestial and terrestrial spirits, of nature and of ancestors, and these formed the religious basis of the human society united within the world empire.[2]

The Chou regime was an embryonic oriental monarchy; at its base was the principle of all such regimes—everything hinged on the magic influence of the sovereign.

In justification of their rule the Chou produced a propaganda which, based on an interpretation of Chinese history, declared the emperor the appointee of Heaven, but only so long as he governed for the benefit of the people was his power legitimate. The Shang, it was said, had displaced the Hsia because they no longer pleased Heaven, and the Chou succeeded the Shang for a similar reason. On the one hand this theory made the emperor, as the Son of Heaven, a divine ruler; on the other hand it gave every revolt the character of a crusade, to participate in which was the duty of

[1] C. P. Fitzgerald, *China: A short cultural history* (1938), p. 43. D. Appleton-Century Company, New York.

[2] Richard Wilhelm, *A Short History of Chinese Civilization* (1929), pp. 107–108. By permission of George G. Harrap & Co. Ltd., London.

every subject. Thus Chinese political changes, as well as social order, remained religious in orientation.

Succeeding Chinese times looked back to the Chou as the creators of model institutions. The aristocracy was organized as a sharply graded hierarchy, each official having a clearly defined authority and field of action, and the peasantry was established on the land in a formal village system that gave every family its proper share of the soil. Like the Aryan village, this formal system—eight fields around a central field—probably never existed. However, it is undoubtedly true that the unit of the Chinese economy and polity was the village. So also it is true, although the aristocracy was never a bureaucracy, that the Chinese social order consisted of the aristocrats who ruled and the peasants who worked.

The power of the Chou aristocracy rested on a monopoly of arms. They alone possessed horses, chariots, and bronze weapons. The fighting unit consisted of three men—a charioteer, a knight, and a "right-hand man." In return for military service the aristocrats received lands from the emperor. Their direct interest in economic production seems to have been limited to the breeding of horses. Their life was regulated by a code of chivalry. Strict etiquette governed their social relations. Admission of a youth to adulthood was carried out in a formal ceremony known as capping. In war they refused to slaughter defeated adversaries. Their chief amusements were banqueting—the Chou were great meat eaters—archery, and hunting. On the whole the Chou aristocrats were a hard-fighting, hard-drinking, turbulent lot.

The peasants, who were attached to the soil as serfs, had no land of their own. They tilled the soil in the manner of their neolithic ancestors, with stone and wooden implements. Their masters took the entire produce of the fields and gave back only a subsistence. Disobedience and resistance were punished with death, for the lords held the power of life and death over them. The peasants could not appeal to a superior official, and the law did not admit that a suit could be held between a lord and a peasant. The peasants were subject to forced labor, chiefly on irrigation works and at clearing land. When they died a hoe was buried with them.

A small slave class, made up chiefly of war captives, appeared in Chou times. But there seems to have been little buying and selling of slaves.

From the eleventh to the sixth century B.C. China was slowly developing the full pattern of urban culture. The cities were the

fortified communities where the aristocrats dwelt; at the center stood the chief lord's house and the temple of his ancestors. Around the cities and towns, to which the bulk of the produce of the land was transferred, were the villages, where life went on as it had in neolithic times. A growth of trade, stimulated in part by the need for copper and tin and in part by the demand for luxury goods, gave rise to small merchant and artisan groups. The earliest forms of Chinese money appeared. And the forces of expansion, on the one hand, extended the area of tillage by reclamation and clearing and, on the other hand, fostered the growth of "barbarian" centers of culture at the edges of the Chinese lands.

4. *The Rise of Rival States in Ancient China.* In the course of these developments the nobles found ways of reducing the authority of the emperor to a shadowy sovereignty. The result was the formation of states under rulers who, although recognizing the overlordship of the emperor, exercised full power. A revolution in military technology, which displaced chariotry with cavalry, contributed greatly to this development. Shortly after the opening of the eighth century B.C., when the Chou were expelled from the Wei valley by the "dog barbarians," they moved the capital to Loyang, where they continued to reign more as high priests than as emperors. Their old dominion in the Wei valley fell to a horse-trading family, who founded the state of Ch'in. About the same time intrigue and warfare reduced the feudatories, which had originally numbered about eleven hundred, to fourteen; among them Chao, Sung, Ch'i, Lu, and Tsin were the most important. At the same time three states—Ch'u, Wu, and Yueh—arose in the Yangtze valley. Among the states raged bitter war for domination, with different states holding sway for short periods.

When iron was introduced, shortly before the middle of the first millennium B.C., new social and economic conditions combined with the feudal rivalries to intensify the general disorder. Walled cities multiplied. Rivers were diked, and marshlands were reclaimed. Trade expanded. And hill peoples were reduced to servitude. These developments not only increased wealth but also brought the states into closer relation. During the early Chou period stretches of heath and marshland had separated the states; now their boundaries touched, and the pressure for lands became greater. Since the rulers of the border states did not adhere to the code of chivalry of the Chou nobility, warfare became more destructive as the economic struggle became sharper. Members of the lesser nobility, possessed of literate learning but torn loose from

their traditional positions by factional strife, became adventurers; the rulers of the border states welcomed them as advisers, and the wanderers paid for the welcome with schemes of treachery and brutal measures that enhanced the powers of their patrons. All the great ministers of Ch'in, it is interesting to note, were men from the older eastern states.

Although later times looked back to the Chou period as a golden age, actually it nurtured the forces that set rival urban centers struggling for the domination of all China.

The Bases of Chinese Culture.

The evidences which support the racial continuity of the Chinese population from very early times also suggest that the Chinese cultural tradition was rooted in very old materials; indeed this fact may be considered decisive in the formation of the Chinese cultural tradition in that it has meant, however great the disturbances in Chinese life, the persistence of primitive customs and beliefs. The traditional view of the antiquity of Chinese culture is correct in this general respect, if not in its details.

1. *The Early Chinese Religion.* At the base of Chinese religious beliefs, it may be accepted, was a rendering of the daimonic universe similar to that in other neolithic cultures. The earliest cults, it seems, were concerned with fertility and practiced magical rites to obtain good crops.

In Shang times these beliefs took forms which endured for many centuries. A hierarchy of deities emerged from the host of spirits which the early peasants knew. At its head stood Shang Ti or T'ien, the "Above Ruler," known in later ages as "Heaven." Heaven had power, but not exclusive power, over war, crops, the other gods, and good and bad luck. The wind was regarded as Heaven's messenger. Among the female deities were the Dragon Woman, the Eastern Mother, and the Western Mother. Spirits presided over the three quarters—the east, the west, and the south; the Chou knew the north as the "Devil's Country." The earth was worshiped as a deity. There was also a snake spirit. These spirits, sometimes friendly and sometimes unfriendly, sent enemies, plagues, ghosts, and dreams to injure or frighten men. They could also cause men to be sold into slavery. All well-being depended on winning and retaining their favor.

This desired end was obtained by worship, mainly ritualistic, which centered around sacrifices. A year, which was probably reckoned by a sequence of seasonal ceremonies, was known as a

"sacrifice." The common sacrificial object was a domestic animal, but humans were occasionally offered. The Shang may have sent expeditions into neighboring grasslands to catch sheepherders for this purpose.

The most interesting artifacts of Shang times are the oracle bones, records of divination by the Shang kings and their families. The diviners asked a question, to which they read the answer "fortunate" or "unfortunate" in a T-shaped crack produced by applying heat at a point on a specially prepared tortoise shell or ox bone. There is reason to believe that the diviners were able to influence the kind of a crack made by the heat and, therefore, to determine the answer. Frequent questions were "Will it rain to-night?" and "Will there be a surprise attack to-night?" and "Will I receive aid?" Among the subjects commonly inquired about were sacrifices, state banquets, journeys, hunting expeditions, military enterprises, illness, crops, and lucky and unlucky days. The kings sought help in interpreting their dreams, which were regarded as messages from Heaven. The Shang practiced divination even in the most minute affairs of daily life.

In Chou times the spirits were divided into two orders, those of the earth and those of the air. At the head of those of the air was Shang Ti, or Heaven, who was regarded as the supreme ancestor or, perhaps, as all the dead emperors. The emperor, as the Son of Heaven, conducted the worship of Heaven. At the winter solstice the sovereign sacrificed for his people and plowed a ritualistic furrow in order to bind earthly life into the harmonious relation with Shang Ti that ensured prosperity. If the moral character of the king was bad, the sacrifice, it was believed, would not be efficacious. This ritual was maintained until the fall of the Manchu Dynasty, A.D. 1911. After death each king was given a temple name by which he was known in the rites of his descendants.

Closely connected with the worship of Heaven was the cult of ancestors. The Chinese believed that man had two souls, *p'o* and *hun*. At death *p'o* stayed with the body in the tomb; when the body decayed, it sank into the underworld. But *hun* ascended to the palace of Heaven; the journey was hazardous, for earth spirits which devoured souls had to be avoided and the Heavenly Wolf which stood at the door of the palace had to be passed. Once in the palace of Heaven, however, *hun* became a powerful and beneficent deity that could be invoked by divination. As long as sacrifices were made, the soul was happy and powerful for good, but if sacrifices were discontinued it became a miserable ghost bent on

evil. It made people ill until it was fed. Since sacrifices could be made only by a male descendant, the need for sons was paramount in the Chinese family.

Under the Chou the peasant-village masses had no part in the worship of Heaven or of the ancestral spirits; their worship was purely aristocratic. Each village had its earth god, and every household its hearth god and its god of the seed room. Over each village hovered a cloud of daimons and a growing host of ancestral spirits that had to be placated. The *wu*, or sorcerers, were the handy men in dealing with the daimonic legions. The religious position of the peasantry was merely a correlative of its economic and social status.

Among the earth spirits the most important were Hou T'u, ruler of the soil, and Hou Chi, the grain god. The spirits of streams and rivers were very dangerous. Every year the Lord of the Yellow River (*i.e.*, the Huang) was given a maiden as a sacrificial offering. This ritual continued until the third century B.C. Culture heroes also became important in Chou times.

No less important than the belief in various spirits was the belief in the fundamental duality of the universe, in *yang* and *yin*, two magical forces or substances whose harmony and disharmony explained every aspect of nature and human life. The date at which this generalization was formed has not been determined; it is found in the *I Ching*, or "Book of Changes," the oldest complete work in the Chinese language. Yang was the male and positive principle, yin the female and negative principle; and the universe was divided into eight spheres embodying these principles in different proportions. Heaven, entirely male, was represented by ☰. Earth, completely female, was represented by ☷. The other spheres were combinations of the long line and the broken line. Thus water was ☵, fire ☲, wind ☴, thunder ☳, vapor ☱, and mountains ☶. By various arrangements these symbols were formed into sixty-four diagrams which were the basis of a system of divination superseding the Shang method. Since these lines can be grouped together in about sixteen million ways, the Chinese belief that in them was contained every secret of the universe, although fantastic from the viewpoint of science, was not absurd from the viewpoint of magic. The *shen*, *i.e.*, the gods, were associated with yang; the *kuli*, or daimons, who caused plague, famine, and floods, were associated with yin. The *wu* were regarded as expert in manipulating yang and yin; their outfit consisted of a copy of the *I Ching* and fifty stalks of a magic plant

with which they found the combinations representing the relation of yang and yin in the matter under attention. The conception of a positive and a negative force became a fundamental element in Chinese thought, but it was never untangled from superstitions.

2. *The Beginnings of Chinese Literate Learning.* Among the notable archaeological achievements of recent decades has been the identification of the markings on the Shang oracle bones as writing. These inscriptions, which date at least from the fourteenth century B.C., are the earliest written documents of Chinese culture. The signs, about twenty-five hundred in number, are pictographic in character, each being an ideograph; for example, the idea "evil" was represented by a snake striking a man's leg. The original elements of many of the signs have been identified. It appears that the Shang used the writing brush and ink and probably wrote on bamboo and wood as later Chinese did. The sign "book," as known in later Chinese writing, indicates that they possessed written works, although none is known to have survived.

The knowledge of writing, which in Shang times was probably confined to a few noble families, spread early in the Chou period to the whole aristocracy; probably no other people of the early first millennium B.C. had as high a regard for the written word as the Chou aristocracy. Written documents certifying ownership were given with gifts, even when the gifts were without value. Orders were written down, edicts recorded, and notes taken. Special priestly scribes were kept at the royal court and, later, at the feudal courts in order to prepare state documents. Even the deities kept accounts, and letters were addressed to the gods. There is no reason to believe, however, that the literate group was large; until the seventh century B.C. writing was almost entirely restricted to purposes of the state.

Besides the Shang oracle bones the earliest documents of Chinese literate learning are certain inscriptions on bronze ceremonial vessels of the Chou Dynasty and a few compilations of various kinds of materials. Some twenty-nine books, none of which is understood, have been identified in the bronze inscriptions; they are important for the mention made of various kings. As previously noted, the oldest complete work in the Chinese language is the *I Ching*, or "Book of Changes," a sorcerers' manual; it was composed early in the Chou period. The *Shu Ching*, or "Book of History," is a collection of documents, about one-quarter of

which date from before 600 B.C. They are mainly proclamations, speeches, and exhortations. The *Shih Ching*, or "Book of Poetry," contains three hundred and eleven poems, mostly lyrics, expressing the sentiments of lovers, toilers, concubines, soldiers, prophets, dismissed officials, and flatterers of the powerful. Their leading note is "The good old days are gone." The *I Li*, or "Book of Etiquette," describes the rituals of the official classes. Two other works are mainly historical. Only one of these books contains a document pertaining to the Shang tradition; the books are, therefore, almost exclusively Chou in origin.

These works set the tone of later Chinese learning. The historical works painted the glories of the past in order to justify conditions in the present. The poems, in spite of the fact that they depicted a colorful popular life, taught a doctrine of acquiescence to the evils of the present. The education in which they formed a part was aristocratic. The Chou nobles were taught ceremony, music, archery, charioteering, mathematics, and writing,—in other words, the means of holding, exercising, and enjoying power. The emphasis on etiquette and ceremony, it should be understood, was as much a matter of keeping order as it was a recognition of the value of politeness. Above all Chou learning was enmeshed in magic and religion, for its chief source was divination and its main purpose was to maintain the harmony between Heaven and earth upon which all well-being depended.

The importance of divination in the history of Chinese civilization cannot be over-estimated. As far as we know, the earliest writings in China were those engraven on the Oracular bones . . . regarding the subject for divination, the date, and the reading of the Oracular answer. This was the beginning of writing, of chronology, of history and of literature. This, too, marked the beginning of literary education and of an intellectual class. For the tremendous importance attached to divination and worship and the difficulty in deciphering the mysterious signs on the bones and mastering the art of ideographic writing, all these gave rise to a class . . . especially trained for the performing of such duties. These were the priests and priestesses, the interpreters of the gods and the teachers of men . . . the custodians of knowledge. It was natural that the office of Imperial Historian was always connected with the state priesthood. Moreover, since astrology early became a part of the science of divination, the priests were the first readers of the secrets of the heavens, the keepers and reformers of the calendar, and the fathers of astronomy. They were the first scientists and the first philosophers, and, insofar as the object of divination was to guide state action and human

conduct, they were also the first moral philosophers who sought to understand the will of the gods for the warning and guidance of men.[1]

The Chinese low and high intellectual traditions, like those of other urban cultures, flowed from primitive mentality, but because Chinese urban culture was rooted in an essentially undisturbed neolithic peasant-village culture, their primitive elements were somewhat less disorganized than those which survived in other urban cultures. In this fact was probably the fundamental reason for the enduring unity of Chinese culture.

THE CLASSICAL CHINESE PHILOSOPHIES.

The disorganization of the Chou regime, which flowed mainly from economic and social changes that multiplied cities, but which had its chief manifestation in the warfare of the states, stimulated an examination of the bases of social order.[2] This examination was the peculiar work of the masters of literate learning, who had increased in numbers as the cities multiplied; although the intellectual descendants of the scribes of the feudal courts, they were products of the new times. By the end of the sixth century B.C. they wandered from city to city, filled every provincial court, and debated every conceivable question. On one point they agreed, namely, "The Chinese world is a single whole," and with one question they were concerned, namely, "How achieve social order and stability?" As teachers they instructed not the nobles, who held fast to the old aristocratic education, but the members of a new group, namely, the well to do by trade and industry. Some of the feudal lords met this intellectual awakening with a censorship of pamphlets and a persecution of the scholars; however, at the same time they employed them in administrative and diplomatic positions. Thus experience in government, as well as speculation about the bases of social order, entered into the philosophies which these men developed.

By the fourth century B.C. there were many varieties of philosophical doctrines, but only four were important. Before

[1] Kenneth Saunders, *Ideals of the East and West* (1934), p. 43. From *Symposium on Chinese Culture*, pp. 28 and 29, published by the Institute of Pacific Relations, Shanghai.

[2] H. G. Creel, *The Birth of China: A Study of the formative period of Chinese civilization* (1937), p. 245: "The history of China on its political side from this time [691 B.C.] to 221 B.C. is largely the history of the struggle between the various states, on the one hand to preserve and on the other to break the 'balance of power' which prevented any of them from swallowing the others and establishing its rule over all China. This struggle had many phases, among its by-products was a large portion of Chinese philosophy." By permission of the John Day Company, Inc., Publishers, New York.

surveying them it is well to be reminded that they arose under circumstances not unlike those which marked the appearance of social criticism and the elaboration of new ethical principles in other centers of urban culture, notably Palestine, Greece, and India.[1]

1. *Confucianism: an Enlightened Conservatism.* K'ung Ch'iu or Confucius (*ca.* 551–478 B.C.) was saddened by the misrule of his age. "The oppressive rule," he said, "is more cruel than the tiger." He enriched his experience as an archivist of his native state, Lu, by travel and study and then turned to teaching as a mode of political action. But, whereas other teachers expounded their own ideas, he undertook to rationalize tradition, particularly as exemplified by Chou institutions and ceremonials. Like the Greek Sophists and Socrates he taught whoever came to him, and like the Sophists he accepted payment for his service; his object was to develop someone who would be useful to the state. There is reason to believe that he felt himself to be performing a divine mission.

Whereas the Greek and Indian thinkers found in metaphysical theories a basis for social conservatism, Confucius grounded his conservatism in history, conceived as expressing the evolving order of nature and society. The ancient sages, he held, took "ideas" from nature, and the history of civilization was merely the working of these "ideas" into a social order. From "ideas" men made "judgments," and these they embodied in legislation. Thus the foundation of social order was the intellectual evolution that had taken place in past ages. This point of view led Confucius to edit the written materials of the early Chou period, giving them a form from which later ages derived their renderings. He also composed a chronicle of his native state from 722 to 481 B.C.; it is known as the *Ch'un Ch'iu*, or "Spring and Autumn Annals." There was precedent for this kind of work in earlier writings. Shortly after his death, disciples collected his conversation in the *Lun Yü*, or "Analects." In his literary work, as in his teaching, Confucius was

[1] The most complete treatment of the classical Chinese philosophies is Fung Yu-lan, *A History of Chinese Philosophy: The period of the philosophers (from the beginnings to circa* 100 B.C.), translated by Derk Bodde (1937). Articles by the same author are "Why China Has No Science," *International Journal of Ethics*, Vol. 32 (1922), pp. 237 *ff*; "The Place of Confucius in Chinese History," *The Chinese Social and Political Science Review*, Vol. 16 (1932), pp. 1–10; and "The Origin of *Ju* and *Mo*," *The Chinese Social and Political Science Review*, Vol. 19 (1935–1936), pp. 151–163. See also Hu Shih, *The Development of the Logical Method in Ancient China* (1922); L. Wieger, *A History of the Religious Beliefs and Philosophical Beliefs in China* (1927); A. Forke, *Geschichte der alten Chinesischen Philosophie* (1927); and Liang Ch'i-ch'ao, *History of Chinese Political Thought during the Early Tsin Period* (1930).



CONFUCIUS

At what time Confucius became a culture symbol is not known; this portrait is an eighteenth century rendering. Confucius represented that combination of age, wisdom, and integrity which was the realization of the traditional values of Chinese culture.

more a transmitter than a creator; yet, in a truer sense, he created by transmitting, for he did not hesitate to select from the ancient works and to comment upon them as he saw fit.[1]

The basic conception of the Confucian social philosophy was *li*, which is usually understood to mean a sense of propriety. This sense was definitely the outcome of the historical evolution of a people, for, so Confucius declared, an uncivilized people had no li. Among a civilized people social classes existed because different persons had greater or lesser knowledge of li. On this basis Con-

[1] See Herbert A. Giles, *Confucianism and Its Rivals* (1915).

For translations of the Chinese classics see James Legge, *The Chinese Classics* (5 vols., 2d ed., rev., 1893–1895); F. Max Müller, editor, *The Sacred Books of the East*, Vols. 3, 16, 27, and 28; Lionel Giles, *The Analects of Confucius* (1933).

fucius distinguished four social classes: (1) those who have intuitive knowledge, (2) those who, having great natural abilities, learn easily, (3) those who learn only by earnest application, and (4) those who decline to acquire knowledge. But for practical purposes there were just two classes, the nobles, who lived by li, and the people, who lived under law. Rulers, he held, should unite the qualities of the prince and the sage, thus combining the learned and the intuitive knowledge of li. Li had many manifestations. It was a recognized code of outward behavior. It was an inward sense of right and wrong. It was an unwritten principle of government. It was a universal norm of justice. It was a strict definition of social duties. It was an official etiquette. To abolish the social classes distinguished by the knowledge of li meant, according to the followers of Confucius, to return to barbarism; to permit the breaking up of these classes was to bring disorder and misery upon men. The maintenance of rank and of the prerogatives and duties of rank was the sole means of preserving social stability.

For the individual a knowledge of li was to be won by self-culture and to be realized in a personal refinement and a strict performance of duties. Above all, the good man must perform his obligations. To the ancestors was owed the duty of begetting sons; to the father and the mother sons owed obedience, reverence, and support in old age. Confucius taught that sons must be careful about receiving injuries, even scratches, lest they became unable to support their parents when they were old; for the same reason he opposed emigration.

In opposition to a vague doctrine of universal love Confucius taught, "Return good for good, and justice for injustice." On this ground he justified the blood feud. One should love with differences of degree appropriate to the family, the community, the social classes, and the people. At the same time, however, he demanded that all men be brothers in the possession of identical virtues: (1) uprightness of mind, (2) propriety in demeanor, (3) a knowledge of affairs, *i.e.*, ceremonies, (4) benevolence, and (5) good faith. He recognized five relationships in which, if the duties of each person were performed in accordance with these virtues, both individual and social well-being would be served; these relationships were: (1) sovereign and minister, (2) father and son, (3) husband and wife, (4) elder and younger brother, and (5) friend and friend.

The personal realization of li took form in self-control, courtesy, and urbanity. Ambition was suppressed; eccentricity, contrariness, and prejudice were avoided. The good man was benevolent,

wise, and courageous, above all sincere and humane. He sought moral virtues rather than wealth, prestige, and power. By means of reason he attained a moral harmony in which, knowing neither grief nor fear, he balanced a knowledge of the evils of life against an appreciation of its pleasant satisfactions. The Confucian gentleman, it should be noted, was neither an ascetic nor a recluse—at best, he combined the qualities of the sage and the prince. On the whole, it is safe to interpret this Confucian ideal of individuality as aristocratic in origin and purpose, for it focused attention not upon the people but upon their rulers.

The social projection of li was, therefore, a system of government. In fact, Confucius is best understood as a political reformer. But he proposed no institutional changes. Rather his system was a renovated Chou feudalism, and in later times, after the fall of the Chou, he was sometimes known as their uncrowned heir. The emperor, he said, was an ordinary man chosen by Heaven to be an earthly steward, and the people were Heaven's people. Government existed for the sake of the governed and by their consent; it was the people's duty to end tyranny, and revolution for that purpose was a social blessing. The means of achieving orderly and just government was education. The empire was a great university and the emperor an instructor guiding his people by example; government was mainly a process of educating the people in virtue. He defined the function of education, pragmatically, as rectification, *i.e.*, the continuous removal of evils and distresses by the inculcation of the manifold ways of li. In accomplishing this purpose education could do four things: (1) it gave definitions of powers, functions, and duties, (2) it delimited the proper spheres of actions of persons and institutions, (3) it passed judgments on the acts of men, and (4) it studied the course of political and social evolution. Class lines should not affect the opportunity to get an education. Merit was to be recognized regardless of social origin, for good government and social progress were promoted only by continuously advancing to important posts the best men available. Since bad government never existed under a superior man, it was to the best interests of every class that the man of intuition and erudition be placed in charge of the affairs of the state.

What were the affairs of state? To this perplexing question Confucius gave a broad answer. In general, the government was to rest lightly upon the people. They were to have charge of local affairs. They were not to be punished except by reformatory measures. They were to be taxed no more than one-tenth of the yearly

produce. Light taxation necessarily meant that the government had to practice economy in expenditure. However, the state was to control the movements of the population, preventing its excessive concentration and aiding its spread into sparsely settled areas. The state was also charged directly with promoting prosperity, so that the people might enjoy a rich life. Thus Confucius favored regulation over *laissez faire*. The land should be nationalized and distributed to the people according to their needs. In order to prevent the growth of private monopolies, public utilities should be owned by the state, which also should accumulate capital and direct the development of industry. But no government official should engage in a private enterprise competing with the common people. Trade should be free, and in order to promote it weights and measures should be standardized. Special attention should be given to the improvement of tillage, and natural resources should be conserved. The state should also maintain social services for the people. Education, of course, was a public charge, but so also was the provision of the means of recreation and social insurance. Widows, orphans, and the unemployed were to be supported by the state. In foreign affairs the state was to follow a pacific policy. War was justified only in case of attack. Imperial expansion, if carried on without violence and for the purpose of civilizing savage peoples, was a sound policy. Militarism was condemned. In the Confucian scale of social values the soldier stood next to the bottom —just above the criminal.[1]

Although Confucius is generally known in the Western world as the founder of a religion, actually he accepted the traditional religion and its relation to the other elements of Chinese culture; thus he retained ritual as the significant governmental act. This was entirely fitting in view of the fact that he conceived the function of government to be the realization of li. To judge the significance of Confucius as a social philosopher it is necessary, therefore, to re-examine the content of li. As a matter of fact, this content was merely the ordered customs of the past. Confucius made knowledge the basis of government, but he derived knowledge entirely from tradition which, in his time, meant a fully developed peasant-village mentality. Moreover, when, by editing the early Chou literature, he gave classic form to the Chinese high intellectual tradition, he ensured that its carriers in subsequent ages would not abandon the peasant-village mentality of which the first

[1] See Leonard S. Hsü, *The Political Philosophy of Confucianism*, (1932); Chen Huang-Chang, *The Economic Principles of Confucius and His School* (2 vols., 1911).

written materials were an expression. In this fact existed the intellectual unity, rather the fixation, of Chinese culture on a basis which was, even more completely than in the Western world, the mentality of the peasant-village masses. Confucius made possible the organization of government on the basis of knowledge, but he contributed little to the advancement of learning. In his system there was neither science nor logic, not even mathematics. He apparently never recognized the place of observation in the advancement of learning. Nor did he appreciate the significance of technology. The superior man, he felt, was never produced by physical work. Confucius made the first mistake common to most carriers of high intellectual traditions, namely, the identification of verbal learning with knowledge. But he did not make the second mistake, namely, the exclusive projection of knowledge in an ideal of individual existence possible only in subjective terms or in the spiritual overworld. Under pressure of the prevailing distresses he conceived its projection in a stable social order; in this respect he was like the Greeks Plato and Aristotle. But, more closely bound by tradition than they, he made possible the ultimate assimilation of Chinese life in the pattern he set, while they did little more than state the theories in terms of which Western men described a stable order they never attained. The Confucian polity was, functionally, only the oriental monarchy, motivated more by the sentiments of the peasant village than by the prejudices of urban social classes.

2. *The Benevolent Anarchism of Mo Ti* (*ca.* 470–391 B.C.). The disorders of the late Chou period uprooted feudal retainers, who, as a result, wandered from court to court like the scholars. Among them was Mo Ti, who developed a social teaching and gathered a body of followers. Although they specialized in the manufacture of weapons, they repudiated warfare, fighting only in defense of the weak. "A world," they said, "which condemns a petty wrong and praises the greatest of crimes—war—knows no true distinction between right and wrong." No modern pacifist has excelled Mo Ti's logic in arguing the absurdity of punishing the murderer of one man and praising the soldier who slaughters thousands.[1]

The point of departure of Mo Ti's thought was the principle of utility. "Righteousness," he said, "consists of doing benefit."

[1] See Yi-Pao Mei, *The Ethical and Political Works of Motse, Translated from the Original Chinese Text* (1929); Yi-Pao Mei, *Motse, The Neglected Rival of Confucius* (1934), Alfred Forke, *Mê Ti des sozialethiker und seiner schüler philosophische werke, zum erste male vollstandig übersetz . . .* (1922).

"The beneficial is that which when obtained gives pleasure." "The harmful is that which when obtained is disliked." In order to act on this principle he developed a system of logic. The proof of a proposition (and none was ever to be accepted without proof) was to be found in the answers to three questions, (1) "What did the ancient sages say about it," (2) "How did it work in the experience of living men," and (3) "When embodied in law, what were its practical effects?" The answer to the third question was decisive; that is, a proposition is true when it works to promote well-being.

Although, like Confucius, he sought no metaphysical basis for his doctrines, he made a conception of Heaven the source of his teaching. He described Shang Ti as a personal God who loved all men and taught that man's duty was to follow God and love all men without differences of degree. "The man of Ch'u," he said, "is my brother." He condemned the Confucian class distinctions, as well as all rites and arts, including music (which Confucius praised as being conducive to the growth of moral harmony), because they did not contribute to the amelioration of the distresses of common men. He proposed that the good man should undertake a life of active charity:

> The business of the benevolent man must be to strive to promote what is advantageous to the world and to take away what is injurious to it. At the present time, what are to be accounted the most injurious things in the world? They are such as the attacking of small states by the great ones; the inroads on small families by the great ones; the plunder of the weak by the strong; the oppression of the few by the many. . . . Let us ask whence all these injurious things arise. Is it from loving others or advantaging others? It must be replied 'No'; and it must likewise be said 'They arise clearly from hating others and doing violence to others.' Do those who hate and do violence to others hold the principle of loving all, or that of making distinctions between man and man? It must be replied, 'They make distinctions.' So then it is the principle of making distinctions between man and man, which gives rise to all that is most injurious to the world. On this account we conclude that that principle is wrong. There is a principle of loving all which is able to change that which makes distinctions. . . . If the princes were as much for the state of others as for their own, which one of them would raise the forces of his state to attack that of another? He is for that as much as for his own. . . . So then it is the principle of universal, mutual love, which gives rise to all that is most beneficial to the world. On this account we conclude that that principle is right.[1]

[1] Fung Yu-lan, "Why China Has No Science," *International Journal of Ethics*, Vol. 32 (1922), p. 245.

Perhaps the most interesting aspect of Mo Ti's humanitarianism was the interest in the "blue-coated masses." He was in no doubt about their distresses:

> People have three troubles: those who are hungry and have no food; those who are cold but have no clothes; and those who are tired but cannot rest.

To ameliorate these conditions he proposed that the state follow a policy that would increase both its wealth and its population. The state should regulate economic life so that there would be neither luxury nor poverty. Production should be determined by the needs of the people, not the desires of the well to do. On the same grounds that he condemned luxury, he advocated economy in government; its expenditures, even while supplying subsistence, should be kept at a minimum. He looked upon a low level of consumption as a safeguard against moral corruption. He believed in early marriage and large families. If needs of men were satisfied, he held, their natural tendency to love one another, in accordance with the will of Heaven, would operate, and social evils would disappear. However, he also held that the advancement of knowledge of physical nature as a means of improving technology was a mode of releasing common men from pain.

Mo Ti was the leading Eastern advocate of the doctrine which, founded on the assumptions that common men are naturally good and that God is universally loving, declares that the people, if freed from want, will live in a state of justice and social harmony. For the Eastern as well as for the Western world this doctrine formed the romantic foundation of democracy. As expounded by Mo Ti, the doctrine had the virtue of including the thesis that somehow common men's poverty is related to their moral degradation. This was heterodoxy, indeed, in the eyes of aristocrats, priests, ritualists, magicians, ascetics, and recluses, who viewed common men merely as workers fit only to support their superiors. He was attacked by the Confucianists as an enemy of society because he disapproved ceremonies as the basis of social order and opposed universal love to kinship as the motive of social organization. His emphasis on discussion as a method of developing knowledge drew the fire of officials who disliked contention and agitation; as in other parts of the world this method, it should be noted, led to arid verbalism and logic chopping. As a philosophy aiming to ameliorate the distress of the masses by dealing directly with the ignorance, prejudice, and exercise of power which caused

them, Mo Ti's doctrines inevitably encountered the hostility of the privileged groups, and the "blue-coated masses," entangled in their primitive beliefs, were unable to understand them. It is easy to understand, therefore, why less knowledge of them survived than of any other of the early Chinese philosophies.

3. *Taoism: a Mystical Quietism.* Taoism had kinship with Indian ideas. *Tao* means a way, chiefly a way of virtue—*te*—which, as described by Taoists, seems greatly like the Brahmanical conception of reality.[1] The classic exposition of tao is found in the *Tao Tê Ching*, a work probably compiled by several persons in the third century B.C.[2] As previously noted, traditional Chinese magic rested upon two principles, yang, the male agent, and yin, the female agent; the Taoists postulated that behind these principles, as well as behind Heaven or Shang Ti, was a single pervasive, undifferentiated, transcendent, and eternal substance or power:

> The Way is like an empty vessel
> That yet may be drawn from
> Without ever needing to be filled.
> It is bottomless; the very progenitor of all things in the world.
> In it all sharpness is blunted,
> All tangles untied,
> All glare tempered,
> All dust smoothed.
> It is like a deep pool that never dries.
> Was it too the child of something else? We cannot tell.
> But as a substanceless image it existed before the Ancestor.

It is not improbable that the root of this conception was the belief that a fundamental harmony existed between yang and yin which, in spite of their diverse manifestations, always bound them together. At any rate this transcendent principle was knowable in the ordered and harmonious development of nature. In the universe it was order. In society it was moral principle. In intellectual activity it was reason. In individual behavior it was virtue. Social disorder and individual distress existed because men fell away from nature. Under tao the universe was perfect and man was perfect; the cure for all evil was a return to nature.

The method of this return was to put man and society in harmony with nature by practicing *wu wei*, *i.e.*, by doing nothing. In

[1] See p. 393.

[2] For a translation of the *Tao Tê Ching* see F. Max Müller, editor, *The Sacred Books of the East*, Vols. 39, 40. See also Lionel Giles, *The Sayings of Lao Tzŭ* (1927); Arthur Waley, *The Way and Its Power: A study of the Tao Tê Ching and its place in Chinese thought* (1934); and Evan Morgan, *Tao, the Great Luminant* (1935).

general this obscure principle meant not doing anything unnecessarily, excitedly, or without forethought. The Taoists worked the principle into an ethics of individual and social behavior.

For the individual the return to nature meant the suppression of animal desires and ambition in a quest for union with reality. This union could be achieved only by meditation—all knowledge derived through sensory perception was false—and was realized in a state of inward illumination. The outward manifestations of this inward knowledge were gentleness, quietness, and frugality—in fine, a saintliness:

> He teaches not by words but by acts:
> He acts but seeks no reward:
> He works out perfection, seeking no credit:
> His preoccupation is with the inner life:
> He puts away excess, and egotism, and softness:
> Honour and dishonour are alike to him:
> All are his children.

For society the return to nature meant the abandonment of the artificialities of civilization:

> When people are skilled in many cunning arts, strange are the objects of luxury that appear. The greater are the number of laws and enactments, the more the thieves and robbers there will be.

Overgovernment, said the Taoist, is the bane of life; he favored a policy of complete *laissez faire*, not in order that men might lay up riches but that they might escape the bars separating them from nature. He repudiated popular education, held that religious rites are useless, and denounced the pursuit of worldly knowledge and agitation for reform.

Chuang Tzŭ, the greatest representative of Taoism in the fourth century B.C.,[1] turned a keen sarcasm on those who argued and were convinced by argument:

> To wear out one's intellect in trying to argue without knowing the fact that arguments are the same is called 'three in the morning.' 'What is three in the morning?' asked Tse Yu. 'A keeper of monkeys,' replied Tse Chi, 'said once to his monkeys with regard to their chestnuts, that each was to have three in the morning and four in the night. But to this the monkeys were very angry, so the keeper said that they might have

[1] Lionel Giles, *Musings of a Chinese Mystic*, selections from the philosophy of Chuang Tzŭ (1911).

four in the morning, and three in the night, with which argument they were all well pleased.'[1]

"The existence of things," he said, "is like a galloping horse." Man should try to know only the "Invariable." Among the constants in human affairs were the conditions suggested by the following statements:

The people have a constant nature: to weave and clothe themselves, till and feed themselves.

The world is invariably possessed by him who does nothing.

The people at their tasks invariably spoil them when within an ace of completing them.

There is invariably the Lord of Slaughter who kills.

Everything in the world longs for peace.

From these and other propositions the Taoists arrived at the conclusion that participation in human affairs has no value. When men seek wisdom, they find hypocrisy; when they acclaim the "good" and the "beautiful," they also condemn the "evil" and the "ugly." Man should not make distinctions; his proper conduct was always to harmonize, for this was the nature of tao.

These doctrines were rendered in various ideals. "The perfect man is spirit-like. Were the great lakes burned up, he would not feel hot. Were the great rivers frozen hard, he would not feel cold. Were the mountains to be riven by thunder or the seas thrown into waves by a storm, he would not be frightened." The perfect ruler made his subjects like small children. The perfect state was a small country with a few people, where although there were carriages there was no occasion to ride in them—where, indeed, although the next state was so near that its cocks could be heard the people never visited each other. Possessing complete liberty, men would practice quietism.

Taoism combined a pantheistic conception of absolute being with the superstitions of the people. Many of its devotees were magicians; still others became ascetics. Chuang Tzŭ taught that some men could walk through fire and solid rock, while others could fly thousands of miles through the air. Such notions were the basis of its appeal to the masses, who by virtue of their peasant-village ways—frugality, sentiment, and neighborliness, not to

[1] Fung Yu-lan, "Why China Has No Science," *International Journal of Ethics*, Vol. 32 (1922), p. 244.

mention stolidity and superstition—realized the best elements of the Taoist ethics. "Back to nature" is a seductive slogan: all who take that broad road end in the maze of paths that run hither and thither in the wilderness but go nowhere. Socially Taoism stood for little more than the quietism of the vegetable-like existence of the peasant village. It is probably not incorrect to view Taoism as a peasant reaction to the disorders of urban culture of late Chou times.

THE LEGALISTS: THE SOCIAL PHILOSOPHY OF AN AUTHORITARIAN STATE.

At the end of the fifth century B.C., when the final struggle for supremacy broke out among the feudal states, the philosophies underwent an elaboration which is well indicated by the fact that the period is known as the age of the "Hundred Schools." There were dashes of irresponsibility, uncertainty, and pessimism in their teachings.

Yang Chu (fl. *ca.* 390 B.C.) called upon the wise man to accept fate, taking pleasure where it was to be found. He was a forthright hedonist. Chuang Tzŭ, as noted, not only developed Taoism into a complete system of meditation but also identified it with superstitions that set men hunting for a wonder-working elixir of life. Mencius (*ca.* 372–289 B.C.) and Hsün Tzŭ (fl. *ca.* 250 B.C.), opposing moral and intellectual anarchism, gave Confucianism a rendering which had much to do with its ultimate triumph. Sometime in this period the Confucianists composed the *Chou-li*, which set forth a picture of the early Chou regime as the full embodiment of li.

Mencius said, "The way of truth is like a great road. It is not difficult to know. The evil is only that men will not seek it." Man, he held, was innately good. He recognized six virtues as belonging universally to men: kindness, a sense of propriety, a sense of right, a capacity for wisdom, sincerity, and trueheartedness. The difference among men had origin in their various conditions of life. "In the good years the children of the people are most of them good and in the bad years most of them are bad. It is not owing to their natural endowments conferred by heaven that they are different. It is owing to circumstances. . . . " It was the function of government to educate the people so that these innate tendencies might function in their lives and to preserve the conditions under which they could function. The emperor should be noble and benevolent. The officials should be well trained. Punishments should be light. Taxes should be levied according to capacity to pay. The young



By EWING GALLOWAY

THE TOMB OF CONFUCIUS

Confucius is buried beneath the earthen mound behind the modern marble shrine. The earthen pyramid was the common type of monument erected over the graves of prominent men by the ancient Chinese.

and the aged should be cared for. Special attention should be given to agriculture, and trade with foreign countries should be free. Mencius sought to apply the spirit, not the form, of the Confucian li to the new circumstances in Chinese life.[1]

Hsün Tzŭ held that man was naturally evil; his goodness was acquired.

> The original nature of man is to seek gain. If this desire is followed, strife and rapacity result and courtesy dies. Man is originally envious and naturally hates others. If these tendencies are followed, injury and destruction follow; loyalty and faithfulness are destroyed . . . therefore the civilizing influence of teachers and laws, the guidance of *Li*, and of justice is absolutely necessary.

From this seemingly pessimistic view of human nature Hsün Tzŭ drew the conclusion that man's fate was in his own hands. He repudiated the superstition that Heaven controls human destiny. If the right way of life was cultivated and not opposed, then Heaven could not send misfortunes. Likewise he denied that li as tradition was knowable. Both tao and li were to be learned, however, in the concrete activities of daily life. They had their source in society where men learned to cooperate for the common good and in knowledge which functioned not in divination and speculation but in agriculture and government. If calamities were due to man's conduct, so also were prosperity and social order. Man, although evil, had the capacity to live in society, to know, and to work; with them he could make the tao that was "the way of justice."[2]

While the philosophers discoursed on the affairs of state, other men dealt with them and in time declared their philosophy. As practical persons, required to take action instead of talk about it, they justified political innovation and set themselves the problem of discovering the principle of action suitable to their time. In contrast to the Confucian *li* they proposed a rigid body of severe laws and fixed their goal as the development of state power—*shih*. To achieve this end they did not hesitate either to abandon old practices or to enforce new ones. Law codes first appeared in China about the middle of the sixth century B.C., and a little later the men who taught doctrines making law the means and power the objective of political action came to be known as the "Legalists" or the "School of Law."

[1] See I. A. Richards, *Mencius on the Mind; experiments in multiple definition* (1932).

[2] See H. H. Dubs, *Hsüntze . . . the Moulder of Ancient Confucianism* (1927); H. H. Dubs, *The Works of Hsüntze . . . translated from the Chinese with notes* (1928).

The chief literary remains of the early development of the Legalist philosophy is *The Book of Lord Shang*, said to have been written by Wei Yang (d. *ca.* 338 B.C.), who found an opportunity to put the philosophy into practice in the state of Ch'in.[1] "A state which loves talking," he said, "is soon dismembered." His realism was harsh, his objectivity clear:

> A country that has no strength and that practices knowledge and cleverness, will certainly perish, but a fearful people, stimulated by penalties, will become brave, and a brave people, encouraged by rewards, will fight to the death. . . . If the poor are encouraged by rewards, they will become rich and if penalties are applied to the rich, they will become poor. When in administrating a country one succeeds in making the poor rich and the rich poor, then the country will have much strength, and this being the case, it will attain supremacy.
>
> A strong country knows thirteen figures: the number of granaries within its borders, the number of able-bodied men and of women, the number of old and of weak people, the number of officials and of officers, the number of those making a livelihood by talking, the number of useful people, the number of horses and of oxen, the quantity of fodder and of straw.[2]

Ten great evils—rites, music, poetry, history, virtue, moral culture, filial piety, brotherly duty, integrity, and sophistry—weakened the state. Where they prevailed, the king could not find fighting men. The remedy for these evils was a stern legal code, sternly enforced. And before this law all men were equal, at least in obedience. The formulation and the enforcement of law were, therefore, the basis of order and power; and only they mattered—economic well-being could be left to nature and men's natural desire for wealth. To prevent disorder it was necessary to suppress the scholars who talked; to maintain order it was desirable to reward merit, as well as to punish disobedience. The state prospered most which used superior men to control inferior men, and they succeeded more by exploiting weaknesses than by inculcating duties.

The realism of the Legalists was given its clearest expression by Han Fei Tzŭ (d. *ca.* 233 B.C.), who, although an efficient servant of Ch'in, was forced by its king to commit suicide. To the Confucianists Han Fei Tzŭ argued that tradition was unknowable. To the Moists he protested that the people did not know what is

[1] See p. 799.

[2] J. L. L. Dayvendak, *The Book of Lord Shang: A Classic of the Chinese School of the Law* (1928), p. 200 *et passim*.

good for them. To the Taoists he said that Heaven was silent. The basis of order was, indeed, the "learned man," but he was educated to deal with practical affairs as they are among men. Han Fei Tzŭ's conception of the learned man and his knowledge may be read in the following passages.

The learned men of the present age, when they speak on the political order, mostly say: "Give land to the poor and the destitute, and thereby provide men with no property with enough." . . . Extravagant and lazy persons are poor; diligent and frugal persons are rich. Now, if the sovereign levies money from the rich in order to distribute alms among the poor, it means that he robs the diligent and frugal and rewards the extravagant and lazy. Naturally, if he desires to make the people speed up their work and restrain their expenditure, he finds it impossible.

* * * * *

Indeed, the sage, in ruling the state, does not count on people's doing him good, but utilizes their inability to do him wrong. If he counts people's doing him good, within the boundary there will never be enough such persons to count by tens. But if he utilizes people's inability to do him wrong, an entire state can be regulated. Therefore, the administrator of the state affairs ought to consider the many, but disregard the few. Hence his devotion not to moralism but to legalism.

* * * * *

Now, the sovereign urges the tillage of rice fields and the cultivation of grassy lands on purpose to increase the production of the people, but they think the sovereign cruel. To perfect penalties and increase punishments is to repress wickedness, but they think the sovereign is severe. Again, he levies taxes in cash and in grain to fill up the granaries and treasuries, in order thereby to relieve famine and drought and provide for the crops and battalions of the army, but they think the sovereign is greedy. Finally, he traces out every culprit within the boundary, discriminates among men without personal favoritism . . . , and unites his forces for fierce struggles in order to take his enemies captive; but they think the sovereign is violent. These four measures are methods to attain order and maintain peace, but the people do not know that they ought to rejoice in them.[1]

Power, therefore, was the objective of political policy, and its exercise in ordering and enforcing laws was the primary function of government. The laws were the only literature, and the officials were the only teachers. The people were ignorant, and they were better off when left that way. They were to be led, not followed;

[1] Han Fei Tzŭ, "Learned Celebrities: A criticism of Confucius and Moists," translated by W. K. Lias. *The Harvard Journal of Asiatic Studies*, Vol. 3 (1938), pp. 161–171.

the stupid, the virtuous, and the obedient, as well as the wicked, were to be given their proper places. And the officials were to be ever ready to adopt new methods; history taught no eternal truth and established no unalterable regime. "A wise man does not expect to follow ancient ways, nor to set principles for all time." He studied the conditions of his own age, and then devised the means to serve them. Opportunism in the service of power was both the doctrine and the practice of the Legalist. Craft, guile, intimidation, and murder were proper methods for the advancement of power. Humane considerations and moral principles were useless, and to take them into account was to become weak. The well-being of the people could be left safely to the action of nature and the play of human cupidity. The people were fit only to be subjects, and only those who knew how to use power were fit to rule. The Legalists, harsh though they were in methods, looked forward to a great age that would come with right leadership.

The Wordly Outlook of Early Chinese Thought.

Two fundamental attitudes permeated early Chinese thought: (1) it was secular, *i.e.*, concerned with human affairs on earth, and (2) it was utilitarian, *i.e.*, judgment was rendered on institutions and theories as they affected or seemed likely to affect some desirable service to men. From tradition the philosophers drew principles which offered social well-being. Individual effort and achievement were deemed worth while only as they served this well-being. Finally, since Heaven had instructed the ancestors, tradition had a divine sanction, and its perpetuation was not only a supremely useful but also a supremely necessary work. Like other men, however, the Chinese disagreed on the methods of attaining their goal, and, like them too, they found the resort to tradition more a way of perpetuating ancient wrong than of achieving the future good. The cynical practicality of the Legalists prevailed:

> Those who cannot be accused of some crime, are assassinated by private swords.

Chapter IX

THE FOUNDATIONS OF EUROPEAN URBAN CULTURES

Europe was at the periphery instead of the center of racial and cultural developments throughout the stone ages and ancient-oriental times. Prehistory and history alike testify that its peoples and cultures were originally Asiatic and, in a lesser degree, African. However, after the breakup of the ice sheet, the peoples and cultures, which intermittently received new elements from the east and southeast, entered into a process of blending that ultimately produced the way of life correctly called "European." The rise of urban cultures in Europe was the culmination of the preliterate phase of this diffusion and blending.

THE GEOGRAPHICAL BASIS OF EUROPEAN CULTURES

If Europe was not at the center but at the periphery of cultural development in these early times, its geographical features should be viewed in the perspective of those people who were coming to it from the east and southeast.

When approached from these directions, Europe was a series of peninsulas reached by sea, except in the extreme east, where the crossing of the narrow straits of the Bosporus and the Hellespont could be made into the Balkan lands. Along the southern coast were islands, which became bases for working inland, and seas, which led toward the heart of the continent. But, however approached from the east and south, the northern, western, and central parts of the continent were difficult to reach, for they were shut off by the western sections of the Eurasian mountain backbone, especially the Alpine mountain system. Beyond it were lower ranges, plateaus, and broken hill lands, and still farther west and north, were the Atlantic coastal plain and the northern European plain which extends across Germany and Poland into

the broad continental plains of central and southern Russia. The Black Sea and the Carpathian Mountains closed central Europe to an easy approach from the east except at a few points.[1]

Most important among these points was the lower valley of the Danube River, which led into the heart of central Europe. Movement up the valley reached the Hungarian plain, from which in turn access to the Bohemian plain was easy; beyond the Hungarian plain the Danube valley crosses southern Germany, and from it over relatively low divides it was possible to reach the valleys of the Elbe, the Main, and the Rhine rivers. From the upper Rhine valley the way to the headwater areas of the Rhone and Saone rivers was not too difficult; these areas were also reached from the western Mediterranean Sea by routes up the river valleys. More difficult but possible routes into central Europe, at least after the opening of the second millennium B.C., led from the Adriatic Sea and Po valley over the Alps, first by the Brenner Pass and then by other passes farther west. From the Aegean Sea a route up the Vardar valley descended into the upper end of the lower Danube valley, from which, of course, the various parts of central Europe were reached. Another route to western and northern Europe followed the Atlantic coast line from Portugal. Eastern Europe was easily accessible from the south by the Black Sea and from the east by steppes and plains. Influences from the eastern Mediterranean lands, therefore, tended to move up the river valleys, while Asiatic influences followed the plains to the lower Danube valley and around the Carpathian Mountains.

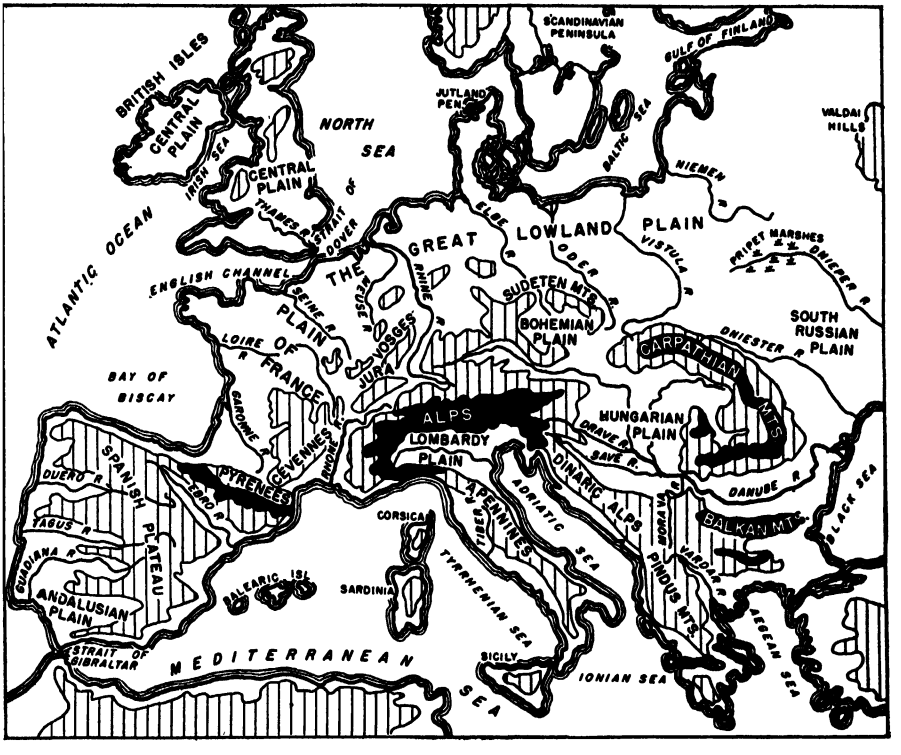
The areas penetrated or reached by these routes fell into three broad regions.

South of the Pyrenees, the Alpine ridges, and the lower Danube valley were the Mediterranean lands—Greece, Italy, southern France, and Spain—with a great variety of terrains and soils and a subtropical climate. Separated by seas and mountains they, like the islands of the Mediterranean Sea, became the homes of local cultures, which the development of social intercourse by sea tended to blend and unify.

[1] On the geography of Europe see Samuel Van Valkenburg and Ellsworth Huntington, *Europe* (1935), especially Part I, "Europe as a Whole"; L. W. Lyde, *Peninsular Europe* (1931); W. E. East, *An Historical Geography of Europe* (1935); H. J. Fleure, "The Bearing of Changes of Climate on History," *Bulletin of the John Rylands Library, Manchester*, Vol. 19 (1935), pp. 373–387.

On the Mediterranean Basin see Marion I. Newbegin, *The Mediterranean Lands: An introductory study in human and historical geography* (1924); Ellen C. Semple, *The Geography of the Mediterranean Basin: Its relation to ancient history* (1931).

WESTERN EUROPE



North of the Pyrenees and the Alps, stretching inland across the British Isles, France, and Germany, is the Atlantic region, mostly plains and low mountainous areas, which, warmed and watered by moist air currents, enjoys a temperate climate. Originally, except in dune, loess, and limestone ridge areas, it was covered with heavy forests of beech and oak. Similar forests over the outliers of the Alpine system reached far southward into the Mediterranean lands. Besides the routes from the Mediterranean Sea, the decisive factor in the diffusion of settled community life over Europe was the mingling of easily tilled loess and limestone areas with dense forests which defied neolithic men and long remained inhospitable to urban men. Only as the metal industries developed were the forests bent to serve men, and this process was so slow that many of the tree-grown areas, instead of being cut over, were transformed into cultivated woodlands. After the middle of the third millennium B.C. a change toward a warmer and drier

climate thinned the forests over the Alpine and Carpathian ridges, making easier the movement from one treeless area to another, and transformed the northern European plain into a park land. The spread of peasant-village cultures over the continent coincides with this climatic trend which continued until a maximum of summer heat was reached in the period 1400–1100 B.C.

In eastern Europe a continental climate of hot summers and cold winters prevailed; a tongue of this climatic region reached westward over the Carpathian Mountains into the Hungarian plain and the lower Danube valley. But soils rather than climate gave characteristics to this great region. In the north, over the glaciated area, which it should be noted extended westward across Scandinavia and the British Isles, there were heavy forests of evergreen trees. South of these forests were the black-earth areas, the band of loess, and the spots of wind-blown soil, which although each supported a different type of growth were grasslands. Each of these areas was likely to suffer from summer drought and excessively severe winters. The shores of the Black Sea, however, were warmed by the subtropical Mediterranean climate.

Amber, a fossil resin, valued by many peoples for decoration and supposedly magical properties (because it magnetizes easily, it has the power to attract light substances), was long the most prized European material to reach the ancient-oriental lands; it was found chiefly around the Baltic coasts. But metals—the gold of Ireland and Transylvania, the copper of Spain and Slovakia, and the tin of Bohemia and Britain—also drew men from the ancient-oriental lands toward Europe, and with them went the elements of settled community life. These elements, however, were built into peasant-village cultures and, later, urban cultures by native developments which, because of the diversity of environments, were from the first different from one another. However, Mediterranean and central European developments continually affected one another, so that, regardless of the elements each received from outside sources, they were participants in a common process and moved toward a fundamental unity. However great the debt of Europe to the ancient-oriental peoples—to whom it was always a raw-material area—its cultures were independent formations.

THE DIFFUSION OF PEASANT-VILLAGE CULTURE OVER EUROPE

Outside of the Aegean area, where, as will be noted in the discussion of Greek culture, Minoan influences contributed so much

to the development of the first urban culture on the European mainland, European cultural development began in a slow diffusion of peasant-village culture. The opening phase of this diffusion extended from about the end of the fourth millennium B.C. until shortly after the beginning of the second millennium B.C. Then, as metalworking spread, European developments moved toward the creation of a more or less uniform peasant-village life over the greater part of the continent. The general elements of this peasant-village life were firmly established by the early centuries of the first millennium B.C., when the iron age in Europe began.[1]

Early Peasant-village Cultures in Europe.

About the opening of the third millennium B.C. simple peasant-village cultures appeared in various parts of eastern and southern Europe. An offshoot of the Anatolian peasant-village culture was planted in Greece and Thessaly and slowly spread into Serbia and Moldavia. Early Crete supplied Sicily and southern Italy with the rudiments of settled life. And Spain, especially Almeria on the southeast coast, became the seat of a grain-growing and pig-keeping culture derived, it seems, from Egypt. None of these cultures used copper.

The extension of peasant-village cultures from these original centers was the result not so much of native developments as of the expansion of the ancient-oriental urban culture that came with the full use of copper. The demand for this metal stimulated trade, and trade carried its use, along with other elements of settled life, to new areas.

Colonists from Anatolia spread over the Aegean islands and the mainland of Greece and began to ascend the Danube valley. The earliest site of a peasant-village culture on the Danube is at

[1] The most complete account of the foundations of European cultures is C. F. C. Hawkes, *The Prehistoric Foundations of Europe to the Mycenaean Age* (1940). Other useful works are V. Gordon Childe, *The Dawn of European Civilization* (n. ed., 1939); V. Gordon Childe, *The Danube in Prehistory* (1928); V. Gordon Childe, *The Bronze Age* (1928); Harold J. E. Peake, *The Bronze Age and the Celtic World* (1922); Georges Poisson, *Les Aryens; Etudes linguistiques, ethnologiques, et préhistoriques* (1934).

For discussions of diffusion from ancient-oriental urban culture centers to early Europe see H. J. Fleure, "Prehistoric Elements in Our Heritage," *Bulletin of the John Rylands Library, Manchester*, Vol. 18 (1934), pp. 325–376; H. J. Fleure, "The Historic City in Western and Central Europe," *Bulletin of the John Rylands Library, Manchester*, Vol. 20 (1936); pp. 312–331; V. Gordon Childe, "The Orient and Europe," *American Journal of Archaeology*, Vol. 43 (1939), pp. 10–26.

The cultural connections between the Aegean lands and the adjacent northern areas are discussed in Stanley Casson, *Macedonia, Thrace, and Illyria: Their relations to Greece from the earliest times down to the time of Philip son of Amyntas* (1926).



Photograph by Professor MILJOL M. VASSITS, *Belgrade University*

VINČA

Excavations at this early site of European peasant-village culture have uncovered two-room houses that were built of wattle and daub. One of the rooms was a kitchen with an oven. The walls were commonly decorated with ox heads modelled in clay. Since these habitations are dated later than the second city of Troy, they may not have been the earliest construction at the site.

Vinča, below Belgrade, in Jugoslavia. Its carriers tilled the soil with a stone hoe shaped like a shoe last, lived in huts built over shallow pits, kept cattle, sheep, and swine, cultivated a kind of wheat, made a good grade of painted pottery, and possessed copper beads. From the lower Danube valley this food-producing culture spread to Istria, Bosnia, and Macedonia, and somewhat later a related culture developed on the loess lands of Moravia. There its carriers, who are known as the Danubians, kept Asiatic varieties of the pig and sheep and a European variety of cattle. Their pit dwellings were not grouped in permanent settlements. After the middle of the third millennium B.C., when the drier and warmer climate thinned the forests, this culture, in various forms, spread to Galicia, Bohemia, Silesia, Thuringia, the Rhineland, Belgium, and northern France. Its chief contributions to the development of European peasant life, besides the crafts, were the diffusion of the

domestic animals and the adaptation of the cereals, wheat and barley, which did not grow wild north of the Balkan mountains, to the environments of central and western Europe. Between 2500 and 2200 B.C. in the area from Saxony to Serbia, especially on the Hungarian plain, permanent villages grew up, the use of copper increased, and agriculture, trade, and warfare were combined in the active pursuit of wealth. This culture, known as the Theiss, opened the full copper age in Europe. After 2200 B.C. when Anatolian enterprise began to exploit the gold deposits of Transylvania and when the tin of Bohemia and the copper of Slovakia first found their way to the southern markets, trade with the Aegean lands expanded rapidly. At first the trade in metals seems to have affected the basic agricultural population of central Europe very little.

Although the Danubian culture—the prime factor in establishing settled community life from the lower Danube valley to the lands about the lower Rhine—was a native development, it was continuously influenced by the Aegean lands and Anatolia. Vinča, it has been suggested, may have been a colony of the great second city of Troy, and later sites show many affinities with Aegean and Anatolian cultures. Sumerian, not Egyptian, materials were ultimately at the base of the first peasant-village culture of central Europe, which, in fact, may be regarded as an offshoot of the earliest copper-using culture found at Tepe Gawra.[1]

In eastern Europe a peasant-village culture spread westward from the Caucasus Mountains across the south Russian plain, where its chief centers developed on the black-earth soils of the middle Dnieper valley. Its western extension reached into Transylvania and northward along the Carpathian foothills. Although the Tripolje culture, as it is called, possessed painted pottery, there is little evidence that it was linked with the painted pottery culture of either Asia Minor or central Asia. Its metalworking, however, was derived from an eastern source. The significance of the Tripolje culture in the general development of European life is not clear.

In the central and western Mediterranean areas the development of peasant-village culture was less extensive than in central and southeastern Europe. In Spain Egyptian and Cretan influences

[1] See V. Gordon Childe, "The Orient and Europe," *American Journal of Archaeology*, Vol. 43 (1939), p. 16: "A veritable cultural continuum traversing the Balkans connects the Aegean coasts with the Danube basin." See article "Archaeology" by the same author in 1939 *Britannica Book of the Year* for a brief statement about the spread of culture from ancient-oriental lands across Asia Minor and Greece to Europe.

produced the first full neolithic culture—the Almerian—about 2700 B.C.; it spread into southern France and the Rhone valley in the two succeeding centuries. From contacts between this neolithic culture and the mesolithic forest culture of the western Alpine area sprang, about 2500 B.C., the lake-dwelling culture. Shortly after the middle of the third millennium B.C. the Danubian and lake-dwelling cultures were in contact in southern Germany. In these same centuries Aegean influence worked northward across Italy, Sardinia, and Corsica. As in southeastern Europe, the dynamic factor in both the development and the diffusion of peasant-village culture in western Europe was the trade in metals.

THE PEASANT-VILLAGE BASE OF EUROPEAN URBAN CULTURES.

During the second millennium B.C. the expansion of trade, the search for raw materials, the pressure of the growing population on the land, migrations, and warfare contributed to the establishment of peasant-village cultures in all parts of Europe; as in the preceding period some areas were more important than others, but all shared in the advance.

1. *The Coming of New Peoples to Central and Western Europe.* In the course of the movements which brought the Indo-European peoples into the ancient-oriental lands, new peoples penetrated Europe at various points.

From the east, across the Russian plains, came invaders, known from their pottery as the "corded-ware people" and from their distinctive weapon—a shaft-hole ax-adze—as the "battle-ax people." Probably they are best designated the "warrior people," for they made their way into eastern and central Europe as conquerors and wherever they settled they gave rise to a class of fighting men. They pushed into Poland, Galicia, and Silesia, and from these lands they spread, on the one hand, across the north European plain to Jutland and Scandinavia and, on the other hand, to Bohemia, Bavaria, Thuringia, and, ultimately, somewhat farther west. The main period of their movements extended from about 2100 to 1700 B.C. Representatives who reached Thessaly and northern Greece—known later as the Achaians—have been called the "first Greeks." They brought the wagon and the plow, a knowledge of metals (somewhat in advance of that possessed by the peoples they encountered in central Europe), cattle, the sheep, the dog, and the horse. The horse was used for draft purposes, not for riding. They were an active, well-armed people, probably speaking an Indo-European language, who made their way easily

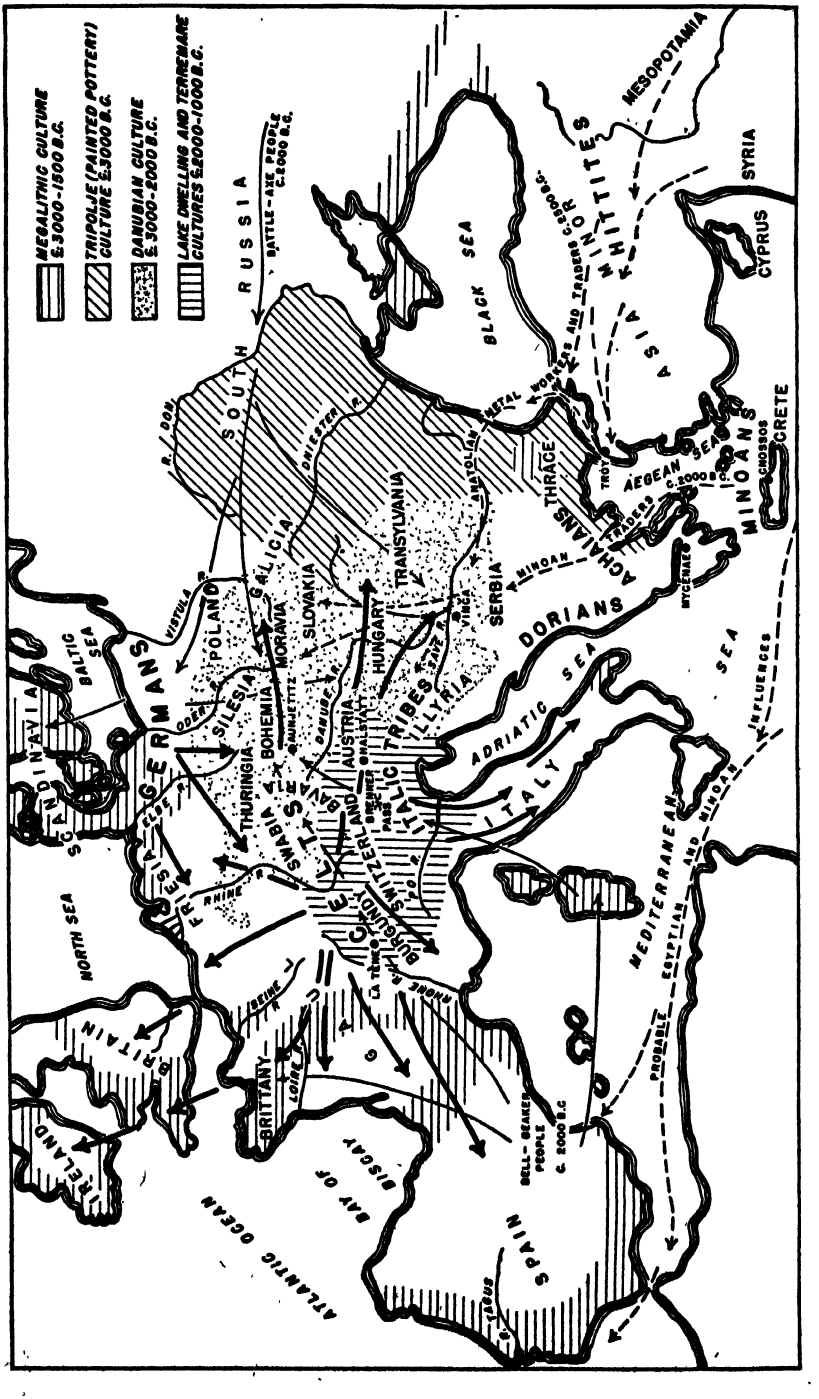
among the older Danubian peasantry. The Danubians, it is now conjectured, may also have been an Indo-European-speaking people.[1] With the coming of the warrior people the Nordic race became prominent in the population of northern Europe.

From central Spain a people known from a style of pots as the "bell-beaker people" crossed southern France into the upper Rhone valley and came, by way of Sardinia and northern Italy through the Brenner Pass, to Bavaria, Thuringia, Moravia, and Silesia. Probably they began to cross the Brenner Pass as early as 2000 B.C.; two centuries later they had spread down the Rhine valley and entered Britain. From central Spain, where they had acquired many elements of eastern Mediterranean cultures, they carried metallurgy to the Alpine, upper Danube, and upper Rhine areas. They possessed a well-developed agriculture and built substantial villages. In England they settled on chalky uplands and built circular villages of round huts. In the Alpine area they mixed with the early lake dwellers. In Thuringia they fused with the warrior people, and in Moravia with the Danubians.

About the time when the movements of the battle ax and the bell-beaker peoples were at their height, a third metal-using culture attained a wide extension along the western coasts of Europe, from Portugal to Scandinavia, and in Ireland and Britain. Because its chief monuments are the dolmen, *i.e.*, a group of rough stone pillars capped with large slabs, the cromlech, *i.e.*, a circle of giant monolithic pillars, like Stonehenge in England, and the menhir, *i.e.*, a rough monolithic pillar, it is known as the megalithic culture. Probably the elements of this culture, derived from early Egypt, were transmitted to Atlantic Europe partly by sea and partly overland across southern France. Although its makers were farmers, it developed mainly in areas open to trade by sea. In this connection, it may be noted that megalithic monuments similar to those of Atlantic Europe are found around the coasts of the Mediterranean lands and in southern Asiatic areas. In Atlantic Europe, where this culture laid the foundations of settled community life, it persisted long after the opening of the second millennium B.C. Recently it has been suggested that the concern for the dead evidenced by the great stone monuments entered deeply into the mentality of western European peoples.

1. *The Rise and Spread of Bronze-using Peasant-village Cultures in Europe.* To southeastern Europe and the Danube valley, especially in Hungary, in the early centuries of the second millen-

[1] See map, p. 223.


EARLY EUROPEAN CULTURES AND PEOPLES
MEGALITHIC CULTURE c.3000-1500 B.C.
TRIPOLJE (PAINTED POTTERY) CULTURE c.3000 B.C.
DANUBIAN CULTURE c.3000-2000 B.C.
LAKE DWELLING AND TERRENARE CULTURES c.2000-1000 B.C.
BATTLE-AXE PEOPLE c.2000 B.C.
BELL-BEAKER PEOPLE c.2000 B.C.
RUSSIA
SOUTH
BALTIC SEA
NORTH SEA
ATLANTIC OCEAN
BAY OF BISCAY
BLACK SEA
AEGEAN SEA
MEDITERRANEAN SEA
ADRIATIC SEA
SCANDINAVIA
IRELAND
BRITAIN
BRITTANY
GERMANS
POLAND
SILESIA
BOHEMIA
MORAVIA
SLOVAKIA
AUSTRIA
HUNGARY
TRANSYLVANIA
SWABIA
THURINGIA
SWITZERLAND
ITALIC TRIBES
ILLYRIA
SERBIA
ITALY
DORIANS
ACHAEANS
MINOANS
CRETE
KNOSSOS
MYCENAE
TROY
THRACE
HITTITES
ASIA MINOR
SYRIA
CYPRUS
MESOPOTAMIA
SPAIN
PYRENEES
ALPS
RHINE R.
DANUBE R.
VISTULA R.
ODER R.
ELBE R.
DNIESTER R.
DON R.
TRADERS
METAL WORKERS AND TRADERS C.1500 B.C.
PROBABLE EGYPTIAN AND MINOAN INFLUENCES

nium B.C. came a stream of miners and smiths from the Aegean and Anatolian areas. As long as the markets for tin and copper were open in their homelands, they produced for export; when, however, communications with these markets were interrupted by the movements of the Indo-European peoples toward the centers of ancient-oriental urban cultures, they began to find local outlets for their products. Thus arose the first bronze-working culture of central Europe—the Aunjetitz, named from a site near Prague. Based on Bohemian tin and Slovakian copper, it spread through Silesia, Saxony, Bohemia, and Moravia. Its makers, more native than newcomers, blended the Aegean and Anatolian metalworking techniques with the methods of the bell-beaker and warrior peoples. They borrowed the agriculture of the Danubians. Commercial expansion accompanied the rise of the bronze industry. With the opening of the Brenner Pass across the Alps, the trade of the western Mediterranean lands was diverted to the central European routes; as a result, bronze-working cultures appeared in Atlantic Europe only in the areas where tin and copper were closely associated, such as northern Spain, Brittany, and England. Another minor bronze-using culture developed around the western outliers of the Alps. The economic counterweight of the Aunjetitz culture, which controlled the new routes, especially for amber, between northern Europe and the Mediterranean Sea, was Minoan commerce. Both were at their height in the period 1700–1600 B.C.

From the Aunjetitz culture sprang bronze-using cultures throughout central Europe. In Bavaria, Thuringia, and upper Austria a pastoral and warlike people, probably a fusion of the bell-beaker and battle-ax folk, spread through heaths and park lands, ruling, it may be believed, the remnants of the old Danubian peasantry. Under the pressure of drought they pushed along the northern slopes of the Alpine system from central France to Bosnia and over the Rhineland. The chief innovation of this culture was, it seems, the socketed bronze ax. Another bronze-working culture arose in Hungary, where Anatolian influences were strong. At its base was the old settled population; its rulers were warriors who first carried the leaf-shaped sword—a weapon for slashing—into battle. This blade was elaborated from the Minoan rapier. About a century after the middle of the second millennium B.C. these two bronze-working cultures coalesced, and their bearers, armed with the socketed ax, the socketed spear, and the slashing sword,

spread rapidly in all directions. A little later they carried a fully developed bronze-working industry to Jutland and Scandinavia. About 1250 B.C. they reached the Aegean lands. At the same time they worked westward, occupying Switzerland and the eastern half of France, and about the opening of the first millennium B.C. they crossed from the lower Rhine valley to England. Partly by trade and partly by fighting these warrior-farmers established a generally uniform culture over the greater part of Europe—from the Baltic to the Adriatic Sea and from central France to the edges of the south Russian plain. They knew well the advantage of controlling good lands, ore-bearing areas, and trade routes. Their villages consisted mainly of log cabins not unlike the habitations of many early American settlers.

By 1200 B.C. the European peoples were in a turmoil. The growth of population, which accompanied the increase of wealth that metal tools and implements made possible, impelled a bitter struggle for the fertile valleys of central Europe. Before the eleventh century B.C. drought sometimes caused the inhabitants of the highlands to move; after that century the return of a moister climate pushed the forests into the arable lands. At the same time an active quest for gold went on, and trade, disrupted by the collapse of the old Aegean urban culture, sought new routes. This circumstance sent the Phoenicians to the western Mediterranean and Atlantic coasts. Sometime also in the last two centuries of the second millennium B.C. ironworking began in southeastern Europe, and farther west the bit for controlling the horse came into use. With it the forerunners of the European knights began to ride to battle and lord it over less well-armed neighbors. Thus Europe became a land of peasants, herdsmen, smiths, miners, and traders, all of whom, it may be believed, turned their hands to fighting without much provocation. Weapons are especially prominent among the artifacts of the age. The peasants held the fertile valleys, the herdsmen the uplands, and the smiths and metalworkers the mountainous ore-bearing areas. Except for wandering hunting peoples the great forests were largely uninhabited. The warfare, as well as the trade, spread innovations among these peoples, and to them came, through a growing commerce with Mediterranean lands, a stream of new cultural materials. Trade, however, had not developed to the point of creating towns.

It is worth noting that throughout these developments the European peoples never passed under the military domination of Mediterranean nations, and after 1200 B.C. a superiority in weapons

opened the way for the successful invasion of the Mediterranean lands.

THE BEGINNINGS OF THE GREEK CULTURAL TRADITION

In the Aegean Basin, invading Indo-European peoples developed a continental urban culture on a Minoan base. In the western Mediterranean region migrants from the ancient-oriental urban areas or native peasant villagers, who received many materials from these lands, created the first urban cultures. In both areas, it is important to note, urban cultures, although resting on an agricultural economy, were greatly affected by the growth of trade and the use of money. Both of these factors were more influential in Europe and at an earlier date than in Persia, India, and China. Probably this circumstance was largely due to geographical factors which also made possible a more continuous communication between urban centers than was possible in Asia. The sea was a far more important factor in the development of Western than of Eastern urban cultures, and the Greeks, whose achievements became the core of the Western cultural tradition, fell deeply under its influence.[1]

The Formation of the Greek People.

It is now clear that the Greeks were not mere invaders of the Aegean Basin; rather, it seems that they were evolved within its confines between the fifteenth and the eight century B.C. and that,

[1] For the general history of the Greek people and their culture see J. B. Bury, *A History of Greece to the Death of Alexander the Great* (1937); H. B. Cotterill, *Ancient Greece: A sketch of its art, literature, and philosophy viewed in connection with its external history* (1913); M. I. Rostovtzeff, *A History of the Ancient World*, Vol. 1, *The Orient and Greece* (1926); Leonard Whitbley, editor, *A Companion to Greek Studies* (4th ed., rev., 1931); Gustave Glotz, *Histoire grecque* (1931); H. Francotte, *Histoire politique de la grèce ancienne* (1922); P. Roussel, *La Grèce et l'orient des guerres mèdiques à la conquête romaine* (1928); H. Berve, *Griechische Geschichte* (2 vols., 1931–1933); *The Cambridge Ancient History*, Vol. 4, *The Persian Empire and the West* (1930), and Vol. 5, *Athens, 478–401 B.C.* (1935).

The extensive treatments of Greek history are Julius Beloch, *Griechische Geschichte* (4 vols., 2d ed., 1912–1927); Ernst Curtius, *The History of Greece* (trans. from the German, 5 vols., 1892); Victor Duruy, *History of Greece and of the Greek People from the Earliest Times to the Roman conquest* (trans. from the French, 4 vols., in 8, 1895); George Grote, *A History of Greece* (12 vols., 1906). This classic English work on Greece, written in the middle of the nineteenth century by an English liberal politician, has been responsible for some of the basic misconceptions of Greek history and culture.

On the archaeological evidences for the developments of Greek culture see A. Petrie, *An Introduction to Greek History, Antiquities, and Literature* (1932); Charles Picard, *Manuel d'archéologie grecque* (1935); John Gennadius, *Recent Archeological Excavations in Greece . . .* (1898); C. V. Daremberg, *Dictionnaire des antiquités grecques et romaines* (5 vols. in 10, 1877–1919).

although certain Indo-European tribes played leading roles in this evolution, the true Greeks, *i.e.*, the creators of Hellenic culture, were a mixed people. The term "Hellenic" is derived from "Hellenes," the name the Greeks gave to themselves. Originally it was the name of the tribe in Thessaly ruled by Achilles. The name "Greek," on the other hand, is derived from a Latinization of the tribal name of the Graeci, who once lived in northwestern Greece; it was introduced into Greece in the time of Aristotle.[1]

When the first Indo-Europeans reached the Aegean Basin is not known. But whenever it was, they found about its coasts a mixed culture, derived partly from Crete and partly from Asia Minor, especially the second Troy. After 1700 B.C., when the Minoans built their first outposts on the European mainland, a peasant-village culture based on the cereals, the vine, and the olive spread over the Peloponnesus, central Greece, and around the coasts of Thessaly and Macedonia; it was the economic foundation of all subsequent cultural developments in Greece. Sometime after the middle of the second millennium B.C. native movements weakened Minoan control, and the Achaians, now commonly recognized as the first Indo-European rulers of Greece, seized and plundered the Minoan cities, which, after mastering Minoan architectural techniques, they rebuilt. Present opinion inclines to the view that the Achaians came first to Thessaly and then moved to other parts of Greece. Their military success was due, it seems, to a superior bronze armor. They came in scattered groups—war bands—and lived as such even after they adopted urban life. Mycenae, the greatest Achaian city of the period 1400–1200 B.C. and its contemporaries, Tiryns and Orchomenos, were little more than fortresses from which raids were made on both land and sea. They were, it must be recognized, the first urban culture centers developed by Europeans. Notable among the elements of this culture was the megaron style of construction—a rectangular building with a gabled roof and, on one of the short sides, a pillared porch—which much later became the distinctive pattern of Greek architecture. Recent archaeological discoveries indicate that Athens was an important secondary site of this culture and that Minoan writing, which was more widely diffused than previously supposed, as well as Minoan technological and artistic materials, was organized in its patterns. In the course of time, too, the Achaians and the natives

[1] On the formation of the Greek people see H. R. Hall, *The Ancient History of the Near East* (9th rev. ed., 1936); A. Jardè, *The Formation of the Greek People* (1926); and J. L. Myres, *Who Were the Greeks?* (1930), especially "Epilogue," pp. 531–539.

fused in a population Mediterranean in type but speaking an Indo-European language.

At the end of the thirteenth century B.C., when the second wave of Indo-Europeans struck the ancient-oriental lands, new invaders pressed into Greece; they were Dorians, probably from Illyria, who from the eleventh to the eighth century B.C. occupied central Greece, the Peloponnesus, Crete, and Rhodes. Apparently they were related to the Achaians, and some of their tribes may have had Achaian kings. Like the Achaians, too, they came in scattered war bands, and their success was due to superior armament. Their iron weapons, it may be believed, were derived from the earliest ironworking culture in central Europe. Before their advance the Achaians and the native peoples with whom they had mixed crowded eastward into Attica, Euboea, and Thessaly, where they separated into two divisions. Across the northern Aegean Basin and in northwestern Asia Minor they became the Aeolian Greeks. Across the middle Aegean from Attica to Chios and Samos and the neighboring coast of Asia Minor they became the Ionian Greeks. They seized the coastal cities of Asia Minor, killed their rulers, and took possession of their women, lands, and subject populations. This mixing of the Achaians, already mingled Indo-European and native stocks, with Asiatic peoples, produced the Ionian Greek, who became the chief creator of Hellenic culture. By the opening of the eighth century B.C., when something like order returned to the Aegean lands, the Greek people—in three divisions, the Dorians, the Aeolians, and the Ionians—and their chief cities—Sparta, Corinth, Argos, Megara, Athens, Thebes, Ephesus, and Miletus—had appeared.

This period of confusion is sometimes termed the "Greek Dark Ages." It was, of course, only a local phase of the general disorganization in ancient-oriental and eastern Mediterranean lands which began with the appearance of the Phrygians, "peoples of the sea," Medes, Persians, and others; the disappearance of Minoan culture, the overthrow of Homer's Troy, and the displacement of the Achaians by Dorians in many parts of Greece were merely separate aspects of the chaos. However, the chaos was itself the milieu of developments which, in turn, were the base of Greek culture: (1) the breeding of the classical Greek physical type and (2) the assimilation of diverse cultural elements into the tradition which that type carried and elaborated in classical Greek culture. This type and its tradition are met first in the Homeric poems, the *Iliad* and the *Odyssey*, which had their setting in this age.

THE SOCIAL AND POLITICAL DEVELOPMENT OF GREEK CULTURE.

Greek culture owed its distinctive qualities to an evolution in which social, economic, and political factors produced a milieu favorable for artistic and intellectual developments more naturalistic and humanistic than those which the ancient-oriental urban cultures had produced. This peculiar milieu existed in the *polis*, the Greek city-state, which in spite of social and economic developments after the eighth century B.C., never lost the character it developed in the preceding centuries.

1. *The Origin of the Greek City-State.* The Greek polis, it must be emphasized, was a product of warfare. Its founders were warriors, organized in clans and tribes, who as an armed minority erected a fortress, from which they exercised power over a peasant population or made plundering expeditions at sea.[1] At the outset the members of these war bands were equals, and their kings were never much more than kings among equals. The fortress cities were perhaps an adaptation of the Minoan palace-temple and Anatolian walls to the mode of life of these bands. Beneath the fortress—*acropolis*, or "high town," so named because it was always built on a hilltop—there grew up a "low town" where the peasants who needed protection or wandering traders who brought goods from afar gathered. The residents of the "low town" carried on economic activities that supported themselves and contributed something to the maintenance of the warriors of the "high town." Of course, they were not members of the "city." Membership in the warrior group was based on descent. This original pattern of the polis was established by the Achaians.

The confusion at the close of the second millennium B.C. favored the development of the polis. The Dorians, who also came as war bands, took it over from the Achaians. For the land it became a center of government over a dependent agricultural area, where, as property developed, the members of the tribes acquired estates. For the sea it was first a center of piracy and later a port to which, in order to obtain food, timber, and other necessities and to raise revenue by taxing trade, the rulers tried to draw or force the flow of commerce. In either case, it should be noted, the ruling group drew economic support from an agriculture or a trade carried on by others. In this circumstance was perpetuated the

[1] On the city-state see article "City-State" in the *Encyclopaedia of the Social Sciences.* See also Gustave Glotz, *The Greek City and Its Institutions* (1929); W. R. Halliday, *The Growth of the City State: Lectures on Greek and Roman history* (1923).

warrior-conquerors' attitude toward economic and political activity. Work was beneath them; political activity, which should provide support, was exclusively their calling. Each polis was independent of all others; in fact, the normal relation among them was a state of warfare.

The Homeric poems afford the first documentary view of the social order of which the polis was the unit. The warrior aristocracy was sharply differentiated from the peasant-village masses. Its members owned large estates, bred horses—the basis of their military supremacy—estimated their wealth in terms of cattle and stocks of metal, and went to battle in chariots. Battles were melees of personal encounters rather than the operation of an organized army. Seafaring was a seasonal calling, still more piracy than trade. At the head of the warriors stood the king. Around him gathered the heads of families in a council. The members of the ruling tribes formed an assembly. Only members of these tribes, it should be noted, owned land; not all members of the tribe, however, held great estates, and in time the warrior group was differentiated into a nobility, the possessors of large estates, and a free peasantry, the owners of small bits of land.

Within the polis, which about the opening of the first millennium B.C. came to be regarded as the traditional political unit of Greek life, were at least three other groups: (1) craftsmen, mainly residents of the "low towns," who carried on such trades as carpentry, smithing, pottery, and leatherworking, (2) hired men, free but without land, who sold their labor for wages, and (3) slaves, at this time mainly in domestic service. The hired men were the peasant-village masses, landless and tradeless, who, having no place in the polis, suffered exploitation without any means of redress. Sometimes they were refused pay for work done, sometimes they were thrown out of their houses, and sometimes they were beaten. Except as they acquired land, usually by clearing the less productive areas, they possessed no rights in the soil. There was no permanent body of traders at this time.

Attached to the ruling group were priests, minstrels, and soothsayers, who performed rituals, uttered prophecies, worked magic, consulted omens, practiced folk medicine, sang songs, and handed down the myths and traditions of the tribes. The original Greek intellectuals, never clearly differentiated from the generality of the tribes, were little different from those of other preliterate peoples.

By the eighth century B.C., as indicated in the works of Hesiod (*ca.* 735 B.C.), the separation of the original war bands into a nobility and a free but poor peasantry was far advanced.[1] The nobles, who had become more or less grasping landlords, everywhere monopolized political power. However, because the free peasants were citizens, they were in a position to use the power of the state, if they could control it, in the service of their interest. The course of Greek political development, especially the rise of democracy, had roots in this circumstance.

2. *Economic and Social Development in Greece, 800–600 B.C.* This original pattern was complicated, however, by economic and social developments which, while leaving the polis intact, changed its social structure and, consequently, affected its political evolution.[2]

The typical Greek farmer was a "garden-cultivator," who made the most of scanty resources by intensive effort. The hoe and the spade were his chief implements; the plow, although iron-shod, was inefficient. Greek soils were generally poor, but the rainfall, conserved in limestone hills, was adequate. The subtropical climate made possible continuous cropping throughout the year. Wheat and barley grew in the winter, but the yield was always low. The summer was the season of vegetables, especially peas and lentils, main items in the daily diet. The olive, the grape, and the fig ripened in the fall. Neither the cow nor the horse was important to the ordinary farmer. In fact, in some parts of Greece, especially Attica, the grasslands were so sparse that the keeping of cattle and horses was difficult. Thessaly was the chief horse- and wheat-producing area. The goat, which turned the coarse growth of the dry hills and mountains into a subsistence for men, was the ubiquitous animal. As a low producer it symbolized well the poverty of the countryside. The pig, the ass, and the sheep also were important to the small farmer. Security at a low standard of

[1] A. R. Burn, *The World of Hesiod: A study of the Greek Middle Ages c. 900–700 B.C.* (1936), pp. 106–109: "In the eighth century, then, aristocracy rules everywhere. . . . The Greek nobles were the minority who, through the concentration of more than their share of their country's products on their hands, obtained a modest surplus of wealth and chance of leisure; and early Greek art and poetry bear witness that that wealth and that leisure were not ignobly used." By permission of Kegan Paul, Trench, Trubner & Co., Ltd., London.

[2] On the economic and social development of Greece see H. Michell, *The Economics of Ancient Greece* (1940); Johannes Hasebroek, *Griechische Wirtschafts- und Gesellschaftsgeschichte bis zur Perserzeit* (1931); Johannes Hasebroek, *Trade and Politics in Ancient Greece* (1933); Fritz M. Heichelheim, *Wirtschaftsgeschichte des Altertums vom Paläolithikum bis zur Völkerwanderung der Germanen, Slaven, und Araben* (2 vols., 1938); Gustave Glotz, *Ancient Greece at Work* (1926). See also George M. Calhoun, *The Business Life of Ancient Athens* (1926); Percy Gardner, *A History of Ancient Greek Coinage, 700–300 B.C.* (1918), Intro., pp. 1–66; A. Jardè, *Les céréales dans l'antiquité grecque* (1925).

living, not high profit, was the reward of the ordinary Greek farmer for very hard labor. He was protected in this security by the law which prohibited foreigners from owning land.

But against the Greek landowner who commanded the use of capital he had little protection. For the large-scale farmer who could afford to wait several years until olive orchards, fig groves, and vineyards would begin producing received greater returns from both land and labor than the ordinary farmer, who, driven by need, produced mainly cereals. Cattle raising and horse breeding were also forms of land use possible only to those who commanded the use of capital. The small farmer, unable to compete with such investors, either eked out a poor existence or borrowed the necessary capital for the expansion of his enterprise. In both cases the result was commonly the same; he lost his land, either by sale under pressure of need or by foreclosure, and the large-scale farmer became its possessor, for he was the only purchaser or creditor. Indeed, debt became the scourge of the countryside. In Attica its ravages were marked everywhere by stones set up to record the obligations of the peasants to their creditors. The problem of land tenure was never absent from Greek politics. Closely related to these circumstances was a situation dangerous to the food supply, for the large-scale farmer did not hesitate to send abroad commodities needed at home if he could make a profit in doing so.

The effect of these developments in agriculture, especially in those areas where expansion close by was difficult—either because of political circumstances, as at Miletus, where movement into the interior was checked by Lydia, or because of a lack of land, as on the islands of Chios and Samos or in the cities of Corinth and Megara—was to promote colonization. Indeed, in the seventh and sixth centuries B.C. they gave rise to a movement which carried the Greeks around the coasts of the Black Sea, to many points along the northern Mediterranean coasts, and to Egypt and parts of northern Africa. Because the chief factor causing emigration was the land system, the main participants in the movement were poor peasants and nobles outside favored circles. The expeditions were organized on the pattern of the traditional war bands, and their objective was the founding of new cities which would give land to the citizens, supply food to the founding city, or discover a trade which could be controlled for the profit of the colonists or the founding city. The military and political, not the commercial, motive dominated Greek colonization; the expansion of trade and

shipping, except as the latter was needed for offense and defense, was an incidental by-product of the movement.

The commercial and industrial developments which followed in the wake of the colonizing movement did not change the fundamental agrarian economy of the Greek cities. No truly industrial or commercial cities appeared. Before the opening of the fifth century B.C. a few cities favorably located for trade developed commercial and industrial enterprises, which had contacts with wide areas. The landed aristocrats, who accumulated capital, invested in such enterprises, but they did not manage them. They were carried on chiefly by foreigners, who borrowed capital from the landowners. Aegina, the first city to compete with the Phoenicians, was mainly the center of a middleman traffic; insofar as its citizens entered the traffic, they were driven to it by the poverty of the soil. Corinth, which suffered greatly from overpopulation, cleared the sea of pirates, not that its citizens might trade in safety but that foreign merchants might come easily to its markets. The trireme is said to have been a Corinthian invention. Because Miletus had contacts with the interior of Asia Minor, it became a center for the distribution of products, such as rugs, blankets, shoes, clothing, and swords. Milesian pottery also found wide markets. Athens, where foreign craftsmen found employment in trades that supplied farmers with manufactured wares, first became commercially prominent as an exporter of grain and olive oil. Naucratis, the entrepôt of Greek trade in Egypt, was originally a military foundation; it developed as a commercial center quite as much through Egyptian favor as through Greek enterprise. In the sixth century B.C. the Greeks discovered the sea route to the Atlantic Ocean and penetrated southern France, but these activities had no important immediate economic effects in the western Mediterranean region or in Greece. Massilia, now Marseille, the colony at the mouth of the Rhone, was the center from which Greek cultural influence spread inland.

The colonizing movement was a very important phase of the development of Greek culture. It opened ways of escape from established controls in old centers of settled life. New lands invited individual enterprise. The adventuring spirit of the original war bands was preserved. New products begot changed habits of life. And newly acquired knowledge of strange peoples and lands gave a wider view of the world and men. Much of the innovating spirit of Greek culture had its source in these psychological by-products of the colonizing movement.

During these developments some of the Ionian cities adopted a modified Babylonian system of weights and measures and elaborated the Lydian invention—money—into a coinage system. The basic unit was the *drachma*, a measure of value, not weight; 100 of these units was one *mina*, and 100 minae formed one *talent*. The original Greek talent was equal to what a man could carry. The technique of marking the coins passed through several stages. At first the molten metal was dropped on a form, after which punch marks were made on the upper side. In the next stage a design was cut in the form, which served then almost as a die, and the punch marks became secondary in importance. Most early Greek coins were made by this second method. Ultimately the punch was replaced with a die, so that both sides of the coin bore designs. A coinage of electrum developed in Asia Minor about 700 B.C.; its chief unit, the *stater*, was designed for circulation in international trade. About the same time Aegina issued silver coins. Corinth followed the lead of Aegina about 650 B.C., and Athens a little later. About this time also the Lydians began to coin both gold and silver. Miletus, it is said, fixed the pattern of coins, *i.e.*, incised circles with decorations on both sides. Corinth introduced the practice of marking the coins with symbols indicating their value. Greece was on a monometallic silver basis until the fourth century B.C., when Athens, after an emergency issue of gold coins in the war crisis of 406 B.C., developed a gold coinage. The most famous Greek coin was the Athenian silver "owl," a piece first struck in 561 B.C.; the name was derived from the fact that it was marked with an owl, the symbol of Athena. Sparta possessed a crude iron coinage. Money was little used, except in the main trading centers, and there most exchanges were made by barter. The Greeks never employed money in their daily economic activities as modern Western men do.[1]

However, the Greeks developed the most advanced exchange economy yet known, and with it an unprecedented ease of dealing in goods, lending money, mortgaging property, speculating for high profits, and getting into debt. But paying debts, it may be believed, became no easier. Capital attained a greater mobility than it had had in any other urban culture. Economic enterprise, except in agriculture, where the great body of citizens held fast to traditional

[1] See H. Michell, *The Economics of Greece* (1940); A. R. Burns, *Money and Monetary Policy in Early Times* (1927); Percy Gardner, *A History of Ancient Greek Coinage 700–300 B.C.* (1918); J. G. Milne, *Greek Coinage* (1931); Charles T. Seltman, *Greek Coins: A history of metallic currency and coinage down to the fall of the Hellenistic Kingdoms* (1933).

methods, was quickened, and the quest for wealth became more diversified and intense. Into this enterprise, however, the masses of the citizens did not enter, and the nobles participated mainly as creditors. Very few Greeks became merchants, industrialists, or craftsmen; these were mainly foreigners, who found in the Greek cities and colonies profitable markets. At the same time, however, the modes of participating in the profits of various kinds of enterprises were elaborated, so that the owners of capital shared the gains of the foreigners, who were generally dependent on them for funds. The development of money economy, therefore, intensified the economic and social rivalries that were characteristic of the urban social process.

Coinage, it should be noted, was diffused from the Greek trading area to the other centers of urban cultures—to Persia in the sixth century B.C., to Phoenicia and Italy in the fifth century B.C., and to Egypt and Carthage in the fourth century B.C. The appearance of Indian and Chinese coinage in the third century B.C. was also probably due to Greek influence. The Athenian owl has been found as far east as the Ganges valley.

3. *The Social Structure of the Greek City-States in the Sixth and Fifth Centuries B.C.* Although differences in social structure existed from city to city, everywhere the social groups were about the same. The fundamental cleavage was between the citizens and the cityless population.

Citizenship was commonly based on descent, and the citizens were an exclusive group, whose members possessed all real property, exercised all political rights, and performed the essential military services. They were, in fact, the state, *i.e.*, the part of the population which used force in the name of the security and well-being of the in-group; actually, they were a "military caste":

> The citizens of a Greek city—ideally, at least—belonged to a class which did not work: at home there were serfs and slaves and metics; abroad there were subject cities. This ideal was most nearly realized in imperial cities; but even where it was less fully realized it was extremely important. The body of full citizens became a 'military caste,' the city itself a 'military unit.' . . . They lived by war. They had no time for peaceful work or trade. Political responsibilities and unremitting military duties absorbed their interest and energy.[1]

Among the citizens separation of the well-to-do nobles and the rank-and-file peasants continued, with the result that the struggle

[1] Johannes Hasebroek, *Trade and Politics in Ancient Greece* (1933), p. 139. By permission of G. Bell & Sons, Ltd., London.

between them became the decisive factor in the politics of the cities. The issue was clearly defined. The poor citizens demanded the cancellation of debts, the redistribution of property, and an admission into a full participation in the government. The nobles, of course, resisted such demands and made their privileged political position the means of further exploitation. In the commercial cities the participation of the nobles in various enterprises increased their wealth, so that they, with perhaps a few merchants who bought land and retired from trade as quickly as possible, formed a plutocracy whose social criterion was "Money makes the man." These plutocracies were nowhere made up of commercial and industrial magnates whose interests were realized through exchange, production, and investment; rather, they consisted of *rentiers*, who drew wealth from the soil mainly in products to be sold in a market and from money loaned at interest; furthermore, as rulers of the state they made little distinction between its revenues and their own. On one point, at least, the plutocrats and the poor farmers agreed, namely, the state should provide for the economic needs of the citizen. The Greeks, it should be emphasized, believed and generally acted on the principle that the wealth of the state ought to be divided among the citizens.[1] This belief had roots in the ancient war band, all of whose members shared in its loot. The fundamental problem of Greek politics was how to continue such sharing when a few grew wealthy and the many became poor.

Below the citizens were a number of groups whose positions varied both economically and politically from city to city; they shared two characteristics: (1) a lack of political rights and (2) the duty of making some contribution to the support of the state. Where the Dorians ruled, as in Sparta, the native populations were reduced to serfdom. In the trading cities foreigners, or *metics*, became more and more numerous as time went on. Virtually all trade, most industry, and a large part of the traffic in money were in their hands. Many of them, of course, were craftsmen, hawkers, and workers about the docks and markets. In agricultural areas, where they could neither acquire land nor hire themselves out as laborers the metics were always few.[2] After the seventh century B.C., when slave labor was first employed in industrial production, the number of slaves constantly increased. Most of them were captives in war or the booty of raids about the Black Sea or the

[1] See H. Michell, *The Economics of Ancient Greece* (1940), p. 16.

[2] On the metics in Athens see p. 472.

Adriatic Sea or in Thrace, although Greeks defeated in war were also commonly enslaved. The armies were followed by traders who bought the captives. Slaves could own nothing and were subject to severe legal penalties for crimes against their masters. The slave was protected by law against outrageous insult. Because "the Greeks were skillful in reducing expenditure on behalf of their slaves in extraordinary proportions,"[1] it seems fair to conclude that the slaves were not too well treated. In agriculture only the large-scale farm could afford slaves. The ordinary free craftsman, commonly a metic, probably did not possess more than one or two slaves. In the fifth century B.C. gang slaves owned by contractors were hired out to persons who did not possess slaves. Domestic slaves were found only in the homes of the well to do. The cities owned slaves who cleaned roads and streets, acted as policemen and clerks, and performed many tasks that might well have been left to minor officials. That view of Greek life developed in the nineteenth century, when slavery in the Western world was disappearing, falsified the picture of slavery in Greece. Indeed, there is little reason to believe that the Greeks regarded slaves as apprentices on the way to freedom or commonly gave them their liberty. The Greeks were too poor and the slaves too expensive to permit the existence of this kindly feeling and action. In fact, slavery, which was necessary to the maintenance of Greek life, never showed the slightest tendency to disappear.

4. *The Rise of Democracy in the Greek City-States.* From these conflicting elements in the social structure issued bitter struggles which, although they did not destroy the traditional polis, greatly altered its organization.

If the source of these struggles was the rivalry between the two bodies of citizens, the nobles and the poor farmers, the primary factor operating for the success of the latter was a change in military technology which made the spearman a match for the knight on horseback. This change involved arming ordinary citizens with a lance, breastplate, thigh pieces, and a round shield—all made of heavy metal—and drilling them for combat in serried ranks. These pikemen, known as *hoplites*, first found favor at Sparta, where they proved superior to cavalry, and then spread to other cities. Thus a

[1] S. Zabrowski, "Ancient Greece and Its Slave Population," *Report of the Smithsonian Institution*, 1912, p. 600. On slavery in Greece see H. Michell, *The Economics of Ancient Greece* (1940); Alfred E. Zimmern, *The Greek Commonwealth: Politics and economics in fifth century Athens* (5th rev. ed., 1931); R. L. Sargent, *The Size of the Slave Population at Athens in the 5th and 4th Centuries B.C.* (1924).

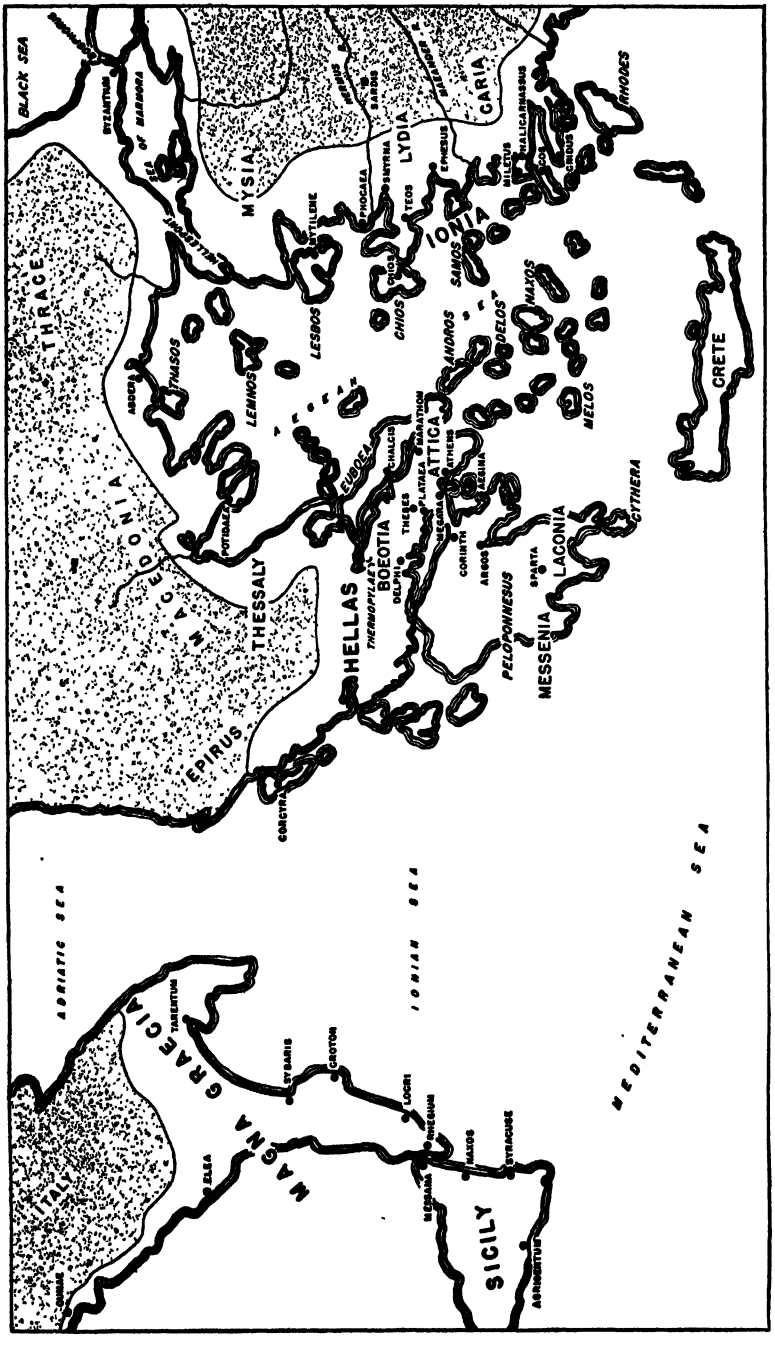
mass as opposed to a *class* army became the chief force of the state, and the political effect of the change was the rise of the whole citizenry to political power. Many of the nobles necessarily found places in the ranks of the hoplites. The support which the cities gave to the colonization movement was an early manifestation of the shift of power which this revolution in military technology impelled.[1]

Everywhere the democratic movement took different forms, and it was by no means generally successful. In a few cities the power of the nobles long survived. In other cities the large landowners and merchants drew together in tight oligarchies. In still other cities, usually where the poor citizens found leaders among the nobles or support among the traders, democracy won the day. At Athens the poor citizens were fortunate in having both this leadership and this support.

Where popular revolts raised leaders to the headship of the states, they became *tyrants*, whose arbitrary rule, although it set aside old forms of government, was hardly more arbitrary than the regimes they displaced. The struggles which produced the tyrants were bitter class conflicts, accompanied by massacres, confiscations, and banishments, generally worse in the small cities than in the large ones. In Miletus, where the oligarchs triumphed, the popular party murdered their women and children, and the oligarchs retaliated by burning their captives alive.

The virtue or crime of the tyrants, depending on the point of view, was their leadership of the people in the support of policies to ameliorate the lot of the poor citizens. Among these policies were: (1) the redistribution of land, (2) the prohibition of the introduction of new slaves, (3) the abatement of the evils of mortgaging land and enslavement for debt, (4) the construction of waterworks, walls, and temples—in other words a "public works program" for urban workers, (5) the promotion of religious festivals of national significance at the expense of the old civic ceremonies, which were identified mainly with the privileged classes, (6) a patronage of arts and letters, which drew the support of the rising literate group to the popular cause, and (7) a weakening of the traditional tribes through which the privileged classes held political power. If Greek learning and art began to flourish under the patronage of the nobility, they burst into full bloom under the rule of the tyrants. The tyrants were a factor both in the democratization of govern-

[1] See Johannes Hasebroek, *Griechische Wirtschafts- und Gesellschaftsgeschichte bis zur Perserzeit* (1931), pp. 158–189.


THE GREEK CITIES c.500 B.C.
BLACK SEA
THRACE
MYSIA
LYDIA
CARIA
IONIA
RHODES
CRETE
LESBOS
CHIOS
SAMOS
MILETUS
HALICARNASSUS
DELOS
MELOS
THASOS
LEMNOS
EUBOEA
CHALCIS
ATTICA
ATHENS
PIRAEUS
MEGARA
BOEOTIA
THEBES
PLATAEA
THERMOPYLAE
DELPHI
CORINTH
ARGOS
SPARTA
LACONIA
MESSENIA
PELOPONNESUS
CYTHERA
THESSALY
EPIRUS
MACEDONIA
POTIDAEA
ABDERA
BYZANTIUM
ITALY
SICILY
MAGNA GRAECIA
TARENTUM
SYBARIS
CROTON
LOCRI
RHEGIUM
MALTA
SYRACUSE
AGRIGENTUM
ADRIATIC SEA
IONIAN SEA
MEDITERRANEAN SEA

ments and in the opening to the main body of citizens of cultural activities long closed to ordinary men.

From the class struggles of the seventh and sixth centuries B.C. emerged finally the forms of government commonly identified with the Greek polis—aristocracy, oligarchy, tyranny, and democracy. The Greek cities never developed a uniform system of government, for no single social group ever dominated all of them. From these struggles also came a political vocabulary—"monarchy," "oligarchy," "tyranny," "democracy," and "demogoguery"—handed down in Western culture in the writings of the Greek philosophers and historians and laden with the prejudices of the bitter social strife which produced it. The main political fact which this transmission has obscured is that even in the most democratic Greek states the citizens were a minority ruling a population from which they drew at least part of their economic support. Greek democracy never faced, let alone solved, the main problem of modern democratic polities, namely, the organizing of the continuous production and distribution of wealth so that citizens shall not only participate in making the significant decisions which affect their lives but also share in the social services and the opportunities for cultural activities which such production and distribution make possible. If the Greek city was, as it has been aptly said, a "hoplite city," the function of its government was to serve the well-being of the citizens by military and political, not economic, policies. For this reason the recurrent recital of baleful predictions based on Greek precedents about present political and economic policies is largely the regurgitation of a decorative learning rather than the iteration of the wisdom of the ages.

Because the Spartan and Athenian polities were the outstanding products of Greek social and political evolution, they deserve special exposition.

The Spartan Monarchy. Sparta was founded by a band of Dorian invaders, who, during the ninth, eighth, and seventh centuries B.C. conquered the Peloponnesus, and until the middle of the seventh century B.C. its evolution was not different from that of any other Greek city. Lycurgus, the traditional founder of the Spartan constitution, was probably a warrior-prince during this early period. The peculiar polity of Sparta was not organized, however, until the seventh century B.C. when, in the course of a desperate revolt of the Messenians, whom the Spartans held in serfdom, concessions were made by the Spartan nobles to the ordinary citizens. As a result of these concessions all citizens became

equals as members of the state. Known as Spartiates, they no longer lived on private estates but in public barracks and ate in mess halls under a rigorous military discipline. Except for weapons and a few simple garments they possessed little property.

At the head of the government were two kings, who alternated in exercising the authority of the high priest and the authority of the supreme commander; actually they were quite powerless. Real power lay in the hands of five *ephors*, or overseers, who represented the five Spartan tribes; they were elected by the assembly of the Spartiates—*apella*—which passed all laws and decided all questions of war and peace. The *gerusia*—a council of elders (over sixty years of age) which included the two kings—prepared and submitted all business to the assembly. No laws were written down, and the decisions of the elders were always final.

The discipline of the ruling class began at birth, when the infant, before it was allowed to live, had to be pronounced healthy by the leaders. At the age of seven children were taken from their parents and placed in public halls. Girls were taught only the duties of motherhood. The boys were organized in companies under a leader, the *iren*, who became responsible for their conduct and education. But any Spartiate could discipline a child. The boys entered the adult halls at the age of eighteen; those who had distinguished themselves for cleverness, courage, and obedience became leaders at the age of twenty. Besides preparing their own food and beds, the boys practiced marching and gymnastics, and studied music and reading. They were encouraged to steal, but the thief who was caught was severely punished for his lack of adroitness.

As a protection against corrupting influences the Spartiates were forbidden to engage in trade, to possess any money except that made of iron, and to practice any of the arts but music. Foreign visitors were frowned upon; often they were deported.

The support of the state rested upon the labor of two disfranchised classes, the *perioikoi* and the *helots*. The perioikoi descended from the pre-Dorian inhabitants, lived around the borders of the country and carried on trade and industry. Commerce was exclusively in their hands, but the Spartan fear of luxury prevented its expansion. They worked iron mines and manufactured weapons and agricultural implements. The helots, originally captives of the wars of conquest, were serfs who tilled the allotments of the Spartiates. Each warrior drew his support from an allotment; in case he could not or did not compel the helots to produce a specified quantity of harvest, his allotment was given to another Spartiate. Ordinarily allotments descended from the father to the eldest son. Any produce beyond the fixed tribute of an allotment belonged to the helots who worked the land. But the helots were not allowed to accumulate much property, for the Spartiates kept a close watch over them. Secret agents, usually young and vigorous Spartiates,

spied upon them and murdered anyone who was disobedient or showed signs of possessing superior intelligence.

And the helots were ever ready to revolt. A little before the middle of the fifth century B.C., when an earthquake shook Sparta, they rushed into the city, hoping to take advantage of the confusion and destroy their masters. The masters, however, had met the confusion caused by the temblor with military discipline and, although surprised, were able to defend themselves. In the two years' struggle which followed, the Spartiates were unable to conquer the band of recalcitrant helots and were compelled finally to allow them to leave the country. Athenian discord over the policy to be followed toward Sparta in this social crisis so disgusted the Spartiates that an enduring animosity toward the Athenians was aroused.

The Spartan polity was organized to perpetuate the rule of a minority camped in the midst of a hostile population. By reducing the citizen to complete dependence upon the state and training him only in the skills and attitudes useful to the state, the Spartans destroyed all individual creative effort. Before the hardening of this polity, it is interesting to note, the Spartans had shown abilities for cultural activity not unlike those developed in other cities, but after the establishment of their military communism they became culturally sterile, producing no architecture, sculpture, poetry, or philosophy. To the end of its days Lacedaemon remained only a collection of straggling villages.[1]

The Athenian Democracy. The Athenian state originated as the result of the consolidation of independent peasant communities about the ancient fortified hilltop, the Acropolis of Attica. The Athenians always boasted that they, unmixed with the Dorians, had always held their land. Originally Athens was a monarchy, but shortly the government became an oligarchy controlled by a landowning aristocracy—the *Eupatridae.* They ruled through a council of elders, the *Areopagus,* which nominated magistrates, heard civil suits, and tried criminal cases; they also had a monopoly of religious functions. The mass of the people, tenants rather than serfs, had no political rights.[2]

During the seventh century B.C. the economic revolution widened the breach between nobles and their tenants. The nobles planted olive groves and speculated in lands; the tenants, confined to grain growing, fell behind in their rents and, as defaulting debtors, lost both their land and

[1] On Sparta and its government see William A. Dunning, *A History of Political Theories, Ancient and Medieval* (1931); Francois Ollier, *Xenophon: La République des Lacédémoniens* (1934); and Karl Willing, *Der Geist Spartas* (1935).

[2] On the Athenian democracy see Alfred E. Zimmern, *The Greek Commonwealth: Politics and economics in fifth century Athens* (5th rev. ed., 1931); P. Cloché, *La Civilisation athénienne* (1927); G. W. Botsford, *The Development of the Athenian Constitution* (1893); Robert J. Bonner, *Aspects of Athenian Democracy* (1933); Robert Cohen, *Athenes: Une Démocratie de sa naissance à sa mort* (1936); *The Cambridge Ancient History,* Vol. 5, *Athens,* 478–401 *B.C.* (1935); Fustel de Coulanges, *The Ancient City: A study of the religion, laws, and institutions of Greece and Rome* (4th ed., 1882).

their liberty. Under the threat of a peasant uprising Solon (*ca.* 638–558 B.C.) carried out a constitutional reorganization in *ca.* 594 B.C. With Solon the influence of a literate class entered Greek politics; later the Spartans ascribed the establishment of their constitution to Lycurgus so that they might have a rival for him.

Solon annulled all mortgages and debts for which land or person had been pledged, freed those who had been enslaved for debt, returned all lands held for back rents to their rightful owners, and limited the amount of land an individual could own. In order to protect the food supply and hold down the price of bread to the poor he forbade the export of grain; the export of oil was allowed. But he did not expropriate the well to do by confiscating estates, interfering with the money market, or fixing a maximum rate of interest. To soften the antagonism between the rich and the poor he prohibited the hiring of mourners and limited a bride to three gowns. To promote commerce he introduced the Ionian monetary standard, legislated against enslavement for debt, compelled every father to teach his son a craft, and made easier the settlement of foreigners in the city. Solon's political innovations were: (1) a new fourfold classification of citizens based strictly on wealth, (2) the admission of the lowest class of citizens to political rights—to sit in the Assembly and on juries—and (3) the creation of the Council of Four Hundred to prepare the business to be laid before the Assembly.

When citizens of the lowest class were admitted to the Assembly and the courts, they gained not only the right to help elect the magistrates but also the right to help try them in case they were charged with a breach of official duty. The executive offices, the archonships, and the judicial body, the Areopagus, were still open only to the richest citizens.

Solon's reforms embodied new principles of political organization. On the one hand they undertook to meet the demands of one class by transforming existing institutions, at the same time leaving the dominant class in its favored position. On the other hand status in terms of the ownership of wealth instead of aristocratic birth became the basis of political rights. Such a polity is known as a *timocracy*.

But these reforms failed to pacify the classes, because the development of commerce and money economy sharpened always the economic issues that separated them. When party feuds weakened the nobles, a new type of ruler, the *tyrant*, usurped the government. Pisistratus (*ca.* 605–527 B.C.) and his sons, Hippias and Hipparchus, ruled Athens from 560 to 510 B.C., except for a brief period. Pisistratus had the support of the peasants, the woodsmen, the charcoal burners, the villagers, and the craftsmen of the city. Probably more important to his ascendancy was the revolution in military technics which brought the heavy armed infantry to the fore as the chief military arm of the state. He also introduced mercenaries.

Pisistratus dealt successfully with the agrarian problem by advancing capital from state funds to the small farmers and by protecting them until

their olive trees were bearing. He also reduced the tax levy. To the urban workers he gave aid through support for pottery making. Athens began her commercial career as a result of this policy. He furthered this career by securing a hold on the Hellespont and in Macedonia, and by encouraging shipping. However, the mines which he obtained in Thrace became his own private property. He did not disturb the chief Solonic reforms, but the power of the poor citizens naturally increased because the old nobles who had been magistrates and judges so long either were weakened politically or were killed off in wars. It should be noted finally that he took care to foster the religious and patriotic feelings of his popular following.

The aristocrats, aided by a Spartan force which the oracle of Delphi had sanctioned, overthrew the sons of Pisistratus. But when the victors could not agree on the changes necessary to maintain their rule, Cleisthenes (fl. *ca.* 510–500 B.C.) originally an aristocrat, called in the poor citizens and drove the factions and foreigners from the Acropolis.

Cleisthenes followed up the victory with a far-reaching reform of the constitution, which, although allowing the old institutions to remain, destroyed their vitality. At the base of the new political structure were at least a hundred *demes* (the word "deme" originally meant village), organized on a purely territorial basis. Every Athenian citizen immediately became the hereditary member of a deme and enjoyed political rights only by virtue of that membership. Each deme was headed by an elective *demarch.* In local affairs the demes had charge of shipbuilding, the management of lands, the protection of shrines, and the administration of justice. Their chief function in the central government was to supply men for its offices.

The demes were grouped in three sections, according to locality and the occupations of the citizens: (1) the landholders, large and small, in the country, (2) the merchants and craftsmen in the city of Athens, and (3) the sailors, fishermen, and workers on the wharves; from these groups ten tribes were organized, each tribe containing demes from all three divisions, so that each tribe became a cross section of the three main groups of citizens.

Representation in the central government was based on the tribes. From candidates chosen by the demes each tribe selected by lot fifty representatives to sit in the *boule,* or Council of Five Hundred. This council was the chief administrative organ; the magistrates, including the *archons,* merely carried out its decrees. It controlled finance, made provision for the election of all officials, watched their performance of duties, dealt with foreign affairs, and prepared business for the consideration of the *ecclesia,* or *Assembly.* The activities of the council were carried on by quorums of fifty members, which held office for a tenth of a year, a new chairman presiding every day. Any citizen was eligible to sit in the council unless he had already served two years, but the council could reject any man whose moral qualifications it deemed inadequate.

The Assembly, consisting of the entire citizenry over twenty years of age, met regularly ten times a year. It dealt with "sacred," "profane," and "foreign" business. It tried cases of "impiety," "treason," and malperformance of duty. Officials charged with maladministration were fined, exiled, or executed; they were always tried before punishment was inflicted. *Ostracism* was a device to determine a choice between leaders advocating different policies. When a disagreement sufficiently wide to endanger the state arose, a popular vote was taken against the leader whose policy was considered dangerous; in case the vote was against him, he went into honorable exile for ten years.

Two boards, the *colacretae*, which supervised the internal revenues, and the *strategoi*, the commanders of the army, joined with the council in managing the affairs of the state. The members of these boards, as well as the archons, were chosen from the richer citizens because they served without pay. Each tribe selected a regiment of infantry and a squadron of cavalry from its members and chose a commander, a *strategos*, who, with associates from the other tribes, directed the conduct of wars. The board of strategoi was a real power in the state. The army was essentially a national militia. The judicial function was exercised by juries selected by lot from lists of candidates furnished by the demes. Cleisthenes widened the base of the government by restoring to the lists of citizens many whom the aristocrats had expelled and by making possible the admission of foreign residents—the metics—to citizenship.

Under this constitution, which went into effect in 502 B.C., Athens was governed by elected officials, who held their offices for only a year and always as members of a body. There were no permanent civil servants, no appointive officials, and no property qualifications for office. The citizens —all political amateurs—passed more or less in rotation through the offices of the government. Pericles (*ca.* 495–429 B.C.) introduced the practice of paying officials in order that the poor citizens might perform their duty to the state, and as a result a large part of the citizens found themselves on the state's payroll. About the same time the admission of metics to citizenship was stopped by a law which restricted citizenship to those who could trace their descent on both sides to legally married Athenians. These reforms were resisted by a conservative faction. The support for them came from a radical party whose chief element was the citizens who worked on the wharves or manned the navy. Its members, always near at hand, dominated the Assembly and the courts. By 430 B.C. over half of the citizens were concentrated in Athens and the Piraeus.

Interesting aspects of the Athenian regime were (1) the displacement of soldiers by politicians as chief functionaries of the state and (2) the maintenance of a state religion without the creation of a priest class. Religious, like political, functions were performed by citizen officials.

The social structure of the Athenian state was threefold: (1) the citizens, (2) the metics or foreign residents, and (3) the slaves.



By the courtesy of the British Museum

PERICLES

Pericles ruled Athens in the age of its imperial greatness. Western men remember him not so much for this, as for the patronage of art and learning which imperialism made possible.

The citizens were descendants, on both sides, of old families. Although the development of democracy had given power to the poor citizens, even at its height the chief functionaries of the state were, almost without exception, members of the noble and wealthy landowning families. Industrial and commercial families never took a prominent place in the Athenian state, even though in practice it remained a timocracy. After 500 B.C. a portion of the citizens was always without private means of support.

Some of them found permanent employment in the fleet, which was the chief military arm of the state; many of the remainder worked on the fortifications and structures that gave an unprecedented splendor to Athens. In the main, however, they lived on the payments they received for service rendered on the juries and in the Assembly. Such payments were in no sense "doles" in the contemporary meaning of that term; they were the normal way of rewarding a democratic ruling class.

The metics were clearly set apart from the citizens. They could not hold political office or become members of a priesthood. They had no voice in the government, could not own land or work as agricultural laborers, and could not bring lawsuits in their own names. The children of their marriages were regarded as illegitimate. Lastly, they could not ask the state for relief in time of economic distress. Their obligations to the state, although numerous, were not heavy. They paid the ordinary tax at a higher rate than citizens. Among the taxes that fell upon them exclusively were the tax on strangers in the market and a metic tax, the failure to pay which was punished by enslavement. However, because the metics enjoyed freedom from the political obligations of the citizens, they could devote themselves entirely to commerce and industry, and by the end of the fifth century B.C. they had crowded the citizens from almost all occupations except those based on the ownership of land, such as making brick, burning and transporting lime, and raising pigs. At this time there were no citizen metalworkers, carpenters, or joiners and very few stone masons. It is not incorrect to see the Athenian metics as the founders and owners of the empire upon which the power of the state rested. Indeed, the citizens had become the rulers of the empire that had been created, at least economically, by the enterprise of the metics.[1]

Like every ancient polity Athenian democracy exploited slaves. The mines of Laurium, which were the great source of new wealth to the state, were worked with state slaves hired out to private contractors. The state slaves also performed much of the work in the arsenals at the Piraeus and on the streets and walls of Athens. For a time a police force of slaves was maintained. Most of these slaves were captives in war, although there was a growing slave trade. The slave traders were among the richest men in Athens. Many of the slaves were owned by metics who operated shops and small businesses. Only the great landowners could afford slaves for agricultural labor.

The estimates of the population of Athens and Attica are little better than crude guesses. In 431 B.C., it has been figured, the population of Athens was about 315,500 persons, of whom 172,000 were citizens, 28,500 were metics, and 115,000 were slaves. As the century moved toward its close the population seems to have decreased, so that by 400 B.C. it was probably not more than 230,000, with the metics numbering about half as many as the citizens. The citizens, of course, were of all ages, while

[1] On the Athenian metics see M. Clerc, *Les Métiques atheniens* (1893).

most of the metics and slaves were adults. This is an important fact in considering the role of the metics and slaves in the Athenian economy, for it means that the proportion of adult citizens was smaller in the total population than the numbers of the different groups indicate.[1]

Sparta was a military democracy which disposed of an economic surplus produced by a conquered agricultural population reduced to serfdom. Athens was an imperialistic democracy based on an economic surplus drawn mainly from mining, trade, and industry which her citizens did not own or manage. In both states revenues were regarded as a legitimate source of maintenance for citizens. The difference between the two regimes had origin not so much in distinct outlooks on life as in the circumstances which led them, because they drew support from wealth produced in different ways, to invent peculiar devices for the use of power and the sharing of the advantages it gave. One may believe that the Spartans understood the Athenians, and vice versa, much better than either people was understood by those modern Western men who read the prejudices of nineteenth-century political struggles into their governments.

The Defeat of Persia and the Ascendancy of Athens.

While the Greeks prospered and quarreled, the advance of the Persians brought to them a supreme crisis which they did not recognize until it burst upon them; then they met it heroically but with divided counsels, hesitant actions, and treasonable connivance with the enemy.

1. *The Persian Wars.* Actually, however, the Greeks had felt Persian power long before it threatened them in Europe—first in Egypt, where they served as mercenaries, and second in Lydia, which had long been a buffer between the Ionian cities and eastern Asia Minor. When this state, more Greek than oriental in culture, fell before the Persians, the Ionian cities, although they attempted a unified resistance, also succumbed to the conqueror's might. They were required to pay the customary tribute and raise the usual military and naval levies. Miletus, which had not joined in the resistance, obtained more favorable terms. Persia's first invasion of Europe was not against the Greeks but against the Scythians, the people of the south Russian plain, who threatened the Persian

[1] On the Athenian population see A. W. Gomme, *The Population of Athens in the Fifth and Fourth Centuries B.C.* (1933), Table I, p. 26; also J. Beloch, *Bevölkerung der Griechisch-Römischen Welt* (1886); E. Cavaignac, *Population et capital dans le monde méditerranéen antique* (1923).

borders from the Hellespont to The Pamirs. In 512 B.C. Darius campaigned as far north as the Danube River.

Except for irritating interference in their political squabbles, which the Persians, familiar only with the monarchial form of government, did not understand, the life of the Ionian cities went on as before the conquest. This interference, always in favor of the tyrants, finally provoked a revolt which, under the leadership of Miletus, lasted from 499 to 494 B.C. Only Athens and Eretria in Euboea gave aid to the Ionians. At the close of the desperate struggle, which was lost largely because of dissension among the cities, Miletus was utterly destroyed, and the Persians turned angry eyes toward the European cities.

In 492 B.C. the Persians again crossed the Hellespont and harried Thessaly but turned back when their fleet was wrecked in a storm. Two years later, instigated by an Athenian democratic politician at the Persian court, they sailed directly for Greece and landed a force on the eastern shores of Attica. The Athenian conservative party, having failed to obtain assistance from Sparta, finally risked an uprising by the democratic faction and sent its main force to meet the enemy. The victory of Marathon (490 B.C.) was the result; for a time, at least, it freed Greece from the Persian menace, not because the Persians had given up, but because disaster had taught them that success was to be obtained only by a greater effort than they had heretofore made. A revolt in Egypt prevented immediate preparation for this effort. The Persians, it must be understood, looked upon these wars as border skirmishes, not as serious struggles involving either the fate of their empire or the course of cultural evolution in the Western world.

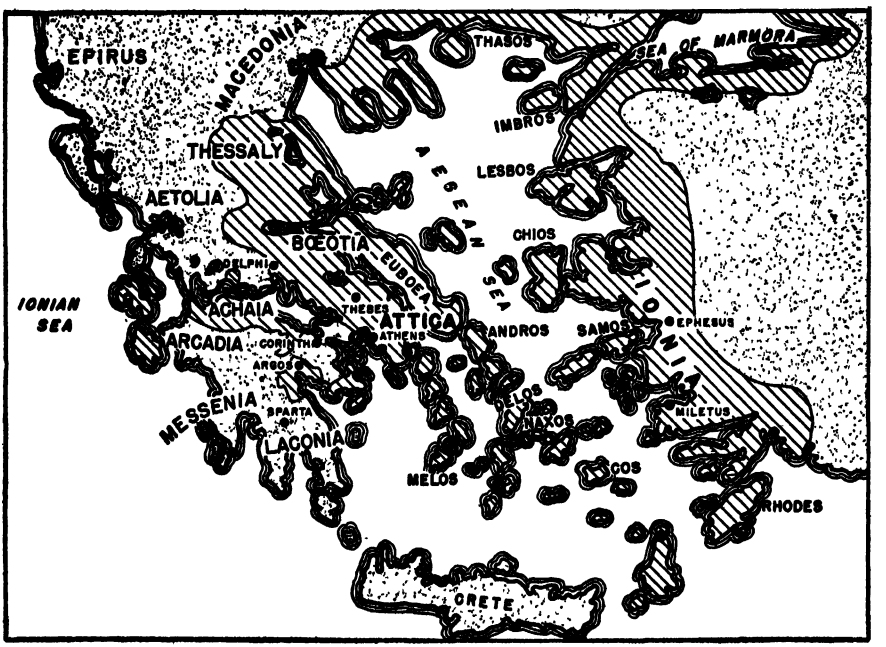
When finally ready, in 480 B.C., Xerxes bridged the Hellespont and marched into Europe with an army now estimated to have been 180,000 men. The Greek cities, Athens excepted, had done little to prepare for such an attack, although they had expected it. Under the leadership of Themistocles, Athens had built a navy—paid for by silver from the slave-worked mines of Laurium—and it proved to be the deciding factor in the struggle. Divided counsels and treachery caused an inadequate Spartan force to sacrifice itself at Thermopylae. When the Persians reached central Greece, similar vacillation allowed Attica to be devastated and Athens burned. The Athenian population took refuge on the island of Salamis, and the fighting men went on board the ships. When the Spartans wished to concentrate all forces behind the fortified Isthmus of Corinth, a maneuver that would have abandoned the

refugees on the island of Salamis, the Athenians threatened to sail away to Sicily. Finally Themistocles, the Athenian commander, in order to prevent the breakup of the Greek forces, took the desperate measure of sending a message to Xerxes describing the plight of the Greeks; as Themistocles had hoped, the message lured Xerxes into an attack. But in the narrow strait between Salamis and the mainland the Persian fleet was unable to deploy, and, as Themistocles had foreseen, the Greeks could fight on equal terms. The battle of Salamis (480 B.C.) was a complete victory for the Athenians. Xerxes immediately returned to Asia Minor, and in the next year his forces were driven from Greece and the Aegean Islands. The war, however, went on for years, chiefly in Phoenician and Egyptian waters, but the Athenians failed to destroy Persian power outside the Aegean area. Peace was not made until about 449 B.C.

2. *The Athenian Empire.* The victory over Persia affected every phase of Greek life. Above all it raised the Greek morale. A buoyancy, a confidence, and a feeling of mastery animated the citizens who had turned back the world's greatest military power. The heavy armed infantry—hoplites—had proved to be more than a match for Asiatic cavalry and archers, and the triremes were the best fighting ships afloat. The feeling of superiority over the barbarians, which had been nurtured by the colonizing movement, now became most intense.

The chief beneficiary of the victory was Athens, which fell heir to the leadership among the Aeolians and Ionians that the cities of Asia Minor, especially Miletus, had held. This leadership was organized in the confederacy of Delos, formed about 478 B.C., in order to get back the cost of the war by ravaging Persian territory. The confederacy was composed of about two hundred cities; the larger ones furnished ships and the smaller ones paid money to a common treasury, originally kept by the oracle on the island of Delos, from which the league took its name. From the first, Athens possessed enough votes in the council to control military policy and, under Cimon and Pericles, transformed leadership into political domination. Cimon forced Carystus in Euboea to join the league and compelled Naxos and Thasos to fulfill their obligations to it. Athens interfered in the domestic political struggles of the members, tolerating only democratic regimes and transporting aristocrats to Athens, where they were tried on trumped-up charges. The Athenian courts exercised jurisdiction in all important cases, especially in commerce, throughout the empire; they were partial to Athenians in commercial suits with the citizens of other

THE ATHENIAN EMPIRE c. 430 B.C.



cities. The military obligations of the cities, except three, were commuted to a money tribute, assessed by the Athenian council without consultation or consent, and the treasury was moved from Delos to Athens, where the funds of the confederacy were confused with Athenian revenues. Athens insisted that as long as she held Persia at bay she was not obligated to account for the funds of the confederacy.

Athenian commercial policy was designed to make the empire profitable. Trade agreements gave a favorable position in regard to naval and food supplies. Members of the league were not allowed to export grain except to the Piraeus, and bankers were not allowed to make loans to merchants except those who traded to and from this port. In 445 B.C., when the allies were compelled to use the Athenian owls, Athenian bankers and money-changers gained some advantage over weaker competitors in rival ports. At Athens a tax of 2 per cent ad valorem was levied on trade; at allied ports the rate, which was charged on both imports and exports, was 5 per cent. While Athens controlled the Hellespont the excessive rate of 10 per cent ad valorem was laid against all

cargoes passing through it. Cities refusing to accept Athenian policies were excluded from trade with the empire. Action of this kind was one of the causes of the outbreak of the war with Sparta in 431 B.C.

Perhaps the gravest abuse of power was the planting of colonies of Athenian citizens about the empire. Sometimes they were settled in areas from which the native population was expelled; at other times they took lands among the natives. In either case they remained Athenian citizens and paid no tribute. Athenian garrisons were stationed in cities suspected of disloyalty. In some cases when cities revolted, their fortifications were pulled down and the remnants of their military forces transferred to Athens. In all this there was no imperial system, for each city made its own arrangements with the Athenian state. If at home Athenian democracy rested on metics and slaves, abroad it was a despotism ruling other Greek cities.

About half of the Athenian revenues came from domestic sources and the other half from the empire. The chief domestic sources were (1) the profits of the Laurium mines, (2) the import and export duties at the Piraeus, (3) market dues, (4) a tax at the gates of the city, (5) a poll tax on aliens, (6) a tax paid by noncitizens who engaged in trade, and (7) judicial fines and confiscations. Besides the tribute collected from the members of the confederacy, the only important imperial revenue was derived from a tax on ships passing through the Bosporus into the Black Sea. After 425 B.C. the tribute underwent a "progressive augmentation," and in 413 B.C. a system of indirect taxation, which was quickly abandoned, was introduced in order to increase it further. From these several sources fifth-century Athens, in comparison with contemporary or preceding polities, drew a truly incredibly large revenue.

Athenian leadership was, however, not lacking in benefits to Greece as a whole. The clearing of the Aegean Sea and the opening of the Hellespont brought an expansion of commerce. Grain and fish from the Black Sea became available to the growing population. Industrial exports to Sicily, southern Italy, and southern France increased. The Phoenicians were driven from the Aegean Basin, and their control of the route to Egypt was threatened. In fact, all Greece experienced a new economic prosperity along with its heightened morale.

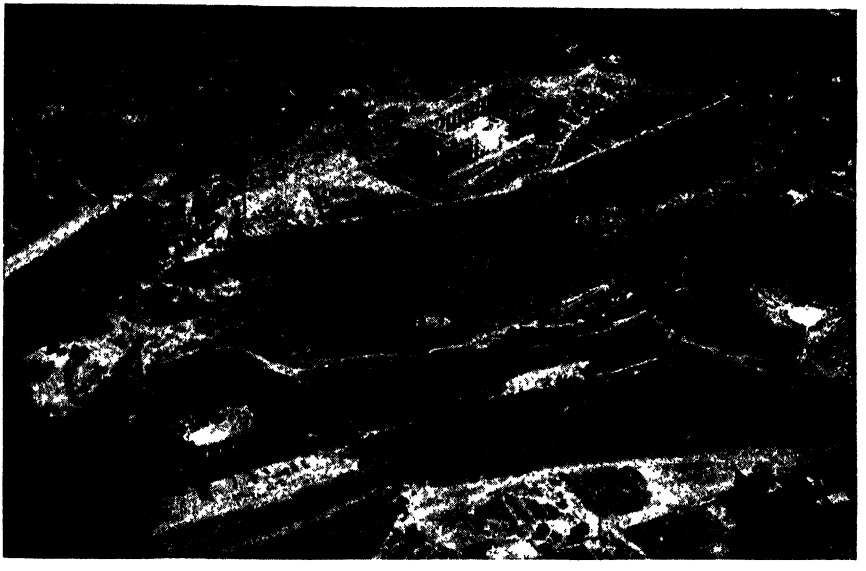
The difficulty with the view of Athenian rule and Greek economic expansion which these facts give is the suggestion that

they approach modern Western conditions. It has been emphasized in preceding paragraphs that Greek democracy is not comparable with modern democracy; here it may be noted that this economic expansion also is not comparable with modern economic developments. Industrial establishments were very small and produced mainly for local markets. Commerce was cosmopolitan, *i.e.*, foreigners, not Greeks, carried it on. There was no credit system. Loans were commonly made on goods pledged as security. Traders always accompanied their goods to market, for an organized shipping industry did not exist. Above all, state policy was designed to obtain revenue from trade and industry more than to promote their expansion, and its chief objectives, besides the obtaining of revenue, were to gain land upon which citizens could be settled or from which the food supply could be ensured for those who remained at home. If dependencies were created, they were important chiefly as they paid tribute to the Athenian treasury or provided foodstuffs for the Athenians. Such was the economic base of Athenian greatness, the period of which is commonly recognized as the first brilliant age in the development of a Western urban culture.

3. *Athens in the Fifth Century B.C.* If Themistocles (*ca.* 514–465 B.C.), the victor of Salamis, was the architect of the Athenian empire and Cimon, who drove the Persians from the Aegean Basin and began the transformation of the member cities into tributaries, was its engineer, Pericles was its artist. For under him the revenues of the state were spent in ways that made Athens unlike any other city, before or since.

The supreme architectural monuments of the Athenian empire were built mainly during his rule. The Parthenon was begun about 447 B.C., the Propylaea, the gate of the Acropolis, about 437 B.C., and the Erechtheum, with its famous maiden porch, some two years later. Beside these structures, the chief buildings of Athens were offices around the market place, the Dionysiac theater, which seated approximately fourteen thousand spectators, and many temples, of which one, the so-called Theseum, is now the best-preserved Greek temple in the world. These buildings, built of fine white marble, were richly painted in brilliant colors and decorated with numerous statues, also painted if made of marble.

Except for these monumental structures Athens, which had been hastily rebuilt after the Persian Wars, was a mass of shabby habitations along narrow, crooked streets.



By the courtesy of VICTOR ALLEN

THE ACROPOLIS, ATHENS

The Acropolis—literally the "high town"—was a fortified site in the Mycenaean age. It became the monumental area of Athens in the fifth century B.C., and most of its notable structures survive from this time. In this air view the ruins of the Parthenon are seen crowning the summit. The Erectheum is the smaller building below the Parthenon on the left. The Propylaean Gate—left center—leads from the western base to the summit. The Theater of Dionysos—right center—is built partly in a natural declivity. West of it—lower center—are ruins of the sacred precinct of Asklepios, the god of health. Most of the buildings about the base of the Acropolis were either erected or reconstructed in Roman times.

The Piraeus, on the other hand, as the arsenal and entrepôt of a sea empire, was well planned and well built. The "long walls" connected it with Athens, and three fortified harbors provided shelter for commercial vessels and war galleys. Great sums were spent on sheds for the naval armament, which, at its height, numbered about four hundred galleys. Under Pericles, Hippodamus (fl. *ca.* 450–400 B.C.) laid out the Piraeus on the checkerboard plan in the first effort at city planning in the Western world. Like Athens, it was adorned with temples, theaters, and other public buildings.[1]

[1] On the archaeology of Athens see E. H. Warmington, *Athens: A picture of a great Greek city* (1928); Charles H. Weller, *Athens and Its Monuments* (1913); Walter Judeich, *Topographie von Athens* (1931).

For recent archaeological discoveries at Athens see *Hesperia: Journal of the American*

The distinctive quality of Athenian social life was its public character. The citizens, in the main exempt from heavy physical labor, devoted themselves to politics, amusements, religious celebrations, and intellectual discourse. Besides the courts and the Assembly, where they made the decisions that guided the state, the citizens found their daily round in the market place, the theater, the temple, the gymnasium, the barber shop, and the banquet hall. Under Pericles the practice of providing the poor citizens with pocket money for religious festivals was introduced. The assemblies for intellectual discourse revealed in Plato's writings were duplicates of far more numerous gatherings devoted to less erudite pursuits. Athenian society was also almost completely masculine. Wives did not join in their husbands' entertainments. They lived apart, in the female quarters of the houses, never speaking to men on the street and never seeing a man, except the father of the family or a few male relatives. The best woman, declared Pericles, was one about whom the least, either good or bad, could be said. However, there were women whose profession it was to provide entertainment at male assemblies. Most of them were musicians, some of them were dancers, and a few of them were witty and cultivated. Well-to-do men maintained such women in sumptuous ease; poor men found them in public quarters.

Athens was a man's city: a city of soldiers home from the wars, a city of sailors ashore—in some circles intellectually awakened, in others bawdy, and in still others both intellectually awakened and bawdy.[1]

The Bases of Greek Culture.

Probably the first factor distinguishing Greek culture from its predecessors and contemporaries was the Aegean environment—a variegated mixture of land and sea. No point in Greece was more than sixty miles from the seacoast, and, although 80 per cent of the land was mountainous, no impassible barriers separated the various parts of the country. At sea the islands were so numerous that the crossing from Europe to Asia could be made without losing sight of land. Colors were warm and bright. Objects at a distance stood out boldly. The blurred image and the fading vista were alike unknown to Greek eyes. Even day passed into night through a

School of Classical Studies at Athens, Vol. 1 (1932) and succeeding volumes, especially for the annual reports of Dr. T. Leslie Shear, Field Director of the American School of Classical Studies.

[1] See F. A. Wright, *Greek Social Life* (1925); Hans Licht, *Sexual Life in Greece* (1932).



From Olympia. Photographed by WALTER HEGE. *Described by* GERHART RODENWALDT. *B. Westermann Co., Inc., New York,* 1936

OLYMPIA

At Olympia, in the western Peloponnesus, was the shrine of Zeus where, every four years, the famous Olympian games were celebrated. Greek chronology developed in terms of these celebrations, the first of which was dated 776 B.C. They were abolished in A.D. 394 by the Roman emperor, Theodosius. This photograph shows the varied landscape of Greece.

sequence of boldly contrasting colors, and moonlight only turned the luminosity of the day into a nocturnal transparency. But nature, prodigal of shapes and colors, was niggardly with products. The soil was poor, but grass and timber were plentiful; and near at hand was the sea calling men to adventure.

Certainly the Greek world was far different from the loess ridges of the Wei valley, the semi-jungles of the Ganges plain, the fertile valleys of the Iranian uplands, and the mixed terrain of Palestine. Insofar as environmental circumstances were concerned, the Greeks had opportunities for far more kinds of employment than did their contemporaries in Palestine, Persia, India, and China.

1. *Primitive Elements in Greek Culture.* The first view of Greek culture is afforded by the two great poems, the *Iliad* and the

Odyssey, into which Homer (fl. *ca.* 850 B.C.) assimilated its oral traditions. In the background of the traditions was an animism no different, except in details, from that of all primitive peoples. A divine power ran through all things. Man possessed a soul, identified with the breath, that lived after death in a shadowy underworld. Totemism persisted in the belief in the sacredness of certain animals. The gods, not yet organized in a pantheon, were, like those of other Indo-European peoples, personifications of natural forces; likely to interfere in any human situation, they did not hesitate to fight one another by inciting men to murder or by fomenting wars. Their anthropomorphic traits were not limited to human physical shapes, for they possessed human weaknesses and passions to a degree greater, perhaps, than the deities of any other people. Although highly original elements developed in Greek culture, these primitive beliefs remained always at its base, forming a low intellectual tradition which, while persisting among the masses, always entered deeply into many institutions and practices of public life.

Besides the gods of the orthodox religion the Greek spiritual overworld included daimons—*kares*—small enough to hide anywhere but large enough to be terrifying. They caused all the pains, distresses, and diseases men were heir to, including old age. A daub of pitch on the door kept them from entering a house. Ugly faces were drawn on tools and painted on the walls of workshops in order to scare them away. They were always looking for opportunities to enter human bodies.

To gain a knowledge of divine things the Greeks interpreted dreams, took omens, watched for signs everywhere, and consulted oracles. The dream was believed to be a divine message sent by Zeus to men by a special messenger. The dreams that came in the early part of the night were due to the effects of digestion, but if one ate nothing at night and slept in a white garment, exceedingly meaningful dreams would come just before awakening in the morning. The Greeks elaborated a complex omenology, particularly by reading the entrails and organs of specially killed animals. A peculiar form of omenology was practiced by interpreting the markings on fingernails when they were held against the sunlight. Almost every natural phenomenon was regarded as a sign. Comets, eclipses, and earthquakes portended great events. Lightning on the left was a bad sign, on the right, good. Thunder was the greatest of all heavenly signs; in a clear sky it was an exceedingly favorable omen. The Athenians ran home from wherever they were when any

peculiar weather phenomenon appeared. Birds and their flight were carefully watched. An eagle flying from the right to left was the best of signs. The hawk forewarned of death. A raven signified danger to an army. Swallows were unlucky, doves lucky. The crowing of cocks was auspicious, the cackling of hens inauspicious. Accidents, like spilling wine or oil, foretold the coming of poverty or prosperity. Words uttered in the sleep or by a frenzied person were carefully listened to because they had hidden meanings. The throbbing of the right eye meant that one was going to see a friend; the buzzing of the ears meant that one was being talked about.

Oracles, it was generally believed, conveyed messages directly from the gods. Each oracle was held to be the residence of a god who revealed requested information through mediaries. The mediaries were, of course, priests or priestesses. At Dodona, the oldest oracle in Greece, Zeus could be consulted; his will was interpreted from the rustling of leaves, the groaning of branches, the bubbling of water, the clashing of copper basins, and the thrumming of knotted thongs inside a copper bowl. At Delphi, the greatest of the oracles, Apollo spoke. From a fissure in the ground a vapor escaped which, when inhaled by a priestess, caused her to become frenzied; while she was in this state priests interpreted her mouthings. The priestess was usually an ignorant woman whom the priests of the oracle had brought up from childhood under strict rules of chastity and temperance. There were eight important oracles in Greece, and at each of them some typically primitive procedure was employed in learning the will of the resident deity.

The influence of the oracles in Greek public life was far-reaching. The "Holy Ones" of Delphi were consulted upon almost every question of domestic and foreign policy. Generally, it seems, the oracle of Delphi favored aristocracy against democracy. Plato held that the oracle had inspired Lycurgus to make the Spartan constitution. Perhaps the most important influence of this oracle was exerted upon the colonial movement, for it became a settled custom that no leader would start on an expedition until the oracle had pronounced in favor of it. The priests of the oracle were in a good position to learn about conditions in all parts of Greece because they dealt continually with persons from every city. It was sacrilege to attack a chariot on any of the sacred roads that led from every section of Greece to Delphi. The oracles were the means of preserving unity of national worship. Their priests arranged the order of the festivals, fixed the calendar, maintained the canon of the gods, superintended the athletic contests, and preserved all

records of the past. The temples of the oracles were the earliest centers of learning and the permanent depositories of treasure. In the great age of Greek commerce the oracle at Delos served as a national bank.

Belief in the intervention of supernatural powers in earthly affairs constituted among the Greeks, as it did among other peoples, the basis of a priest class. Every city had its own priesthood, and every god and goddess cult ministrants. Every head of a family was a priest, and every magistrate as well. Diviners and quack prophets swarmed everywhere. An Athenian would consult a diviner just as an American would call a doctor. The particularism of Greek national organization prevented the consolidation of these priestly elements in a national priest class. The Greeks were almost supinely pious, but they expressed their piety formally in festivals, rituals, and gestures which had little significance in the making and carrying out of decisions, either public or private. The devout Athenian might go about carrying freshly cut boughs, might kiss the threshold of the temple he entered, and might prostrate himself before its altar, pulling hairs from his head to sacrifice to its god, but he was not under the domination of its priests. They were merely a part of the formal mechanism through which his religious feeling was expressed. In this fact, as well as in the pervasive localism, lay the chief influence which allowed most of the Greeks to remain profoundly religious and at the same time permitted a few of them to develop a secular outlook on life.

The religious festivals fell into three classes: (1) the civic, many of which were common to several cities, (2) the confederate, or those in which several cities joined, and (3) the national, to which all Greece sent representatives. Among the confederate festivals the most famous was held in honor of Apollo on the island of Delos; a notable feature was the recitation of the Homeric poems. The oldest national festival was that of Zeus at Olympia, in whose honor the athletic games determining the champions of Greece were held; tradition said that it had been originally held in 776 B.C. The Pythian games at Delphi, the Isthmian games at Corinth, and the Nemean games at Argolis were established in the sixth century B.C. The Panathenaic games, held every four years at the metropolis of the Ionian Greeks, were elaborated by the tyrant Pisistratus into a civic festival and for a time, because of the political importance of Athens, rivaled the national games.

These games, it should be emphasized, were religious in purpose and organization; indeed, they were ritualistic expressions of

patriotism. In a city the state and the church were one, but the church was absorbed in the state. To refuse the gods of a city customary respect was to endanger the common well-being; not through priestly meditation but in communal piety was the will of the gods served. Although impiety and sacrilege, like treason, were high crimes, persons accused of them were punished not when denounced by priests but when citizens protested, and after having been found guilty in a trial before ordinary judges. The citizenry as a whole preserved a priestly function. At the national level religion was the single bond through which unity was organized.[1]

2. *The Greek Assimilation of Foreign Cultural Materials.* Only in recent decades, as a result of the excavations of the sites of Minoan civilization and the unraveling of contact between Ionia and the ancient-oriental areas, has the role of diffusion in the rise of Greek culture been realized. Now it is clear that foreign cultural materials flowed into Greece throughout the entire period of invasion, settlement, and commercial expansion.

What the Greeks owed to their Minoan and Mycenaean predecessors in the Aegean lands will probably never be known. They regarded the Minoans as the creators of their law, religion, and art, and, as indicated in the Homeric poems, they preserved some Mycenaean traditions. The Achaians, who created the Mycenaean culture, undoubtedly worked with a Minoan base, and a few of the Ionian cities appear to have risen on Minoan foundations. Perhaps the most important channel of survival of Minoan influence was seafaring life. As heirs of Minoan seamanship the Achaians were well fitted, by the nature of daily activities, at least to receive and transmit the Minoan cultural outlook. Thus, perhaps, the Ionians fell into the way of life that continued the general trend of Minoan culture. The Dorians, on the other hand, as conquerors of the lands once ruled from Cnossos, seem to have preserved elements of Minoan religion and law. The most important Greek shrines seem to have been originally centers of Minoan worship, and the Greek athletic games, always religious in orientation, perpetuated Minoan practices. The Greek pantheon, pat-

[1] On the primitive base of Greek culture see J. E. Harrison, *Prolegomena to the Study of Greek Religion* (1903); Martin P. Nilsson, *A History of Greek Religion* (1925); Gilbert Murray, *The Five Stages of Greek Religion* (1925); W. R. Halliday, *Greek and Roman Folklore* (1927); W. R. Halliday, *Greek Divination: A study of its methods and principles* (1913); T. D. Dempsey, *The Delphic Oracle* (1918); H. W. Parke, *A History of the Delphic Oracle* (1939).

terned on a monarchial state, it has been argued, was developed in Mycenaean culture.[1] In general, it may be said, the Minoan sporting interest, secular outlook, and sense of humor survived, if at all, more among the Ionians, who took up the way of the sea, than among the Dorians, who kept mostly to the land.

Greek contact with Egypt, Mesopotamia, and Syria was established and kept up by sailors, mercenaries, merchants, and travelers, who by 600 B.C. were well known not only around the eastern coasts of the Mediterranean Sea but also in the hinterlands of Asia Minor bordering on Syria and Assyria. And Phoenician traders constantly touched the shores of the Aegean Sea.

Lydia, lying behind the Ionian coast, had a culture rich in Babylonian and Assyrian materials. Its capital, Sardis, the entrepôt of western Anatolia, was a thriving center of commerce and banking. Along with Lydian coinage, the Greeks borrowed Babylonian business practices, as well as the Babylonian system of weights and measures. The Homeric words for "gold," "tunic," "ax," "hour," and "crocus" appear to have been derived from Assyrian names. Later the Assyrian words for "messenger," "camel," "brick," "shekel," "pine," "reed," "cherry," "laudanum," "naphtha," "myrrh," "hoe," "sack," and "corn" entered the Greek language. It is easy to identify these words as part of the vocabulary of the merchants who traded in the hinterlands of Asia Minor. The Lydian words for "king" and "tyrant" were also adopted by the Ionians.

It is difficult to estimate the intellectual debt of the Greeks to Mesopotamian culture. They borrowed the worship of the Mother Goddess from the Phrygians, who probably received it from the Assyrians; the attributes of Ishtar were symbolized by several Greek goddesses, such as Demeter, Aphrodite, Artemis, and Hecate. The union of male deities with female consorts also seems to have been taken over from Eastern sources. The idea of the "all-embracing ocean" found in Homer and the conception of "a

[1] Martin P. Nilsson, *The Mycenaean Origins of Greek Mythology* (1932), pp. 250–251: "That a monarch was put at the head of the gods is in Greece as well as in other countries due to political conditions. This idea did not originate in Greece, as it did in other countries, from the fact that a city made other cities and their gods subject to their god. . . . Such a full kingly power as that of a supreme god can be ascribed only to the mighty kings of the Mycenaean age. . . . The idea of Olympus and the State of the Gods under a strong monarchial rule originates in the Mycenaean age." By permission of the University of California Press.

On Minoan and Mycenaean survivals in Greek culture see also C. H. and C. B. Hawes, *Crete, the Forerunner of Greece* (1911); W. R. Ridington, *The Minoan-Mycenaean Background of Greek Athletics* (1935); H. R. Hall, *The Civilization of Greece in The Bronze Age* (1928).

primordial chaos" set forth by Hesiod may have been Babylonian in origin. Thales (*ca.* 640–546 B.C.), the first nature philosopher, was familiar with the Babylonian data on the occurrence of eclipses. Plato used Babylonian names for planets. It can be readily believed that the Phoenicians who brought the Semitic consonants to the Greeks also planted among them many ideas derived from Mesopotamian sources. Recently it has been asserted that the *Odyssey* is a cross between a Greek sea story and a Semitic war poem. Certainly the Greeks acquired from the Phoenicians a familiarity with many articles de luxe, such as perfumes, ivory combs, inlaid furniture, glass, and fine metalwork in bronze and silver. They also borrowed from them many industrial processes, as well as the practice of employing slave labor in shops and on ships.

Although available evidence now indicates that the Greek debt to Mesopotamia was greater than to Egypt, direct contact was first established with the latter country. The development of the Greek column was affected by the palm-tree and lotus-flower motifs of the Egyptian column. Egyptian decorations were common on Greek pottery. Greek portrait statuary was derived directly from Nile models, and Greek painting probably utilized Egyptian techniques. At Miletus and Delos avenues of statues in the Egyptian manner were set up. Tradition ascribed the origin of several Greek oracles to Egyptian sources. This fact indicates that the Greeks greatly admired the learning of the Egyptian priests. In fact, the early centers of Greek literate learning were modeled on the Egyptian temple schools, and Greek medical practice and study was patterned after the cult of Imhotep, the Egyptian god of medicine. But although Greek geometry was based on Egyptian methods of measuring land, it is not at all clear that much Egyptian scientific lore was known to the early philosophers. Many Egyptian habits, such as garlic chewing and quail fighting, found places in Greek daily life.

The assimilation of these diffused cultural materials, although continuous after the entrance of the Achaians into the Aegean lands, was at its height in the seventh and sixth centuries B.C. when the secular tendencies generated by Greek social experience arrived at full strength. Furthermore, since these cultural materials, like the people who received them, were torn loose from their traditional positions, they entered easily into new patterns. More important still was the fact that the mingling of such diverse cultural materials was itself a stimulus to cultural departures.

3. *The Beginning of Literate Learning among the Greeks.* The beginning of a knowledge of writing among the Greeks is an unsettled problem. Certainly they borrowed, perhaps as early as the tenth century B.C., the north Semitic alphabet, and it is not unlikely that they retained a few Minoan symbols. Although many local alphabets appeared, two quickly won wide popularity, an eastern one in Ionia, Attica, Corinth, and Argos and a western one in Euboea, Boeotia, the Peloponnesus, and Magna Graecia, *i.e.*, southern Italy and Sicily. The first use of writing was for official purposes. The earliest inscriptions date from about the middle of the eighth century B.C., when the Ionian alphabet, as rendered at Miletus, which included the newly invented vowel signs, began to spread through commercial channels. Not all of the vowel signs were introduced at once. By the fifth century B.C. all the letters except kappa (K), mu (M), nu (N), and sigma (Σ) had been given their classic forms. In 403 B.C., when Athens made the Ionian letters official, they soon spread throughout all Greece. These letters, all capitals, were written from left to right.[1]

The roots of Greek learning were in the oral tradition of which the great poems, the *Iliad* and the *Odyssey*, are consolidated forms. The origin and development of this tradition are now, as always, a foremost problem in the history of Greek culture.[2] Homer, although given various dates between the eleventh and the seventh century B.C., may be merely a personification of the poetic tradition, as has been claimed, and not a particular poet. It is easy to accept the view that this tradition was built up by many minstrels who composed and sang lays throughout the centuries after the Trojan War. It is worth noting that Homer knew nothing of books; he regarded writing as a powerful form of magic.

Apparently the consolidation of the Homeric poems was achieved under Athenian influence, for after the sixth century B.C. the recitation of the poems was a prominent feature of the Panathenaic and Delian games. This fact is ground for the assertion, now greatly doubted, that Pisistratus had an authoritative text of the poems prepared. However, inasmuch as parts of the poems were recited in a fixed order, each part by a different person, something akin to a text must have been in existence. But no formal

[1] See B. L. Ullman, *Ancient Writing and Its Influence* (1932); also Hans Jensen, *Die Schrift in Vergangenheit und Gegenwart* (1935).

[2] On Homer and the Homeric question see Walter Leaf, *Homer and History* (1915); T. W. Allen, *Homer: The origins and transmission* (1924); Victor Bérard, *Did Homer Live?* (1931); Alexander Shewan, *Homeric Essays* (1935).

rendering of the poems was produced at this time, if, as indicated by quotations found in Aristotle, they were still in a fluid state late in the fourth century B.C. However, it may be agreed, the oral tradition of early Greece came to be regarded as a single body of learning in the sixth century B.C., and, more important, became the basis of education for all who learned to write.

Writing became a necessary accomplishment in political and trading circles in the seventh century B.C. as a result partly of the growth of commerce and partly of the political advance of the poor citizens, who demanded that the laws be recorded. The first law codes were compiled about 650 B.C. A half century later the first considerable prose works, guidebooks for travelers and navigators, were put together. About this time also lived the men who, known for pithy comments on morality and politics, were the first Greeks to win reputations for intellectual achievements other than poetry and music.[1] But literate learning was still largely poetical in form. In the sixth and the early fifth century B.C. Anaximander (*ca.* 610–547 B.C.) and Empedocles (fl. *ca.* 490–430 B.C.) recorded their philosophical speculations in verse.

Cadmus (fl. *ca.* 540 B.C.) of Miletus is commonly recognized as the author of the first prose composition in Greek. From Hecataeus (fl. *ca.* 500–476 B.C.) sprang a whole school of prose writers who sifted old traditions and rendered them in an artless but concise prose style. The interests of the early prose writers were antiquarian, genealogical, geographical, and philosophical. It is reasonable to believe that they borrowed materials from the foreign bodies of learning with which they came in contact.

Late in the sixth century B.C. the temples, long centers of oral learning, began to keep written records of public festivals, notes about impious practices, and observations of diseases. But true to priestly tradition this temple learning was regarded as sacred and closed to vulgar eyes. Even in the fifth century B.C., when the knowledge of writing spread widely, the tradition of oral learning, as evidenced by the rhetoricians and Socrates, was still strong. Then, however, the papyrus roll had been introduced, and the practice of consulting books grew up. By the end of the fifth

[1] The Seven Wise men and their mottoes were: Thales of Miletus, "Who hateth suretyship is sure"; Solon of Athens, "Know thyself"; Chilon of Sparta, "Consider the end"; Bias of Priene, "Most men are bad"; Cleobulus of Lindos, "Avoid extremes"; Pittacus of Mytilene, "Seize time by the forelock"; and Periander of Corinth, "Nothing is impossible to industry." The secular content of these mottoes reveals clearly the way of thinking that was becoming common among the Greeks. Counting Solon of Athens, five of the Wise Men were Ionians.

century B.C. books had become cheap and easily accessible in Athens and probably in other parts of Greece, for poets, historians, and philosophers were familiar with one another's works.[1]

THE SOCIAL OUTLOOK OF GREEK CULTURE.

Although the Greek city-states—about four hundred in number—had distinctive institutions, they also had several important characteristics in common. Chief among these characteristics was the feeling of solidarity binding together the citizens, regardless of economic and social distinction. In conflicts with non-Greek peoples, in exploiting conquered peasants, slaves, and foreign traders, and in fighting one another for favored lands, they preserved the in-group feelings of the war bands that had originally penetrated the Aegean lands. In this connection it should be remembered that territorially the city-state combined the town and the country, for usually the city was merely a fortified settlement in the midst of lands held by its citizens. The primary obligation of the citizen was to serve his polis, to participate in its government, to fight its wars, to obey its laws, and to worship its gods. In fact, the citizen was nothing except as a member of the polis, and its control over him was absolute. His family life, economic pursuits, and intellectual activities could be interfered with by the state in order to protect or advance its interests. In fine, the in-group was paramount over the individual. On the other hand, it is important to observe, the citizen looked upon the state as a means of supplying his economic needs, and its revenues were regarded as his property. Indeed, except as the state maintained the economic position which made it possible for the citizen to perform his political duties, the rights of citizenship were almost valueless. Greek democracy had its origin in the successful attempts of poor citizens to maintain their economic independence through sharing a wealth obtained by political means. Greek liberty, it should be emphasized, rested on the concept "citizenship," *i.e.*, membership in a group of free men, and not in a bill of rights or in theories of legal and social equality.

This social order released individual energies and attached a high significance to individual achievements. In other cultures the individual had been subjected to in-group control without his own worth or well-being receiving recognition; in Greek culture, especially in the democratic polis, the interest of the in-group was regarded as being well served by individual achievements of almost every sort.

[1] See Frederick G. Kenyon, *Books and Readers in Ancient Greece and Rome* (1932), p. 24.

In Sparta, where the well-being of the citizens depended on the production of wealth by a conquered agricultural population, a single type of achievement—military—was fixed as the main objective of individual effort; in Athens, where well-being rested on wealth from several sources, the release of individual energies and abilities in every sort of activity—military, political, economic, intellectual, artistic, and sporting—was recognized as serving the in-group interest, and excellence in several fields of action was deemed worthy of approval and reward. Athens, more than any other polis, liberated the individual for the free pursuit of all attainments that might enrich and adorn in-group life; the remarkable artistic and intellectual development nurtured by its democratic regime was the product of this freedom. It must be noted, though, that this individualism did not recognize the right of personal development for its own sake; on the contrary, this right existed only because through its exercise the in-group interest was served best. The execution of Socrates (*ca.* 399 B.C.), condemned by the citizens for corrupting the youth of Athens, must forever symbolize the ultimate failure of Greek democracy to rise above the level of the primitive in-group in the all-important matter of defining the relation of the individual and the in-group. But the wide release permitted by the Greek democratic cities was unprecedented in history; for that matter, it has been duplicated, if at all, only in very recent times in the Western world. Perhaps, after all, the execution of Socrates is merely testimony to the fact that in the end the collective interest must always prevail over the individual interest.

The origin of the Greek view of the individual's role in in-group life was undoubtedly deep in the historical circumstances of the evolution of the Greek people. As the member of a migrating war band the individual necessarily kept at the center of his attention the welfare of the band; at the same time, however, fighting was an activity in which different degrees of individual skill and prowess were obvious. Furthermore, it was definitely to the interest of the in-group that individuals advance their skills. The place of the hero in early Greek thought indicates clearly the solution which the early war bands found to the problem of the individual's relation to the in-group, for in the hero individual achievement was sublimated through the service it rendered to the in-group. When the war band took to seafaring life, the members found the same need for individual achievement in the service of the in-group as had existed during the conquest of the land. At least four centuries of social experience nurturing these tendencies preceded the full

emergence of the city-states, in the eighth century B.C. Then the rise of commerce and money economy, by intensifying competition in the economic sphere of action, gave further impetus to the individualistic tendencies which had been shaped in the preceding periods. It is, therefore, in no sense surprising that the most commercially active of the Greek cities are found to be the chief centers of the diversified cultural development that has always been recognized as the glory of Greece.

Certainly Athens exemplified in the fullest degree the combination of sentiment through which the new conception of individual achievement and the feeling of loyalty to the in-group entered into life. Pericles, the leader of the Athenians when they stood foremost among the Greek people, was made by Thucydides to justify their position on the grounds of individual achievement.

> We are alone among mankind in doing men benefits, not on calculations of self-interest, but in fearless confidence of freedom. In a word I claim that our city as a whole is an education to Greece, and that her members yield to none, man for man, for independence of spirit, many-sidedness of attainment, and complete self-reliance in limb and brain.

After the disasters at the end of the fifth century B.C. the feeling of in-group loyalty, again uppermost in individual and community life was well expressed in the oath which the Athenian youth took upon completing his formal training.

> I will never disgrace these sacred arms nor desert my companions in the ranks. I will fight for temples and public property, both alone and with many. I will transmit my fatherland, not only not less, but greater and better, than it was transmitted to me. I will obey the magistrates who may be at any time in power. I will observe both the existing laws and those which the people may unanimously hereafter make, and if any person seek to annul the laws or to set them at naught, will do my best to prevent him and will defend them alone and with many. I will honor the religion of my father.

The true miracle of Greek culture existed in this integration of individual energies and abilities in the service of an enriched in-group life.

THE PENETRATION OF THE WESTERN MEDITERRANEAN LANDS BY EASTERN URBAN PEOPLES

The disorders in Asia Minor and the ancient-oriental lands at the close of the second millennium B.C. caused the westward

migrations of the Etruscans and Phoenicians, who founded the first urban cultures in the western Mediterranean Basin and began the intensive exploitation of its coasts. After the eighth century B.C. the Greeks played an important part in opening up some of the western Mediterranean lands.

THE ETRUSCANS.

The Etruscans, whose origins are obscure, were, it seems, a people from Asia Minor who penetrated Italy by way of the Tiber River and conquered the plain between it and the seacoast. Probably their migrations continued for about two centuries, from the eleventh to the ninth B.C. They were at a height of power and prosperity in the sixth century B.C., when they held not only most of north Italy but also the western coastal plain as far south as the Bay of Naples. This southern expansion was undoubtedly motivated by a desire to control the trade flowing northward from the Greek cities.

The Etruscan cities, each an independent fortress, were joined together in a loose confederacy. No city was regarded as the capital and no city was dominant, although, after the seventh century B.C., Veii, which controlled the road from the south, was especially important. Each city held in subjection a native peasantry which cultivated its surrounding lands; the rule does not seem to have been harsh.

The Etruscans were an important influence in the economic development of Italy. They brought to its western coastal plains an improved cultivation of the vine, the olive, and wheat. They were skillful in draining marshy lands. They organized the native smiths in highly productive copper, bronze, and iron industries. Their military success was originally due to the superiority of their iron weapons, and their relatively great wealth was nurtured by the export of copper and iron. After the eighth century B.C., when they became active in the trade of the western Mediterranean Basin, shipbuilding became an important industry. In the fifth century B.C. they carried on a direct trade with Athens.

Etruscan religion, art, and learning were borrowed from Eastern sources. Their religion had affinities with the beliefs of several peoples of Asia Minor. They worshiped the dangerous forces of nature, against whose evil powers they protected themselves by spells, charms, and curses. They propitiated their gods with human sacrifices. They had a vivid conception of life after death, especially in a hell populated with terrible daimons. Indeed,

the chief ritual of their religion seems to have been developed in terms of a belief not unlike the later Christian doctrine of purgatory. Their art was deeply indebted to the Greeks. They built temples with stone foundations and timber walls and roofs. Private houses were constructed mainly of sun-baked brick. Their towns, heavily walled, had paved streets and sewage systems, probably after Minoan models. There was an Egyptian massiveness about their walls and gates. They painted well, especially on walls, but sculptured crudely. They were adept in making elaborate designs in metal by repeating small figures over and over again. Their horror about death was expressed by the skeleton motif which found a place in their art. Their learning consisted of the superstitions of liver divination, formulas for turning aside the lightning bolt, geometrical lore, especially that useful in land measurement, and rules for founding cities. Its sources were mainly Mesopotamian and Egyptian. They used an alphabet, derived, it seems, from an early Greek form, but only a few inscriptions have survived. Their language, although not yet identified, is known not to have been an Indo-European tongue. A characteristic use of the letters was in nonsense arrangements repeated as prayers and charms.

As a conquering people the Etruscans sought to extend their power more by seizing new lands than by assimilating the peoples they ruled. In the sixth century B.C. they joined with the Carthaginians in opposing the Greek penetration of the western Mediterranean Basin; in fact, in the last quarter of the sixth century B.C. and the first quarter of the fifth century B.C. they fought almost continuously to prevent the northward movement of the Greeks. Their political influence in central Italy did not disappear finally until just before the outbreak of the second and decisive struggle between Rome and Carthage. Etruscan power in north Italy was destroyed quite as much by Celtic inroads as by the rise of Rome.[1]

The Carthaginians.

The colonization of western Mediterranean lands by the Phoenicians began about 1100 B.C.; its chief centers were western

[1] On the Etruscans see *The Cambridge Ancient History*, Vol. 4, *The Persian Empire and the West* (1930), Chaps. XII and XIII, "Italy in the Etruscan Age." See also David Randall-MacIver, "The Etruscans," *Antiquity*, Vol. 1 (1927), pp. 159–170; R. C. Carrington, "The Etruscans and Pompeii," *Antiquity*, Vol. 6 (1930), pp. 5–23; David Randall-MacIver, *The Etruscans* (1927); David Randall-MacIver. *The Iron Age in Italy* . . . (1927); and David Randall-MacIver, *Italy before the Romans* (1928).

Sicily and the coasts of northern Africa. Carthage, a name meaning "new town," was founded about 853 B.C. by wealthy citizens of Tyre who fled before the advancing Assyrians. Unlike the Greek colonization, Phoenician settlement was almost exclusively commercial, for it was not impelled by a restless and land-hungry free peasantry. In fact, until the sixth century B.C., the Carthaginians paid rent on the land their city occupied.

Carthage was ruled by a plutocracy, and its government, a republic, reflected this social and economic base. The senate was composed of commercial magnates interested mainly in foreign trade and expansion; it elected two *suffetes*, who directed the civil administration. A commission of ten, which became later a council of one hundred, was associated with these officials in carrying out the policies the senate adopted. Military affairs were managed by individual senators sent to outlying areas, ports, and foreign lands. They not only recruited the army but also were responsible for its equipment and payment; because they frequently allowed wages to fall in arrears, revolts in the army were common. In an army made up mostly of mercenaries the mercantile magnates formed one legion, from which all officers were drawn. An assembly composed of landowners was almost always in opposition to the senate's policies. In the last phase of Carthaginian rule the council of one hundred met secretly and exercised a tyrannical power.

The senate's policies uniformly served the pursuit of commercial gain. The navy opened markets by force and excluded competitors by the same means. Pirates were shown no mercy. Enemies were exterminated, if possible. Friendly peoples who allowed their commerce to be monopolized were protected. Education also served economic ends, young plutocrats being trained for a smart, versatile, and tenacious pursuit of profit. Carthaginian learning seems also to have dealt mainly with material subjects and interests. Its only known representative, Mago, wrote a work on stockbreeding and farming which the Romans valued highly. Carthaginian religion was originally Semitic, but Anatolian and Egyptian elements had influenced its development. The chief deities were Tanit, a Mother Goddess, and Baal-Amon, or Moloch, to whom children were sacrificed. The symbol of Tanit was the crescent moon. Some Greek materials, especially in religion and coinage, found places in Carthaginian culture.

The influence of the Carthaginians upon the western Mediterranean lands was, therefore, largely economic. To an empire which in the sixth century B.C. included western Sicily, Sardinia, the

Balearic Islands, the northern coast of Africa west of Cyrenaica, the greater part of southern Spain, and a shadowy claim to the European and African coasts on either side of the Strait of Gibraltar, they carried a rich agricultural, industrial, and commercial heritage. Under their influence northern Africa was transformed into a cereal-producing, stockbreeding, and fruitgrowing region. They seem to have brought the first horses, sheep, goats, and poultry into these lands. Spain was opened up, particularly as a source of silver and copper ores. The legendary trade in Cornish tin became a reality under Carthaginian exploitation. And the first caravan routes were pushed into the western Sahara Desert. The Romans were their heirs, not their rivals, in the economic development of the western Mediterranean lands.

Obsequiousness to the powerful, arrogance to the weak, and contempt of labor were the prevailing social attitudes among the financial magnates who ruled the Carthaginian state, in which, certainly as much as in any other early Mediterranean polity, capitalism, as contrasted with militarism and imperialism, influenced political policies. Even the generals, who leaned on the merchants for favors, did not hesitate to stint food supplies and cheat on the pay of soldiers in order to make a profit. The acquisition of wealth alone mattered; the way it was acquired was of no concern. However, the evil reputation of the Carthaginians has been due largely to the fact that their enemies, the Greeks and Romans, who were hardly less keen in the pursuit of gain, transmitted to the future a biased view of their defeated rival.[1]

The Greeks.

As a result of the colonizing activity of the eighth and seventh centuries B.C., cities no less prosperous than those of Greece proper grew up in Sicily and in Magna Graecia. The cities of Sicily, especially Agrigentum and Syracuse, were rivals of the Carthaginians, and the cities of Magna Graecia, above all Sybaris, pushed their trade and influence northward toward Etruria. Early in the seventh century B.C. the eastern Greeks founded several colonies on the coast of Spain, Massilia (*ca.* 600 B.C.), now Marseille, in southern Gaul, and Alalia (*ca.* 560 B.C.), now Aleria, in Corsica. Massilia and Alalia were planted by the Phocaeans, from northwestern Asia Minor, who migrated under the pressure of the Persian advance. From Massilia settled life spread throughout

[1] Stéphane Gsell, *Histoire ancienne de l'Afrique du Nord* (4 vols., 1921–1924); and D. B. Harden, "The Topography of Punic Carthage," *Greece & Rome*, Vol. 9 (1939), pp. 1–12.

southern Gaul, and commerce extended inland up the Rhone valley and to the Bay of Biscay. Alalia fell to the Etruscans in the early fifth century B.C., but Massilia remained independent and became an ally of Rome when it contested with Carthage for the supremacy of the western Mediterranean.[1]

THE BEGINNINGS OF THE LATIN CULTURAL TRADITION

Italy is far larger than Greece and, more important, at least in ancient times, was much more self-sufficient. But like Greece it was broken into many small areas by mountains, rivers, marshes, and forests. This fact meant not only the development of local cultures but also easier settlement of open hill districts than of lowlands. At the southern extremity of the peninsula, its backbone, the Apennine range, ended in ridges which more or less shut off Magna Graecia from northern areas. Communications northward originally followed the seacoast to the Bay of Naples and the mouth of the Tiber River or overland from Sybaris to the Bay of Naples, where, from Cumae, the first Greek city on the western coast, and later from Puteoli, a Roman port, a road led to Rome. Facing the seacoast were the plains—Campania, Latium, and Etruria—fertilized by alluvial or volcanic deposits, where numerous agricultural populations first established themselves. Behind the coastal plains over the Apennines lay the uplands, which everywhere extended, except in the north, to the Adriatic Sea; they were covered with heavy forests and rich pastures. In the north, beneath the Alps, was the alluvial plain of the Po River. The Alpine passes gave difficult but possible access to the peninsula from central and western Europe, first in the east and later in the west.

Cattle and sheep, which thrived in all parts of the peninsula, were the economic support of its early peasant-village cultures, and stockbreeding was always an important industry. Wheat growing was difficult even on the fertile coastal plains; with the spread of the vine, the olive, and other eastern Mediterranean plants, settled agriculture attained a prosperity which the cultivation of grain did not give. The climate was Mediterranean—hot, dry summers and cool winters. As long as the forests remained, the rainfall was sufficient for tillage; when they were cut away summer drought became a serious menace. Then erosion bit into the

[1] See J. Holland Rose, *The Mediterranean in the Ancient World* (1933); R. Carpenter, *The Greeks in Spain* (1925); David Randall-MacIver, *Greek Cities in Italy and Sicily* (1931); E. A. Freeman, *History of Sicily* (4 vols., 1891–1894); and K. Fabricius, *Das Antique Syrakus, Klio*, Supplement to Vol. 28, 1932.

uplands, and the swift mountain streams deposited debris on the plains, transforming parts of them into marshes. As settled life developed in Italy, environmental conditions impelled an ever more intense struggle for the possession of fertile lands and the control of roads.

Copper from Sardinia and Corsica and iron from Elba combined with native supplies to support the metal industries, which very early became an important factor in the economic life of the central and northern parts of the peninsula.

The location of the Italian peninsula at the center of the Mediterranean Basin was the decisive factor in its relations with external areas. Very early in the history of the peninsula cultural materials from diverse Mediterranean lands began to arrive. Later, when its people were united, they faced these lands and, driven, at least in part, by the land hunger stimulated by the Italian environment, made them the objectives of imperialistic enterprise. At the same time, however, if the Mediterranean area was a "catchment basin" for cultural materials, Italy, at its center, received them in greatest amount and most mixed condition. Imperialistic enterprise merely hastened their reception.

The development of the Latin cultural tradition was conditioned by these internal and external factors in the Italian environment; if the basic emotional attitudes of land-hungry farmers were at its core, at its circumference, ultimately, were elaborations of materials from the many local cultures of the Mediterranean Basin.[1]

The Rise of Urban Culture in Italy.

About the opening of the second millennium B.C. peoples from beyond the eastern Alps began to work southward into Italy. They bore a culture which, in Italian form, is known as the Terremare culture. The black earth found at its sites in the Po valley and elsewhere is now used as fertilizer. The rectangular villages were built of timber and surrounded by a moat. The Terremare people crowded the native population of Mediterranean stock, the Ligurians, into the northern ridges of the Apennine range.

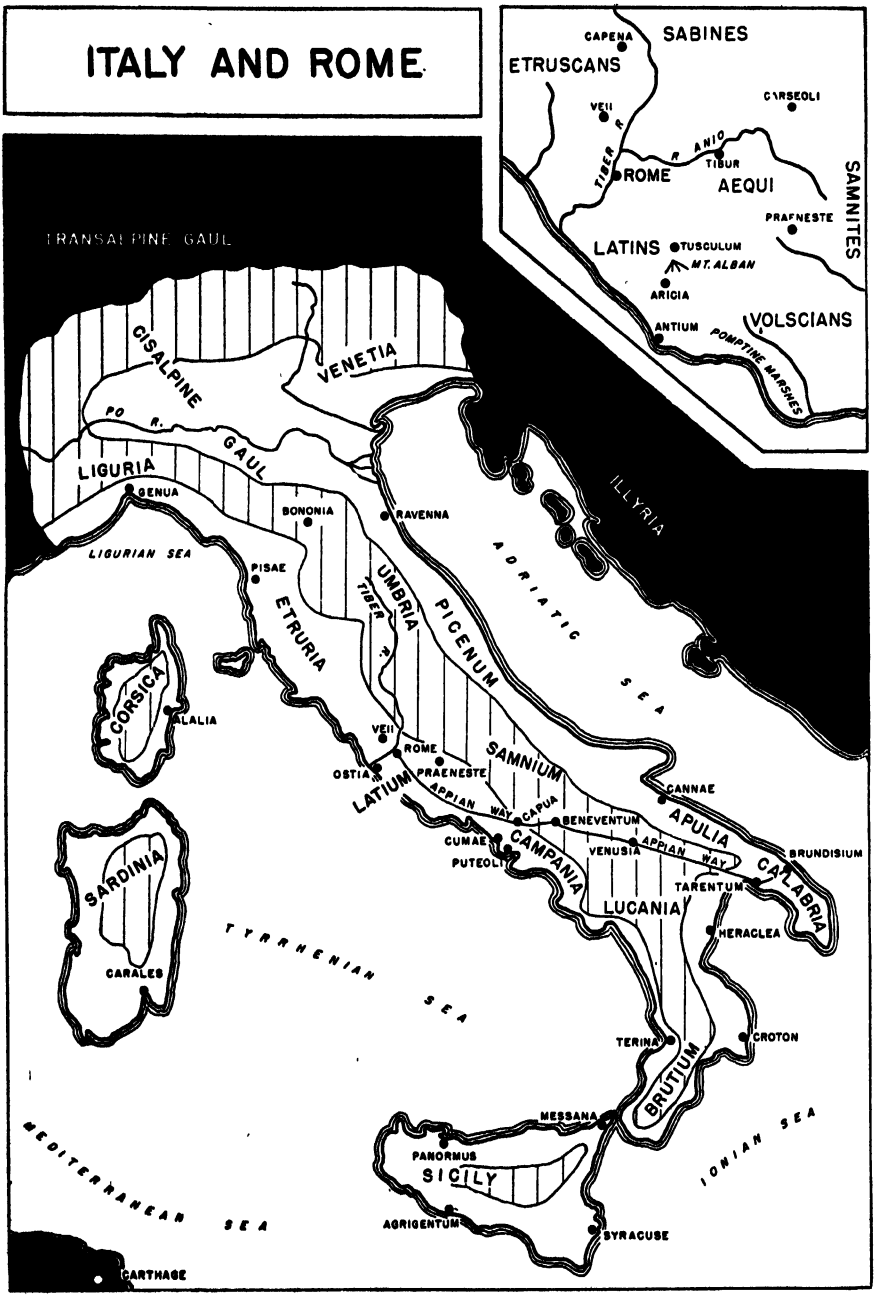
In the general disturbance among the Indo-European peoples at the end of the second millennium B.C. new peoples, known as the

[1] See Marion I. Newbegin, *The Mediterranean Lands: An introductory study in human and historical geography* (1924), Chap. VII, "The Rise of Rome." See also L. W. Lyde, *Peninsular Europe* (1931); George Sarton, "The Unity and Diversity of the Mediterranean World," *Osiris*, Vol. 2 (1936), pp. 406–460.

Italic tribes, crossed the eastern Alps and displaced the Terremare peoples along the Apennine range. Chief among them were the Latins, the Samnites, the Sabines, and the Umbrians. In central and northern Italy an ironworking culture, known as the Villanovan culture, developed shortly after their advance. This culture reached its height after the ninth century B.C. Two centuries later there were at least five well-defined cultural regions in Italy: Lombardy and Venetia, the latter settled by the Veneti from Illyria, in the north; Etruria and Picenum, where invaders had mixed with Ligurians, in the central parts of the peninsula; and the Greek cities at its southern end. Except in the south the bases of Italian urban culture were created by continental peoples using continental materials. Greek and Etruscan infusions never disturbed these foundations.

In Latium, the small plain between the lower Tiber River and the Alban Hills, cultural development was slower than in other parts of Italy. Volcanic action in the Alban Hills probably kept settlers away for a long time. When the Latins arrived there, early in the period of the Villanovan culture, they were undoubtedly a mixed people descended from a combination of Terremare and Italic elements. They were farmers, living in scattered villages built on hills, having a common shrine on Mount Alban, and making war freely on one another. Their chief occupations—stockbreeding and grain growing—were carried on with difficulty until underground tunnels were cut in the subsoil along the sides of the hills. Drainage was always a problem in Latium and around Rome. Originally, it seems, the Latins held some thirty-odd villages on the hilltops that dotted the plain of Latium.

Among these hills was a cluster of seven on the south bank of the Tiber River where it turned toward the sea, a strategic location controlling the crossing of the river and defending the plain from northern invaders. Probably the first village at this site was a Ligurian settlement. Another village was founded by the Sabines, who held the hill country to the northeast. Still another village was built by traders and refugees coming from the sea. And there, too, the Latins had a frontier settlement. When, after many changes, the villages coalesced, probably under Etruscan pressure or leadership, the city of Rome appeared; it may have taken its name from the word *groma*, meaning "crossroads." The traditional date of the founding of the city—753 B.C.—may have been the year when the villages united or the year when a bridge was built across the Tiber. An important factor in the rise of Rome was that it was a center


ITALY AND ROME
CAPENA
SABINES
ETRUSCANS
CARSEOLI
VEII
TIBER R.
ANIO R.
TIBUR
ROME
AEQUI
SAMNITES
PRAENESTE
LATINS
TUSCULUM
MT. ALBAN
ARICIA
ANTIUM
VOLSCIANS
POMPTINE MARSHES
TRANSALPINE GAUL
CISALPINE GAUL
VENETIA
PO R.
LIGURIA
GENUA
BONONIA
RAVENNA
ILLYRIA
LIGURIAN SEA
PISAE
ETRURIA
UMBRIA
TIBER R.
PICENUM
ADRIATIC SEA
CORSICA
LALIA
VEII
ROME
OSTIA
LATIUM
PRAENESTE
SAMNIUM
APPIAN WAY
CAPUA
CANNAE
APULIA
BENEVENTUM
CUMAE
PUTEOLI
CAMPANIA
VENUSIA
APPIAN WAY
BRUNDISIUM
CALABRIA
TARENTUM
LUCANIA
SARDINIA
HERACLEA
CARALES
TYRRHENIAN SEA
TERINA
CROTON
BRUTIUM
MESSANA
PANORMUS
SICILY
IONIAN SEA
MEDITERRANEAN SEA
AGRIGENTUM
SYRACUSE
CARTHAGE

from which roads were extended, first in the parcel of land the city held and later into adjacent areas on all sides. Originally roads led *from*, not *to*, Rome. However, in the eighth and seventh centuries B.C. Rome was a minor community among the several centers of urban culture in Italy. Indeed, its people and those of Latium were backward in comparison with those of other Italian areas:

> . . . At the earliest recoverable stage the Romans were a mixed people, metal-using barbarians, understanding simple agriculture and owning domestic animals, knowing enough to mark off their land and build some sort of a little town where their king could rule them and they could beat off an attacking enemy. They had but little trade and little higher culture, if they had either at all, but that some foreign influences filtered through is clear when we examine their earliest cults and find some things common to them and other Italian peoples, some things which look Greek, and a few, though this is an extremely thorny question, which suggest the influence, highly probable in itself, of mighty Etruria.[1]

The Foundations of the Roman Republic.

The beginnings of the Latin cultural tradition were embedded in the social and political evolution which created the early Roman Republic; in fact, its core consisted mainly of political and legal forms which took shape as Rome first rose to prominence. The continuity of political and legal development was the distinctive characteristic of the Latin cultural tradition.[2]

1. *Early Roman Social and Political Organization.* Cato the Elder (*ca.* 234–149 B.C.), a defender of the old Roman way of life when Hellenistic influences were running high in Italy, declared, "To our ancestors a good man meant a good farmer." He also specified the essential quality of the good farmer, "Make money out of everything: whatever is not wanted in the house, whatever is past its work—old oxen, sick cattle, wool, hides, worn out implements, old or invalid slaves—must be sold." By necessity in the early days when the Latins were a migrating people and intertribal warfare was more or less constant, the good farmer was

[1] H. J. Rose, "Who were the Romans? Evidences from Religion," *Greece & Rome*, Vol. 4 (1936), p. 167; David Randall-MacIver, "The Forerunners of the Romans," *Antiquity*, Vol. 2 (1928), pp. 26–36; 133–146; Joshua Whatmough, *The Foundations of Roman Italy* (1937); Leon Homo, *Primitive Italy and the Beginning of Roman Imperialism* (1927).

[2] On the general history of the Roman Republic and Latin culture see Frank G. Moore, *The Roman's World* (1936); Max Cary, *A History of Rome down to the Reign of Constantine* (1936); M. Rostovtzeff, *A History of the Ancient World*, Vol. 2, *Rome* (1927); André Piganiol, *La Conquête Romaine* (1927); and J. Vogt, *Die Römische Republik* (1932).

also a soldier. Farming and warfare were from the first the leading occupations of Latium and Rome.[1]

As the father of the family—*paterfamilias*—the Latin soldier-farmer was priest, lawgiver, and the sole owner of property. His wife and children, even the eldest son, were chattels over whom he held rights of life and death. Family morality was as severe as the power of the father was great. Cato the Elder said that the paterfamilias should never bathe in the presence of his sons. Besides the patriarchial family the chief social institution was the *gens*, a collection of families claiming descent from a common ancestor. From an early date dependents known as *clientes* (clients), or listeners, *i.e.*, they served when called, were associated with each gens. Some of these dependents were serfs and some were freemen. When villages coalesced into a city, a magistracy, *i.e.*, a body of officials, a priesthood, *i.e.*, a ministry of the communal religion, and an organized military force were created. These social and political forms were the starting point of an evolution which soon produced sharp social distinctions. Although each paterfamilias was an owner of land, the villages undoubtedly held lands which were under communal control. And the priests received income from sacred lands. Property in human beings was recognized, and enslavement for debt was practiced. The villages possessed assemblies to which the freemen were admitted. A king, advised by a council of elders, stood at the head of a loose tribal organization of the villages.

2. *The Effects of the Etruscan Conquest of Rome.* In the last half of the seventh century B.C. Rome was seized by the Etruscans, and it was ruled for over a century by foreign kings; in the Roman tradition they were designated the Tarquins. Under their rule Rome first came into contact with the Mediterranean world. Commerce expanded, Greek products became common, and Greek, as well as Etruscan, artisans were brought into the city to work on the public buildings which the Tarquins constructed. They fortified the city, laid sewers, and erected a number of temples which were larger than those of any other Etruscan city. The building of a temple to Jupiter, as well as temples to several other gods, transferred the religious center of Latium from the Alban Hills to Rome and thus laid a religious basis for the extension of Roman control over the plain.

[1] On the early Roman Republic see Howard M. Scullard, *A History of the Roman World from 753 to 146 B.C.* (1935); *The Cambridge Ancient History*, Vol. 7, *The Hellenistic Monarchies and the Rise of Rome* (1928); and W. E. Heitland, *The Roman Republic* (3 vols., 2d ed., 1923).

The chief social development of the period of Etruscan rule was the differentiation of a nobility—the *patricians*—from the people—the *plebeians*. The patricians were the heads of families in the old warrior clans; also, of course, they were the large landowners. The plebeians, in contrast, were the "multitude" of poor farmers, humble traders and more wealthy merchants, clients who had lost their patrons, and foreigners attracted to the city. The patricians bore most of the burdens of the state, especially the duty of serving in the army, and possessed all political privileges. Roman tradition testified to this differentiation by affirming that one of the Tarquins, Servius Tullius (fl. *ca.* 550 B.C.), reorganized the army, forming five classes based on wealth and admitting the plebeians to the less well armed classes. However introduced, these reforms put an end to the gentes as exclusive military organizations and established in terms of military service a relation between the state and the people. Other social developments, which reflected the Eastern origin of the Etruscans, were the introduction of forced labor, a growth of slavery, and the organization of industrial artisans in guilds in the Assyrian manner. Throughout the sixth century B.C. when it seemed that the Etruscans might unify the entire peninsula, Rome advanced in both wealth and power. The Etruscans, probably, were the true founders of Roman might.

3. *The Establishment of the Roman Republic.* Late in the sixth century B.C. the Tarquins were expelled from Rome by the patricians, who, it seems, had the support of the Greek enemies of the Etruscans in southern Italy. The revolution may have had origin in the patrician hostility to the military reforms which gave the plebeians a place in the state; at any rate the patricians followed up their victory with the organization of a republic exclusively under their control. At its head, in place of the king, stood two *consuls*, each of whom possessed the royal power to command the army, *i.e.*, the *imperium*, and the right to veto the acts of the other. When they disagreed the ancient council of elders, which had advised the king, now the *senate*, dealt with the issue. The senate was the chief instrument of the patrician class; from an advisory body it developed into a supervisory body, approving legislation and determining policy. The political monopoly of the patricians also included the enforcement of the legal tradition, which was unwritten, and the preservation of the religious tradition. They held all of the important religious offices in the state. Within the nobility a smaller inner circle of families tended to hold the consular offices. Altogether the patrician gentes formed perhaps only

about one-tenth of the free population when the republic was founded.

The only popular institution was an assembly—the *comitia curiata*—based on a grouping of families; this was called together to ratify acts of the consuls, and to it a citizen condemned to death or exile could appeal. The senate held a right of veto over its acts, and many of its members who were clients were unable to vote against the patricians.

At the outset of its career the Roman Republic was a timocracy based on landed wealth. Its rulers, the patricians, were the owners of large estates; the bulk of its citizens consisted of farmers who cared little for learning and art and much for material wealth and military power. They understood well the use of wealth to safeguard political power and the use of political power to increase wealth.

The Struggle of the Patricians and Plebeians for the Control of the Roman Republic.

The Roman account of the struggle between the patricians and plebeians for the control of the state was put together only in the late second century B.C., and undoubtedly many of its elements were highly colored. Behind them, however, is to be seen a long contest in which social and economic developments affected political movements and foreign relations reacted on the domestic situation. The trend of all developments was the increase of plebeian power.[1]

1. *The Political Emergence of the Plebeians.* The immediate reaction to the patrician control of the republic was a drawing together of the plebeian elements. The social origins of the plebeians are uncertain, but the most important groups among them seem to have been the small farmers of Latium and traders who, having contacts with Greece, introduced certain Greek deities and made their temples the center of plebeian organization. The economic developments of the fifth century B.C. were unfavorable to these groups.[2] The expulsion of the Etruscans led to a neglect of the

[1] On the struggle of the patricians and plebeians see *The Cambridge Ancient History*, Vol. 7, *The Hellenistic Monarchies and the Rise of Rome* (1928), Chap. XIV, "The Early Republic," and Chap. XVI, "The Making of a United State"; also Stephan Brassloff, *Sozialpolitische Motive in der Römischen Rechtsentwicklung* (1933).

[2] J. Holland Rose, "Patricians and Plebeians at Rome," *The Journal of Roman History*, Vol. 12 (1922), pp. 105–133: "The land was largely taken up, and the owners were naturally the class which was originally wealthiest, the patricians. Now came exclusiveness, and the closing of the ranks of the nobility. The result of this was that the *plebs urbana* comprised,

drainage system. Deforestation, erosion, and exhaustion of fertility reduced the productivity of the soil. Although an improved variety of wheat introduced from Greece led to baked bread's displacing porridge as a common food, supplies were inadequate, famines occurred, and the problem of obtaining grain from foreign sources appeared. Under these circumstances a shift from grain growing and stockbreeding to keeping vineyards and olive groves took place, and, as in Greece, because the planting of vineyards and groves required large outlays of capital without immediate return, the small farmer was placed at a disadvantage. To make the shift he often had to borrow from a large landowner, with the result that, when he was unable to repay the loan, he lost his land and was sold into slavery. At this time the Romans, including the senators, as well as the Latins, tilled their own fields; they had little interest in trade and, except for the occasional need to obtain food from outside sources, sought generally to maintain a self-sufficient household economy.

From the political point of view the plebeians were underprivileged citizens. They had many grievances. They were at the mercy of the patrician courts which enforced the unwritten law. They could not vote in the assembly. They could not be elected magistrates. They were not allowed to marry patricians. They suffered under the vicious law of debt, which operated as follows. After a court order was issued against a creditor, he had thirty days to pay a debt. At the end of that period, if the debt were unpaid, the creditor could bind him with thongs and fetters weighing at least fifteen pounds and hold him in bondage for sixty days. Three times during this period the creditor led him to the market place and proclaimed the amount of his debt. If, after the third

not simply the poor of the town, who might be turbulent but hardly a serious danger, but the plebeian merchants of wealth and standing, who were dissatisfied to see their cults grudgingly allowed a place on the Aventine, or elsewhere *extra pomerium*, and themselves a precarious footing on the verge of the citizen body. The country also, no doubt, was in a state of economic discontent. The frequent wars meant no more than loss to the rich man, with only part of his capital locked up in fields which could be plundered or stock which could be driven away. They were ruin for the small farmer, with no extra capital; and things were made worse for him because he was forced to borrow from the richer landholder, to whom, rather than to the more distant town-dweller, he would be likely to turn. The only small men in the country who would not suffer much would be the immediate retainers, the *clientes* in the narrower sense, of the patricians—who traditionally vote patrician.

"So we have the materials for the traditional quarrels. On the one hand, the *plebs urbana* could furnish leaders, rich, able, and with a decided grievance. On the other hand, the *plebs rustica* could produce a sturdy rank and file, probably much more numerous than the townsmen, with still more urgent grievances to redress. The redistribution of political power became the only alternative to anarchy."

exposure, the debt remained unpaid or security for its payment had not been given, the creditor could give the defaulter up for capital punishment or sell him into slavery across the Tiber. If there were more than one creditor, they could cut the debtor into pieces in order to satisfy their claims. Usually, the debtor was enslaved. Finally, the plebeians were treated unfairly in the disposal of public lands. Originally, it seems, the patricians never assigned public lands to plebeians. Public lands were leased to patricians, and the magistrates were lax in collecting rents. Furthermore, inasmuch as the title to land once leased descended from father to son, patrician practice amounted to a monopoly. In other words, lands confiscated from defeated enemies were appropriated by the patricians, despite the fact that the plebeians had fought in the wars that won them.

The plebeians found a lever against the patricians in a refusal to perform military service when the patricians, beset by foreign dangers, called upon them for aid. The plebeians said, "They have stripped us of our farms, they have carried our brethren into bondage, and now they call upon us to fight their battles." This the plebeians were not unwilling to do for a price, for they had a stake to defend. The price, of course, was reform. The plebeian program was sevenfold: (1) the mitigation of the law of debt, (2) a share of the public lands, (3) a codification of the law, (4) the right of marriage with patricians, (5) the admission to the magistracies and the senate, (6) the right to participate in making laws, and (7) the admission to the priesthood on terms of equality with the patricians. The intention of the program was to establish a complete equality of rights. The achievement of these aims was the slow work of about two and a half centuries, and most of the successes of the plebeians were won either at the beginning or at the end of a war, at which times the well-to-do plebeians used the economic grievances of the poorer plebeians in order to agitate for their own political advancement. The crises of the struggle were the withdrawals of the plebeians from the city, somewhat in the manner of a modern general strike. Roman tradition recorded the occurrence of such secessions in 494, 449, and 287 B.C.

2. *The Political Reforms of the Fifth Century B.C.* Although plebeian pressure for reforms along these lines began to grow shortly after the founding of the republic, few gains were made until the middle of the fifth century B.C. Perhaps the reform, traditionally dated 495–494 B.C., which established the *tribunate*, an office whose incumbent was charged with protecting plebeians

in the patrician courts, involved the freeing of peasants held as serfs. Controversy over the law led finally to the displacement of the consuls by a commission of ten, known as the *decemvirs*, which, after temporizing for ten years, issued the code known as the Twelve Tables, about 450 B.C. Plebeian opposition forced the appointment of a new commission, with plebeian members, which modified in some respects the provisions of the code, and shortly brought about the restoration of the consuls and tribunes.

The Twelve Tables were little more than a statement of ancient customs. They provided safeguards against arbitrary judicial action and affirmed the right of an accused citizen liable to the punishment of death or exile to appeal to the people. Although the code stated the law of debt and made somewhat easier the buying, selling, and willing of property, actually it did little to alleviate economic distress, for nothing was done to make more difficult the falling into debt or more easy the payment of a debt once it was incurred. Indeed, the problem of debt was ceasing to be strictly a matter of patrician-plebeian contention, for a body of rich plebeians whose economic interests were similar to those of the patricians was appearing.[1] The code affirmed the political privileges of the patricians, as well as the prohibition against plebeians marrying patricians.

Dissatisfied with the concession of a written law, the rural and urban plebeians united in 449 B.C., made their own assembly—the *consilium plebis tributum*, or a plebeian assembly of tribes—a legislative body, and set up their own judicial officers, the plebeian *aediles*. These moves forced the patricians to further action. On the basis of the new military technology of the Greek type and a census of citizens, the five military classes were redefined, and the *comitia centuriata*, or assembly of centuries, originally the inspection parade of the army, was made a political body. Actually, it seems, this body never coincided with the military composition of the centuries; in other words, it was from the first a political, not a military, body. The amounts of the fines levied by patrician magistrates were limited, the right of a citizen condemned to death or exile to appeal to the assembly of tribes was recognized, and resolutions of the assembly of tribes, if approved by the senate,

[1] Paul Louis, *Ancient Rome at Work* (1927), p. 86: "It may be conceived that the question of debts was for numerous reasons one of the fundamental problems of Roman antiquity, and that it will be found at the base of all social developments from the downfall of the monarchy to the laws of Licinius, and also, during the second period of the history, until the civil wars of the first century." By permission of Alfred A. Knopf, Inc., New York and George Routledge & Sons, Ltd., London.

became law. In 445 B.C. the legality of the marriage of a plebeian and a patrician was established.

In the same year a proposal to open the consulship to plebeians began a struggle for the control of the magistracies. The patricians countered the proposal with a measure providing for the election of military tribunes having the power to command armies, the office to be open to both patricians and plebeians. This compromise saved the consulship but led to the frequent election of military tribunes instead of consuls. In the seventy-eight years between 444 and 366 B.C. the substitution occurred no less than fifty times. Patricians also countered the plebeian pressure for admission to the magistracies with the delegation of parts of consular authority to new officials. Thus in 435 B.C. the office of *censor*, whose incumbent was charged with making the census upon which enrollment in the army was based and with filling vacancies in the senate, was set up; and in 430 B.C. the office of *dictator*, carrying absolute power for a six-month period, was introduced.

But the plebeian advance was not halted by these moves. In 427 B.C. the comitia centuriata was recognized as having the power to declare war. In 421 B.C. the number of *quaestors*, who had charge of military funds, was increased from two to four, and plebeians were admitted to the office. About this time also the practice of paying citizens for military service was introduced.

Throughout these struggles the primary objective of the patricians was to preserve their monopoly of the consulship. A growing division in the ranks of the plebeians played into their hands. The rich plebeians, who desired the opening of the consulship, broke with the poor plebeians, who sought land reform. The redefinition of the military classes led to the admission of well-to-do plebeians, if they owned land, to the highest military order, the *equestrian*, or knightly, rank. By the creation of the censorship and dictatorship the patrician retained control of (1) the composition of the senate and (2) the supreme command in time of crisis.

Except as the assemblies and tribunate increased in importance, the plebeians as a group gained little. The patrician assertion that the admission of plebeians to the consulship would pollute the office reflected the religious orientation of the state; in this connection it should be emphasized that the monopoly of religious offices, because no action was ever undertaken without omens, gave the nobility final control over state policies.

3. *The Fusion of the Patrician and Plebeian Interests in the Fourth Century B.C.* Social, economic, and military factors combined in

the fourth century B.C. to advance the interests of the plebeians, or rather the interests of the well-to-do plebeians, although the patricians resisted every step; ultimately the interests of the two groups were united in the rule that took form as Roman control was extended over Italy.

Constant wars—against the Etruscans, the Celts, the Samnites, and the Greek cities—imposed heavy burdens on the Romans, patricians and plebeians alike. Many of the patrician gentes disappeared, and the proportion of nobles in the population constantly decreased. Invasions destroyed the farms of the small owners, and campaigns, ever farther afield, took them away from their farms. At the same time, although the marshes spread, part of Latium became an arid plain. Under these changed conditions stock raising, which found winter pasturage on the plains and summer pasturage in newly conquered highlands, began to develop; like the keeping of vineyards and olive groves, this type of husbandry called for an amount of capital not possessed by the small farmers. From 390 to 360 B.C. no distribution of new allotments of lands was made. The patricians and rich plebeians profited most from these changes in agriculture, as well as from the military victories that brought new lands to the state. The land question became acute.

Although the Romans and Latins played little part in their development, both industry and commerce expanded. The manufacture of weapons was a by-product of the constant warfare. The trade in grain grew as stock raising became more important. These changes led to the increase of movable wealth, most of which accumulated in the hands of the growing body of wealthy plebeians. Through contact with its Etruscan and Greek neighbors, Rome came to use money. The Twelve Tables described the *as*, a bar of copper which circulated by weight. The first true coins issued in the name of Rome were struck at Capua late in the fourth century B.C. Silver coins were not minted until 268 B.C. and gold only in 206 B.C. Many other Italian cities issued coins during the fourth century B.C.

The patricians, it should be noted, controlled the issue of money. Throughout this period of the republic, money, it seems, was considerably overvalued in relation to other commodities, and patrician policy aimed to keep it so. This policy, together with the spread of the price system and credit transactions, placed the plebeians, especially the artisans, traders, and small farmers, who had only the products of labor to sell, at a disadvantage in the

market. Credit was the great instrument of the well to do against the poor. Thus the patricians and rich plebeians were able to make financial manipulation quite as much the means of exploitation as political power and judicial authority had been.

The crisis precipitated by the capture of Rome by the Celts in 390 B.C. gave the plebeians an opportunity to press for both economic and political reforms. Later wars kept the opportunity constantly open. Some patricians, it should be noted, favored reform.

The plebeian agitation came to a head in the struggle over the proposals of the tribunes C. Licinius Stolo and L. Sextius which dragged through the decade from 376 to 367 B.C. During these years the well-to-do plebeians forced the election of military tribunes for five consecutive years; they did not hesitate to agitate the economic grievances of the poor plebeians in order to gain their support. Victories in the north contributed considerably to the final winning of the concessions embodied in the Licinian laws of 367 B.C. The economic reforms provided that (1) no citizen should hold more than three hundred acres of public land or pasture on it more than one hundred cattle or five hundred sheep, (2) each landlord should employ a proportion of free laborers, and (3) the interest already paid on a debt should be deducted from the principal and the period for final payment should be extended three years. The political reforms abolished the military tribunate, opened one consular position to the plebeians, and divided the responsibility for the keeping of the oracles equally between the patricians and the plebeians. These political reforms gave the plebeians a voice in determining state policy as well as a part in carrying it out. The economic reforms opened the way for the poor farmers to share in the lands won by warfare. Between 343 and 264 B.C., it is estimated, at least forty thousand Roman families benefited from the allotments of public lands. Thus success in war became the means of remedying the economic crisis; and, of course, the improvement of the economic position of the plebeians contributed to their further advance. In spite of the fact that the laws dealing with land and free labor were not well enforced, the Licinian legislation strengthened the small farmers, whose fighting qualities were the fundamental source of Rome's power.

Throughout the remainder of the fourth century B.C. many laws favorable to the plebeians were passed. In 357 B.C. a maximum interest rate of 10 per cent was fixed; a decade later the rate was reduced to 5 per cent; and in 342 B.C., as a result of a revolt of the army in Campania, interest was abolished. At the same time booty

was distributed and colonies in which the small farmers received allotments were founded. In 326 B.C. a creditor was required to accept in payment any property a debtor offered and was forced to obtain a court order before selling a debtor into slavery. In 313 B.C. the right of a creditor to seize a debtor was abolished, and men in prison for debt were released. In 304 B.C. an easier method of instituting a lawsuit was introduced.

The political advance of the plebeians, evidenced by the enactment of such laws, affected every part of the government.

Perhaps most important in this advance was the transformation of the assemblies. In 366 B.C., when the plebeians first chose a consul, the assembly of tribes gained the right to elect quaestors. In 358 B.C. the patricians recognized it as a legislative body, and in 339 B.C. the plebiscite became binding on both plebeians and patricians. In 312 B.C., when the census first took account of movable property, the well-to-do plebeians were generally admitted to the highest ranks in the assembly of centuries; since its five classes voted by rank and in order of rank, the richest and oldest citizens controlled it. Practically this meant that the plebeian yeomen, not the patricians, were in the saddle. As these assemblies grew in importance, the ancient comitia curiata lost most of its functions.

The admission of plebeians to the magistracies followed rapidly after the election of the first plebeian consul. In 366 B.C. plebeians were elected curule aediles; these officials, along with the plebeian aediles, were charged with supervising the markets and streets. The first plebeian dictator was chosen in 356 B.C., the first plebeian censor in 351 B.C., and the first plebeian praetor in 337 B.C. This last office had been created in 366 B.C. in order to keep judicial proceedings in the hands of the patricians. After 342 B.C. one of the consuls was almost always a plebeian, and in 300 B.C. the priestly offices were opened to plebeians.

The final step in the political advance of the plebeians was their admission to the senate. After 366 B.C., as a result of the opening of the magistracies to the plebeians, the number of plebeians having had political experience constantly increased. When and under what circumstances they began to be admitted to the senate is not known. The patricians, who resisted their admission, undertook, after winning the censorship in 312 B.C., to counterbalance their influence by admitting rich freedmen, *i.e.*, liberated slaves, to the senate and by distributing poor freedmen through the tribes. In 304 B.C. a patrician-plebeian combination acting in the interests of landowners repealed this legislation.

The senate and the assemblies became the stronghold of the landowning groups, and in a short time a new aristocracy, based on wealth gained from agricultural enterprises requiring large capital outlays or in tax farming, trade, and industry, was formed. After 340 B.C. the rise of "new men" who had proved themselves "good soldiers" was rapid; chief among them, it seems, were men from the Latin cities. For a time, however, the small landowners, augmented in numbers and enriched a little by victorious wars, shared with the new aristocracy both power and wealth. The height of their influence was reached in 287 B.C., when they forced not only the abrogation of the senate's power to veto plebiscites but also additional relief for debtors and a further distribution of land.

"When the struggle of the orders at long last reached its end, the poor could count their gains with a certain satisfaction. Nevertheless the only issue to which the struggle brought a final settlement was different—the issue raised by the claims of the rich plebeians to the high offices of the State."[1] The outcome of the patrician-plebeian conflict was not an adjustment between the rich and the poor but a new combination among the rich. The decisive factor in bringing about this result was probably the decline of the patrician families whose members had stubbornly refused to intermarry with the plebeians. By the end of the fourth century B.C. the proportion of patricians to plebeians was perhaps not more than 1 to 20.[2]

A brief summary of the political organization of the Roman Republic at the opening of the third century B.C. will make clear its timocratic character.

The Roman Timocracy. When studying the Roman Republic, as well as all other ancient governments, it should be remembered that it was organized not under a formal constitution, as is the Federal government of the United States, but under a mass of customs, precedents, procedures, and laws somewhat after the manner of the English limited monarchy. The central fact in its organization was that participation in political activity was always related to wealth holding, so that as the composition of the group possessing considerable wealth, the forms of wealth, and the modes of acquiring wealth changed, both political institutions and policies were altered. However, throughout the struggles in whose course these alterations were made, old political forms were generally preserved so that new economic interests and tradition were adapted to one another, and if political innovation occurred, it too was

[1] *The Cambridge Ancient History*, Vol. 7, *The Hellenistic Monarchies and the Rise of Rome* (1928), p. 546. By permission of the Cambridge University Press.

[2] Max Cary, *A History of Rome down to the Reign of Constantine* (1935), p. 107.

adjusted to tradition. Thus in Roman politics social conflicts having origin in changing economic life begot a continuity of political evolution.[1]

The citizens of the early Roman Republic were a body of freemen recognized as having social, economic, and political rights because of membership in the tribes that made up the city of Rome. Membership in these tribes gave citizenship, but its rights were not exercised equally by all citizens. Originally the patricians possessed full political, social, and economic rights; the plebeians enjoyed full economic rights, while the clients were bound in many ways to the patricians. The rights of citizenship were extended by manumission or by special grant to those not entitled to them by birth. Slaves became freedmen with rights of citizenship by the first method; the leading men in the Latin towns were the first new citizens admitted by the second method. However, if in the course of the struggle between the patricians and plebeians political rights were extended to new persons, it should be realized that the institutions through which they were exercised were arranged in a manner which gave a greater voice in government to well-to-do than to poor citizens. In other words, although the body of fully privileged citizens changed, the government remained a timocracy.

The chief social right of the Roman citizen was the right to marry within the body of citizens. The economic rights established a system of private property; they were the rights to acquire both chattels and real property, to buy and sell them, to give and take mortgages, and to bequeath property by a will. The political rights were to sit and vote in the assemblies and to be elected to the magistracies. Civil liberties, except for the right of a citizen condemned to death or exile by a magistrate to appeal to the citizens, were sharply limited. Citizens assembled only on the call of a magistrate, and no one was permitted to speak at a public meeting except the magistrate who called it or those whom he authorized or compelled to speak. Magistrates were careful to avoid making arbitrary arrests and holding citizens in custody without legal charges. Because family law gave the father almost complete power over all members of the family, the exercise of these rights was not possible by those subject to his will except with his approval. In contrast to the modern system of individual liberties in democratic countries, the rights of Roman citizenship were regarded as having an independent existence apart from persons: they were legal entities, not the attributes of an individual. The chief obligations of the Roman citizen were to pay taxes and to serve in the army; the latter was a far heavier burden than the former, for the general practice of public finance was to pay the expenses of the state from revenues other than taxes imposed on citizens.

[1] On the constitutional development of the Roman Republic see H. F. Jolowicz, *Historical Introduction to the Study of Roman Law* (1932); Leon Homo, *Roman Political Institutions* (1929); A. H. J. Greenidge, *Roman Public Life* (1901); G. W. Botsford, *The Roman Assemblies from their Origin to the End of the Republic* (1909); John Edwin Sandys, editor, *A Companion to Latin Studies* (3d ed., 1938); A. N. Sherwin-White, *The Roman Citizenship* (1939).

The original assembly of the Roman people was the *comitia curiata*, based on the *curiae*, or groups of families, which originally confirmed magistrates holding the power of command, acted on the appeals of citizens sentenced to death or exile, registered wills, and performed certain religious duties. As time went on it lost more and more of its functions.

During the struggle of the orders two new bodies developed: (1) the *comitia centuriata*, or assembly of centuries, and (2) the *comitia tributa*, or assembly of tribes.

The comitia centuriata was based on the army, for its five classes of centuries corresponded to classes of citizens differentiated according to the type of military service they performed. Since each citizen equipped himself for war, these classes necessarily reflected the distribution of wealth. Such a classification was introduced in the last half of the fifth century B.C., when Greek military methods were borrowed; then, also, the census was established. At first it took account only of land; later it included all kinds of property. Age distinctions were also considered in the grouping of the citizens in the centuries. Sons, it seems, were placed in the centuries of their fathers. The original centuries, numbering 193, were classed as follows:

The equestrians or knights (cavalry): 18 centuries
The first class (cavalry): 80 centuries
The second class (heavy armed infantry): 20 centuries
The third class (heavy armed infantry): 20 centuries
The fourth class (heavy armed infantry): 20 centuries
The fifth class (light armed infantry): 30 centuries
Attached to the second class (craftsmen and carpenters): 2 centuries
Attached to the fourth class (bandsmen): 2 centuries
Only for the defense of the city (proletarians): 1 century

Since in the total number of centuries the first two classes had a majority —98 out of 193—the other classes, composed of lesser wealth holders, seldom attended the meetings of the assembly. In the third century B.C., when the centuries were increased to 373, the equestrians and the first three classes constituted a majority. This change, due to the expansion of Roman power over Italy and the consequent confiscation and distribution of lands, reflected the economic advance of the small landholders.

The comitia tributa consisted of both patricians and plebeians, assembled on the basis of their membership in the tribes. Sometime in the fourth century B.C. the tribes were grouped in urban and rural divisions. In 304 B.C. the landless citizens were enrolled in the four urban tribes; as Roman territory expanded, the number of rural tribes increased, until in 241 B.C. they numbered thirty-one. Thus there came to be thirty-five tribes in all. Because the number of patricians constantly decreased, their influence in the comitia tributa declined; as the power of the plebeians grew, the role of the comitia tributa became more important.

Representation in the assemblies was by groups, for a citizen voted only as a member of a century or a tribe. Because the assemblies possessed no power to initiate legislation, they dealt only with matters placed before them by magistrates, and the individual members, except as called upon by the magistrates, did not possess the right to speak. All meetings were held in Rome, with the result that citizens on campaigns or residing at a distance from the city found attendance difficult. Although judicial and financial, as well as legislative, matters were placed before the assemblies, their most important function was to elect the magistrates who were the active heads of the state.

The original magistrates of the Roman Republic—the two *consuls*—held the ancient powers of the king, chief of which was the power of command over the army, *i.e.*, the *imperium*. In the field this power was absolute; within the city certain limits were imposed upon its exercise. The consuls were elected by the comitia centuriata for a term of one year; the comitia curiata confirmed their imperium. Each consul could veto the act of the other. Usually, however, they took turns at exercising the powers of their office or divided its functions so that each had a sphere of action. As time went on the duties of the consulship became more and more military in character.

The *tribunate* was the direct product of the struggle between the patricians and the plebeians. Originally there were five tribunes, later ten, and all were plebeians. Their primary duty was to protect the plebeians prosecuted in the courts of the patricians. They were required always to keep open the doors of their houses and never to sleep outside the city. They had the rights to veto the act of any magistrate and to prosecute any magistrate after he had left office. As time went on they came to exert more and more influence upon legislation because of their power to convene the assemblies. They also sat in the senate. The tribunate, which was more important as an instrument in party warfare than as a magistracy, was by no means always at the service of the people; in fact, the nobles were commonly able to find a tribune to oppose his veto to a line of action proposed by another tribune.

The *aediles* were municipal officers charged with cleaning the city, repairing roads and public buildings, maintaining supplies of water and grain, regulating the market, providing games, and hearing minor criminal cases. At first the aediles were plebeians; later patrician aediles were created and the comitia centuriata was given the power to fill the office. The aediles could not call an assembly.

Four magistracies were created—the *dictatorship*, the *censorship*, the *praetorship*, and the *quaestorship*—in the course of the patrician-plebeian conflicts and the extension of Roman power over Italy.

The dictatorship was established in order to centralize the power of command in times of crisis; the term of the office was only six months. The senate suggested the appointment of a dictator, and the consuls named

him. Only men who had held the consulship were eligible to the office. At the close of the third century B.C. the dictatorship fell into disuse.

The censorship became the most respected office of the republic; only former consuls were eligible, and usually only those of the highest character and reputation were elected. The power of election was exercised by the comitia centuriata. The censor's powers were (1) to take the census which fixed the military status of citizens, (2) to make up the list of senators, (3) to levy the taxes citizens were required to pay, and (4) to collect the revenues of the state. In taking the census the censor had the right to demote a citizen from a higher to a lower class or to exclude him entirely from voting. Also he could remove individuals from the list of those eligible to sit in the senate. In assessing taxes the censor could impose special values on the various kinds of property of different citizens. Such actions were based on personal attributes of citizens, such as cowardice in the field, brutality in private life, the misuse of public funds, and excessive luxury. The censor gathered the revenues of the state by selling the right to collect taxes in stipulated areas to individuals, who, having paid a fixed sum for this privilege, hoped to take in more than they had paid out. Tax farming became a lucrative business and a growing evil as Roman power was extended. The censor also let contracts for building roads and public works. No appeal from decisions of the censor was allowed. The term of the censorship, which was filled every five years, was only eighteen months.

The *praetor* was a deputy of the consuls. His duties were to exercise their civil jurisdiction, which involved the arrangement of the list of citizens to serve on juries and the settlement of the preliminaries of civil suits. Although the praetor was not a judge he became the head of the judiciary. His edict, issued at the beginning of his term of one year, became the declared law for that period, and through it, as issued from year to year, legal development was greatly facilitated. The praetor was elected by the comitia centuriata. His exercise of the imperium was limited to a fixed area; in time, therefore, praetors, as the representatives of the consuls, became the governors of provinces. Although the power was rarely exercised, a praetor could assemble the comitia centuriata and the senate.

As financial assistants to the consuls, the *quaestors* served as the treasurers of the state. The original quaestors, two in number, remained in Rome; as military operations were extended, two were added to accompany armies in the field. They had charge of disposing of booty and dividing it, as well as of the payment of sums authorized to be expended by the consuls. They also represented the consuls in criminal cases.

These civil and military offices formed a series, known as the *cursus honorum*, through which an individual passed in order as he achieved political prestige. The order of offices was the quaestorship, the patrician aedileship or the plebeian tribunate, the praetorship, and the consulship.

After a Roman citizen had served a military apprenticeship of ten years, from age seventeen to age twenty-seven, he became eligible for the quaestorship; then he progressed through the cursus honorum with at least two years elapsing between the terms of the different offices. In 342 B.C. a law forbidding holding two offices simultaneously was passed. A law of 330 B.C. which provided for a lapse of ten years between an individual's terms as consul was repeatedly suspended. Magistrates were subject to prosecution for their official conduct after their terms had expired. The cursus honorum served to create and maintain experienced leadership at the head of the state; at the same time, however, it operated to keep the magistracies in the hands of a small group, whose members, drawn from the patricians and well-to-do plebeians, were powerful in the assemblies. In this connection it should be emphasized that all magistrates, except the dictator and his deputy, the *magister equitum* or master of horse, were elective officers.

The unifying factor in the government of the Roman Republic was the senate, whose members, once they were designated to sit, held office for life. Originally they had been the heads of the patrician gentes. But in time they came to be the heads of the wealthy and politically powerful families, plebeian as well as patrician. In fact, the senate was a continuing body representing the aristocracy of wealth from which the magistrates were chosen, and most of the individual senators had served in the magistracies. Under the monarchy the senators were appointed by the king, under the early republic by the consuls, and after 367 B.C. by the censor. Traditionally they numbered three hundred. The power of the senate was based, therefore, not so much on law as on the prestige of its members and on the conventions which gave it authority in every field of government.

All legislative, judicial, and financial aets of the assemblies were subject to the senate's ratification. The magistrates, guided by convention, did not use their power without consulting it. New legislation was not brought before the assemblies until it had been debated by the senators. The assemblies, it should be remembered, did not have the power to debate or amend legislative proposals. The senate also dispensed laws and extended the terms of the magistrates who served in the provinces. Except through indirect influence exerted on members of the assemblies, the senate had little power over elections. It chose only one official, the *interrex*, who, when both consuls died, was empowered to hold elections. Under the late republic the passage of a resolution known as the *senatus consultum ultimum* authorized the consuls to put citizens to death without appeal; it established a kind of martial law. The financial powers of the senate included the approval of expenditures, the authorization of the taxes levied on citizens by the consuls, and the disposal of state properties, especially lands. In foreign affairs declarations of war were made by the comitia centuriata, but the senate negotiated peace. As

Rome's territories increased the government of the provinces passed under the senate's supervision. The state cult was also under the control of the senate; in fact, the chief religious officials, the *pontifex maximus* and the *augurs*, acted more or less as its standing committees. Religious business took precedence over all other matters in the senate's deliberations.

The senate conducted its business under the presidency of one or the other of the magistrates, usually a consul or a tribune. It met only at the call of a magistrate and dealt only with the business he placed before it. As the numbers of conveners multiplied, it became possible, of course, to find a magistrate to assemble the senate for almost any purpose. When fixing the list of senators, the censor, who usually acted on the principle of seniority, determined the order of speakers. Thus the oldest and most distinguished leaders of the republic were always heard first in the senate's deliberations. The effect of these procedures, together with the cursus honorum and the relatively closed membership of the senate, was to give wealth, birth, and age primacy in the state: the senate, the heart of the Roman Republic, was also the apex of the Roman social pyramid. It was not a representative assembly; it was a social body possessing wide powers of government.

Last but not least in the operation of the Roman Republic was the fact that action was always taken under the guidance of auspices, *i.e.* signs which were regarded as indicating the approval or disapproval of the gods. The right of looking for auspices—*spectio*—belonged to every Roman citizen, but only patrician magistrates exercised it in public affairs. After plebeians were admitted to the consulship they were permitted to exercise it under a legal fiction. The signs watched for were the flight or sounds of birds, the cackling of sacred chickens (regarded as significant in military matters), and phenomena in the sky. Signs were given only to the magistrates having the right to look for them, but wise men—augurs—learned in an unwritten lore of omens, could be called upon to interpret them. Once the augurs were called in, their decision was final. At each meeting of the assemblies the augurs took appointed stations and, upon signs which they observed, could adjourn or postpone the meeting. They had the exclusive power to determine whether, from the religious point of view, a proposal had an unconstitutional flaw in it. The political importance of the college of augurs made its membership much sought after. The college of pontifices, headed by the pontifex maximus, regulated the calendar and maintained the purity of rituals, both of which were extremely important in the conduct of secular affairs. The pontifex maximus also read the prodigies, *i.e.*, the signs sent as divine warnings. At first two patricians and later an equal number of patricians and plebeians kept the Sibylline Books, oracles in the Greek language, which the senate commonly ordered to be consulted when a calamity, such as a pestilence or an earthquake, occurred; from them was learned, it was believed, the form of expiation which, as indicated by the calamity, was necessary in the sight

of the gods. These practices gave the priests a powerful position in the state, especially in regard to the determination of policy. Since the pontifices and the augurs formed self-perpetuating bodies composed of patricians until late in the history of the republic, the manipulation of the auspices by the nobles was long an important factor in the maintenance of aristocratic power.

Finally, in connection with the religious influence in the Roman Republic, it should be understood that government itself was regarded as a mode of realizing the will of the gods. The city, it was believed, had been founded and had grown powerful under favorable auspices, and the safety of the state depended on their continued observation and correct interpretation. The duty of the senate, magistrates, pontifices and augurs, and assemblies was to follow their guidance.

The Bases of Latin Culture.

The basic elements in Latin culture were derived mainly from the peasant-village culture that was common to the Italic peoples; their development in the Latin cultural tradition was influenced continuously not only by the circumstances which accompanied the expansion of Rome but also by the assimilation of materials from eastern Mediterranean sources.

1. *The Religion of Rome.* Like all religions at the base of urban cultures, the Roman religion was an orientation of primitive beliefs.[1] The daimonic universe was conceived as an array of spirits —*numina*—which manifested their power, good and evil, in the natural world, and the function of worship was to maintain a right relation between them and men. The feelings of fear, awe, and scrupulousness which animated the Romans and Latins in their dealings with the spirits gave meaning to the word *religio*, from which the English term "religion" is derived; the word also meant to the Romans and the Latins a strict regard for the practices and rituals through which right relations with the spirits were maintained. The qualities of the religious person were summated in the word *pius*, from which such English words as "pious" and "piety" stem; it described the individual who, knowing the will of the spirits, conformed to it in his personal, family, and political behavior. These feelings pervaded every aspect of Latin culture.

Three groups of spirits were prominent in the beliefs of the Romans and Latins: (1) the gods of the household, (2) the gods of

[1] See W. W. Fowler, *The Religious Experience of the Roman People from the Earliest Times to the Age of Augustus* (1911); Cyril Bailey, *Phases of Religion in Ancient Rome* (1932); Franz Altheim, *A History of Roman Religion* (1938); and R. S. Conway, *Ancient Italy and Modern Religion* (1933).

agriculture, and (3) the gods of the state. It should also be pointed out that ancestral spirits—*manes*—although not worshiped, formed a ghostly host, partly harmful and partly kindly, which was regarded with religious feeling. The chief deities of the household were Vesta, the goddess of the hearth and the guardian of the family, the penates, the guardians of the storeroom, Janus, the god of the doorway, the lar (later the lares), the guardian of the homestead, and Silvanus, the protector of boundaries of the fields. At every important occasion in family life one or another of these gods was worshiped. Among the agricultural deities were Saturnus, the spirit of sowing, Flora, the goddess of flowers, Pomona, the goddess of fruits, Ceres, the goddess of crops, especially the grains, and Pales, the protectress of herds and cattle. These deities either presided over the processes of tillage and husbandry or guarded their products. Jupiter, a sky-god, was the supreme god and protector of the Roman state; Juno, his consort, was the patroness of women. Tellus, an earth-goddess, was the guardian of the fertility of the soil. Mars, a non-Indo-European deity, was the peculiar military god of the Romans; a field—Campus Martius—along the east bank of the Tiber was dedicated to him. There the army gathered whenever it was called for duty. A second military god, Quirinus, shared with Mars the military loyalty of the Romans. Mars and Vesta seem originally to have been exclusively gods of the Latins, until they were adopted by the Italian peoples during their early contacts with Rome. From these deities, especially those of the state, issued a divine law—*ius divinum*—to which men and state adhered; under it men lived in a peace of the gods—*pax deorum*—which was a state of material well-being among the people and of physical power for the state.

The Roman priest was regarded as a person especially set apart to perform the rituals and make the sacrifices necessary to the maintenance of the *pax deorum*. The *flamines* were priests devoted to the service of particular gods, especially of the state cult. The *flamen dialis*, the chief priest of Jupiter, was hedged about with a great number of tabus. He was forbidden ever to see an army in military array, to touch a horse, a dog, or a goat, to eat wheaten flour or leavened bread, or to wear clothing tied with knots. His hair was cut only by a freeman using a bronze knife. Special tabus also governed the conduct of his wife, who shared with him a life devoted entirely to divine service. As previously noted, the *pontifices*, headed by the pontifex maximus, were the guardians of the calendar and the law. The calendar, which indicated the

religious festivals, reflected the agricultural base of Roman and Latin life; for example, on April 15 a pregnant cow was sacrificed in order to promote fertility, on April 19 the ceremony of transferring cattle from winter pasturage to spring grazing was performed, and on April 25 the god who prevented red mildew on wheat was propitiated. Other groups of priests, like the augurs, had special functions. The vestal virgins kept a sacred fire burning continually on the state altar of Vesta. Men were excluded from the temple of Vesta, and her priestesses were subjected to a severe discipline, including physical punishment for faults.

The Roman priests were originally drawn from patrician families, and the admission of the plebeians to the priesthoods did not significantly weaken their hold on the position of religious power in the state. During the fourth and third centuries B.C. the priests multiplied ceremonies in what may be regarded, perhaps, as an attempt "to rivet the yoke of priestly formalism on the life of the individual as well as on the life of the state as a whole"; this effort may be understood as a patrician religious reaction to the political advance of the plebeians.

Inasmuch as the Roman deities never possessed the anthropomorphic traits and somewhat licentious characteristics of the Greek gods, the elaboration of religious formulas tended to emphasize their power as an abstract quality and to disassociate them from matters of daily life. Except as they stood guard over custom and law, they were not interested in morality, at any rate not in ethical problems. On the contrary, they were concerned greatly with public actions affecting the state; the Romans understood their history as a chain of actions which had occurred under the direction of the gods. Like the Hebrews, the Romans believed that the in-group was protected and guided by the divine will.[1] And all government and religion functioned only to maintain this protection and guidance. Among the most colorful ceremonies of a religion that became more colorful as it became more formal were the processions of purification around places which were regarded as having been the scene of a violation of the pax deorum. The dependence of the magistrates upon omens and prodigies in making decisions about state policy was merely the chief manifestation of this

[1] Franz Altheim, *A History of Roman Religion* (1938), p. 199: "From the very first, the Romans must have represented their history to themselves as a chain of actions, which were guided by constant indications from the gods and, through unwearied questioning in accordance with those indications, were brought into harmony with the divine will." By permission of Methuen & Co., Ltd., London.

fundamental element in Roman religion. Although custom established a stern personal morality, individual religious aspiration was alien to the mind of the Romans. There is little trace in Roman religion of any quest other than the pursuit of worldly well-being and power.

2. *The Beginnings of Latin Literate Learning.* Latin was the language of the men of Latium, and until well into the third century B.C. it was one among the many dialects spoken by the Italian peoples. Its victory over these dialects was a by-product of the expansion of the Roman state.

The Romans borrowed the alphabet from the Etruscans, who, in turn, had taken over the western Greek alphabet from Cumae. When the Romans first learned writing is not known. The oldest inscriptions in Latin date from either the late seventh century or the early sixth century B.C. The earliest inscription from Rome, on a stele found in the Forum, is dated in the sixth century B.C. At that time the Romans used an alphabet of twenty-one letters; later they added two—the short *u* and *z*, making a total of twenty-three letters. In late republican times they developed a monumental script, consisting entirely of capitals, from which the capitals of the modern alphabets based on the Latin are derived.[1]

The effect of writing upon Latin learning was neither rapid nor far-reaching. It undoubtedly contributed a great deal to the priestly elaboration of religious formulas and impelled the demand for the codification of the law. As evidenced by the Twelve Tables, a terse prose style had been developed by the fifth century B.C., but there was no Latin literature until two centuries later. The roots of epic poetry and history were in the ballads sung at banquet tables. The rise of popular political influence fostered the growth of oratory. In the third century B.C., after the senatorial orations began to be recorded, a literary education came to be a mark of distinction among the new aristocrats.

The Romans of the early republic had very limited intellectual interests. Education was carried on in the family, first by the mother and later by the father. The father undertook to make his sons like himself, and, in the main, it may be believed that he succeeded. Morality was inculcated and patriotism was awakened by word of mouth and example. Occupations and military exercises were learned firsthand under the father's supervision. Older boys were kept with their fathers constantly. After the introduction of

[1] B. L. Ullman, *Ancient Writing and Its Influence* (1932); Frederick G. Kenyon, *Books and Readers in Ancient Greece and Rome* (1932).

the alphabet enough writing, reading, and arithmetic were taught to serve the practical interests of the farm and the state. Law, always the possession of the patricians, was taught by rote. The obvious aim of early Latin education was to perpetuate without modification the traditional modes of life.

3. *The Origin of the Roman Legal Tradition.* Theoretically Roman law began with the legislation of the ancient kings; actually it was grounded in the customs of the family and the gens and preserved as a sacred tradition by the patricians and the pontifices of the state cult. It is impossible to overestimate the influence of the priests on the early development of the law. Modes of procedure, regarded as secrets, were closely guarded by the pontifex maximus. Early distinctions between the religious, public, criminal, and civil branches of the law were important for its future development.[1]

As previously noted, the social and economic changes of the fifth and fourth centuries B.C., which impelled Rome's expansion, also promoted alterations in the laws, and under their influence the Twelve Tables were drawn up. This code, for which examples were found in the Greek cities, has not survived as a whole; it is known only from parts pieced together from many sources. It was largely a compilation of private law for a community of small landowners who had little commerce and few intellectual interests. Although based on tradition, it embodied departures that kept the law abreast of changing economic conditions. Rules of sale, contracts, loans, mortgages, and trusts were dealt with in a way favorable to commercial interests. By a legal fiction sales on credit were recognized as binding. Clauses which made easier the emancipation of slaves and their purchase of freedom were introduced. In the criminal provisions the traditional right of an injured party was displaced by a right to collect damages. The agricultural interest retained the prohibition against the use of charms against a neighbor's field and the punishment of hanging for the crime of cutting a neighbor's corn at night. The law of debt was stated without significant modification.[2]

At the outset of Roman legal development the law was a class law, dominated by the rights of property and burdened with distinctions among classes in terms of punishments for crimes. Just

[1] H. F. Jolowicz, *Historical Introduction to the Study of Roman Law* (1932); F. P. Walton, *Historical Introduction to the Roman Law* (4th ed., rev. 1920), Joseph Declareuil, *Rome the Law Giver* (1927).

[2] E. H. Warmington, *Remains of Old Latin*, Vol. 3 (1938), pp. 425–515: "The Twelve Tables or the Law of the Twelve Tables."

as the public law failed to establish a system of civil liberties, so the early private law left the person as a human being less favorably placed than the person as a property owner. It did not recognize freedom of trade or unrestricted social intercourse. The Twelve Tables established equality before the law among the citizens. The development of the law proceeded more by interpretation than by legislation; and over it the priests, patrician judges, and magistrates exercised an almost unchecked influence. As codified tradition the Twelve Tables became the enduring form of the *ius civile*, *i.e.*, the law of citizens, but it did not supplant the oral legal tradition, which, because it persisted, made possible the development of the law under changing social and intellectual influences. The Romans, it should be emphasized, were always loath to abandon any part of their legal tradition. Inasmuch as the law was the field of learning to which the Romans made their truly significant contributions, the Twelve Tables may be recognized as the beginning of their high intellectual tradition; their literate learning preserved throughout its entire development the aristocratic, legalistic, and practical elements contained in this code.[1]

4. *Cultural Diffusion among the Latins and Romans.* From the first, Latin culture developed under the influence of foreign materials. Roman religion, ceremonials, and divination were greatly indebted to the Etruscans. The first temples at Rome were built by the Etruscan kings, and the Roman religious calendar was probably based on Etruscan precedents. The insignia of the magistrates, even the trappings of a triumphant general, were originally Etruscan. And the details of urban life as it first developed at Rome were undoubtedly borrowed from the Etruscan cities.

After the expulsion of the Tarquins, Greek influence for a time ran high. Some Greek deities, such as Tellus, Ceres, and Flora, were introduced, and many Greek words—*camera* (arch), *machina* (engine), *techina* (device), *talentum* (talent), and *ampulla* (jar)—were borrowed. The general result of this borrowing was to make the vocabulary of the life of pleasure Greek, while the vocabulary of the serious life remained Latin. The channel of these borrowings was the developing trade in the hands of the plebeians.[2]

During the fifth and fourth centuries B.C. Latin culture remained only one among the several local Italian cultures. This

[1] See Stephan Brassloff, *Sozialpolitische Motive in der römischen Rechtsentwicklung* (1933).

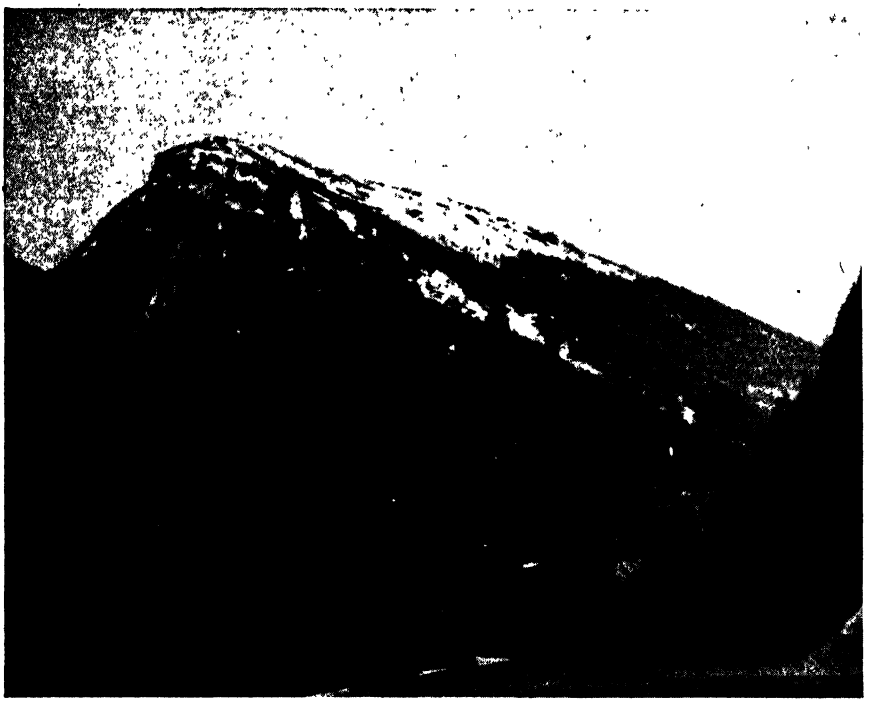
[2] See A. Meillet, *Esquisse d'une histoire de la langue latine* (1928).

circumstance led to a further assimilation of Etruscan and Italian materials, and each victory over a neighbor was probably accompanied by some diffusion of its culture among the conquerors. For example, after the fall of Veii, its goddess was brought to Rome and enshrined in a new temple.

Rome's advance southward, which brought it into direct contact with the cities of Magna Graecia, opened the way for a rapid diffusion of Greek culture. It may be said to have begun in 291 B.C., when, upon the advice of the keepers of the Sibylline Books, the cult of Asklepios, the Greek healing god, was brought to Rome. This action, it is interesting to note, was taken after Rome had suffered greatly from a pestilence. Later in the third century B.C. new shrines were erected to Tellus, the earth-goddess, and Flora, the goddess of flowers, who were among the deities admitted into Rome during the early period of Greek influence. From such beginnings followed the spread of Greek artistic, literary, and intellectual materials which gave content to Rome's nonmaterial culture, and soon Egyptian and Asiatic materials flowed with them. Thus Rome entered upon the main role it was to play in the development of the Western cultural tradition, namely, the chief agent of the assimilation of materials from all parts of the Mediterranean Basin and the ancient-oriental lands into a uniform culture and of its diffusion among the peasant-village peoples of western and central Europe. This role was ultimately far more important than the career of conquest for which Rome is chiefly remembered.

THE EMERGENCE OF WESTERN EUROPEAN PEOPLES

The emergence of western European peoples of literate times was bound up with the diffusion of ironworking. The route by which this metallurgical technique reached central and western Europe is at present unknown. The first European iron-using culture, known as the Hallstatt, developed in the eastern Alps sometime, it seems, shortly before the opening of the first millennium B.C. and spread eastward, northward, and westward. By the close of the ninth century B.C. iron was in general use throughout central Europe. Italian influences were prominent at this time. In the sixth century B.C. the second ironworking culture, known as the La Tène, arose in southwestern Germany and eastern France. It was largely a product of a mixing of Greek traits diffused from Massilia with the older native culture. The Greek influence was mainly stylistic, although it also brought coinage, wheeled vehicles, and



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BRENNER PASS

Across this pass in the eastern Alps, peoples and cultures have moved both north and south for over 4,000 years. Because Europe is a land of many local regions, not too easily accessible to one another, its cultures have always possessed a diversity which has obscured their fundamental unity.

alphabetical writing. By the late fifth century B.C., when the La Tène culture had spread more or less uniformly over the heart of Europe, the fundamental patterns of peasant life that were to endure until modern times had been organized.

The Celts.

Although no single center of origin of the Celtic peoples has been found, they appear to have sprung from a fusion of the diverse peoples who made their way into southwestern Germany, the upper Rhine valley, and eastern France early in the second millennium B.C. As masters of the western branch of the bronze industry of central Europe, they became powerful and, about 1200 B.C., began

to spread. By the opening of the first millennium B.C. they held a broad band of territory across central Europe. To the north they reached Britain and Denmark. On the south they disturbed the related peoples in older settlements, pushing the Iberians into Spain and the Italic tribes into Italy. In the course of these movements Europe's first ironworking culture arose; its founders seem to have been Illyrian salt miners, but the Celts soon borrowed its techniques and specialized in the manufacture of knives, spears, and swords. Bronze continued to be used for domestic utensils.

The social organization of the Celts was based on the clan, headed by a chief whose hereditary position was made secure by prowess in war. Village assemblies controlled local affairs and, on occasion, could depose the chief. Originally the clans, it may be believed, were democratic, but as wealth increased a nobility emerged, and the chief tended to become a king. These developments may be understood as effects of the increase of wealth that came with the diffusion of ironworking. By the eighth century B.C. the Celts had developed a tribal polity of nobles, priests, craftsmen, and peasants. Their typical community was a slightly fortified village. Foreign merchants and smiths, whom they regarded with superstitious awe, led a wandering existence among them. Raids and counterraids were incessant.

A second expansion movement of the Celts got under way about the opening of the seventh century B.C. Permanent settlements were made in Gaul, from Burgundy to Brittany. Britain was invaded a secont time, and Spain was penetrated. The Alpine lake dwellers were driven into the forests, and other Alpine tribes were forced into Italy. The conquest of Gaul was completed about 500 B.C. Celtic power in the central Danube valley was firmly established about two centuries later.

This enlargement of the Celtic world was followed by a cultural advance, chiefly stimulated by Greek materials coming through Massilia, northern Italy, and the lower Danubian lands. Perhaps Greek coins reached Gaul about 600 B.C. and Greek vases a century later. The chariot was introduced and, somewhat later still, writing became known. Iron was used for the implements of the peasant, the tools of the smith, the mason, and the carpenter, the utensils of the cook and the butcher, as well as the weapons of the warrior. The La Tène culture was almost completely the work of the Celts.

The chief intellectual element in Celtic culture was a religion characterized by a lively sense of the daimonic universe which peopled every spot and nook with fairies, sprites, and goblins. The

colorful folklore of western Europe was derived mainly from this source. This religion was ministered by priests who, late in Celtic preliterate times, became known as the Druids. They cared for numerous holy places, preserved a verbal tradition (which, after the introduction of writing, they did not allow to be recorded), kept a calendar—marked by many lucky and unlucky days, and performed sacrifices to gods who demanded human victims. They practiced divination by reading the death struggles of a man struck one blow in the back with a heavy sword. They had no idols. Most of their sanctuaries, which became rich in metal treasure, were clearings in forests. In the third or second century before Christ the Druids seem to have developed an organization which transcended the clans, tribes, and federations and became, especially in Gaul, a more or less cohesive priesthood under a hierarchical government, headed by an Archdruid, who held office for life. The authority of this hierarchy, which was based on the right to deny the individual religious ministration, was exercised chiefly through judicial functions.[1]

THE GERMANS.

To the northeast of the early Celtic lands the pastoral Indo-Europeans who had reached the north German plain and southern Scandivania from the east early in the second millennium B.C. became the main element in the Germanic stock. Perhaps this stock had become clearly differentiated in southern Scandinavia as early as 1500 B.C. When the early Germans began the use of bronze toward the close of the first millennium B.C., they also began an expansion which carried them southward and westward. In the eighth century B.C. they occupied the right bank of the Rhine; in the fifth century B.C. they crossed the Rhine just above its mouth and made the area now known as Belgium into a "no man's land." The Celts met their advance with fortifications that closed the upper Rhine valley. By the fourth century B.C. they had expelled the Celts from the lands north of the mountains in central Germany. During these centuries the Germans divided into three groups—the Cimbri, who held the lands in western Germany bordering the Celtic area, the Goths, who inhabited northern

[1] On the Celts and Celtic culture see Georg Kraft, "The Origin of the Kelts," *Antiquity*, Vol. 3 (1929), pp. 33–44; J. M. de Navarro, "Massilia and Early Celtic Culture," *Antiquity*, Vol. 2 (1928), pp. 423 *ff.*; Henri Hubert, *The Rise of the Celts* (1934); T. D. Kendrick, *The Druids: A study in Keltic prehistory* (1927); and *The Cambridge Ancient History*, Vol. 7, *The Hellenistic Monarchies and the Rise of Rome* (1928), Chap. II, "The Coming of the Celts."

Germany and southern Scandinavia, and the Teutons, who are first met in the Oder valley.[1]

The early Germans—mainly peasants, husbandmen, and hunters—were, above all, warriors. They lived in temporary villages, practiced a few crafts, and developed a poor art. They borrowed the Hallstatt ironworking techniques about the middle of the first millennium B.C. and kept them until well into the second century B.C. The earliest German use of alphabetical signs—*runes*—was derived, it is now believed, from an Etruscan source.[2]

[1] See C. S. Elston, *The Earliest Relations between the Celts and the Germans* (1934).
[2] Franz Altheim, *A History of Roman Religion* (1938), p. 273.

Chapter X

THE GREEK DEFINITION OF THE WESTERN HIGH INTELLECTUAL TRADITION

Every element of the Western high intellectual tradition bears witness to the achievements of the Greeks. In literature, art, religion, philosophy, and science Western men of literate learning have thought, at least in some manner and often in a fundamental manner, as the Greeks thought. For this reason it can be said that the Greeks defined the high intellectual tradition of the Western world. To say this does not mean that this tradition, even from its origin, did not have other elements; it does mean that the Greek elements have been its core and that its development has followed lines originally indicated by the Greeks. A cultural tradition, it should be understood, does not consist only of materials which endure; it consists also of potentialities of development which are realized as new social conditions arise. The Western high intellectual tradition has always contained Greek materials, but, further, it has undergone developments which these elements, at least in part, made possible. In fact, the three great elaborations of the Western high intellectual tradition—the religious orientation which took form in Christianity, the literary-artistic-philosophical renovation which is identified with the Renaissance and Reformation, and the more recent scientific transformation—each had some of its roots in Greek potentialities. Today, when Western men, under the stresses of the unprecedented social conditions that have arisen with great industrial cities and world-wide social intercourse, strive to find solutions to their problems, many of them recall Greek principles and precedents. That they do this testifies more to the force of the Greek elements in Western thought than it does to the applicability of these elements to present conditions.[1]

[1] Among the many surveys of Greek cultural development the following are the most useful: M. Croiset, *Hellenic Civilization* (*ca.* 1926), a simple survey; H. B. Cotterill, *Ancient*

THE IONIAN ORIGINS OF GREEK ARTISTIC AND INTELLECTUAL ACHIEVEMENTS

The Greek intellectual awakening correlative with the Hebrew, the Iranian, the Indian, and the Chinese religious and philosophical movements had roots in the Ionian cities where political conflict, commercial activity, and cultural diffusion were most intense. The Ionian Greeks were truly "an uprooted people"—indeed "a mongrel race," so badly mixed with Asiatic peoples that the Athenians disliked to be known as Ionians. They were the seafarers, the colonizers, and the traders, whose eyes were always turned toward what the aristocratic Plato called "the bitter and corrupting sea." Their cities teemed with industry and buzzed with traffic. Their streets were filled with luxury-loving men and voluptuous women. They "laughed immoderately." They walked with "unseemly movements." They made arts of amusement and indulgence. Prominent among them were the merchants, the shipowners, and the speculators, but more important, merely by virtue of numbers, were the sailors, the porters, the craftsmen, the small dealers, and the hangers-on who thronged about the wharves, in the shops and market places, and around the temples where pleasure and business were mixed with religious devotion.

Only those Greeks deeply touched by seafaring life and market activities were the bearers of the Greek genius—the two phrases "the Greek spirit" and "the commercial energy" are merely two different ways of expressing the same idea,[1] and the phases of the creative expression of the Greek genius followed, both in time and in place, the stream of maritime traffic. Seven Ionian cities claimed to have been the birthplace of Homer; it seems that he may have lived at Miletus toward the close of the period of Phoenician domination of the eastern Mediterranean coasts. Hesiod, the earliest European poet, was the son of an emigrant from Ionia to Boeotia. Many of the early poets associated with

Greece: A sketch of its art, literature, and philosophy viewed in connection with its external history (1913), the best short work; R. W. Livingstone, editor, *The Legacy of Greece* (1924), an excellent statement of the Greek contributions to Western culture; R. W. Livingstone, *The Pageant of Greece* (1924), selections from the most important Greek writers; G. W. Botsford and E. G. Sihler, *Hellenic Civilization* (1915), a useful collection of documentary materials on all phases of Greek culture; Leonard Whitbley, *A Companion to Greek Studies* (1931), the standard reference work; and W. C. Greene, *The Achievement of the Greeks* (1924), an evaluation of Greek cultural development. For concise discussions of the important figures in the development of Greek culture see William Smith, *A Classical Dictionary of Greek and Roman Biography, Mythology, and Geography*, (rev. ed., 1932).

[1] William M. Ramsay, *The Historical Geography of Asia Minor* (1890), p. 5.

Sparta were refugees from the democratic revolutions in the Ionian cities and Aegean Islands, as were also the first cultural figures of Magna Graecia. After the Persian conquest of Ionia commercial supremacy passed to the European Ionians, the Athenians. By far the greater number of the men who gave Athens the cultural leadership of the Greek world were not Athenian-born, and the flowering time of their genius was the period of greatness of Athen's sea empire.

The general tendency in modern estimates of Greek thought is to regard Athens as "the Eye of Greece, Mother of Arts and Eloquence," whereas the true source of almost every branch of literature and science, and the earliest great names in almost every department, belong to the cities and colonies of the old Ionians.[1]

Greek artistic and intellectual achievements have no racial explanation for which evidence can be produced; it can be better contended that they were the outcome of a social process in which the psychological tendencies of the Greek cities, especially those which had important colonizing and commercial roles, played not only through the Greek tradition as received from Homeric times but also through numerous cultural materials diffused from the ancient-oriental lands. The uniqueness of Greek artistic and intellectual achievement had origin, it seems, not in race but in the peculiar social and cultural conditions of the sixth and fifth centuries B.C. These conditions emerged with the Greek tyrants of the sixth century B.C. and began to pass from Greece proper in the intercity strife of the fourth century B.C. Between these two periods was the flowering time of the Greek genius.[2]

[1] W. M. Ramsay, *Asianic Elements in Greek Civilization* (1927), p. 4. By permission of John Murray, London. See also H. R. Hall, *The Ancient History of the Near East* (8th ed., 1932), p. 79; Kathleen Freeman, "Anaxagoras," *Greece & Rome*, Vol. 4 (1935), pp. 68–69: "Miletus was, for more than a century, the home of philosophy; it was itself an ancient colony of Athens and, in the sixth century before Christ, a flourishing seaport, whose sea-captains were foremost in navigation, as her intellectuals were foremost in thought. The employers and navigators brought home the facts; the thinkers collected and classified them, drew maps, wrote about them, and considered their meaning in relation to the whole." And T. B. L. Webster, "Ionia in the Sixth Century B.C.," *Greece & Rome*, Vol. 6 (1936), p. 8: "The Ionians were not heroes like the Spartans, but they gave the world lyric poetry, much painting and sculpture, science and philosophy, and above all the spirit of inquiry."

[2] M. T. McClure, "Greek Genius and Race Mixture" in *Studies in the History of Ideas* (Department of Philosophy, Columbia University) Vol. 3 (1935), p. 28: "The significant thing is that in those regions where there was the greatest amount of race mixture, namely, in Attica, Ionia, and in a very small corner of northeastern Peloponnesus, there was the highest development of Greek genius. In the outlying regions where there was the least

GREEK LITERATE LEARNING

The literary achievements of the Greeks were the expressions of the energies and moods of men and women who experienced the release from tradition that the rise of cities gave. The greatest educational institution of Greece was the public life of her cities; for the spread of literacy, as well as the diversification of intellectual interests, owed little to formal education. The cities regulated education but did not support it. Militaristic Sparta and imperialistic Athens were alike interested only in the training of "good citizens." From the first appearance of schools in Ionia—about the time of the opening of the Persian Wars—they were "private ventures," and there were never any "public school teachers" in Greece.

The required training of Athenian boys had three phases. From six to fourteen years of age they learned the letters, read great masses of poetry, memorized admonitions and laudations of great men, became familiar with music, and acquired a simple knowledge of counting. The training of the mind was balanced by a training of the body through athletic exercises. In the years from fourteen to eighteen geometry and the interpretation of poetry were standard subjects to which individuals added others as they saw fit. At eighteen the youth entered the military service for two years, usually in the frontier guard. In the fourth century B.C. Athens abandoned military training for a more diversified education in athletics and literary subjects.

Although the Greek institutions of "higher learning" were originally temple schools, like those of Babylonia and Egypt, in the secular intellectual climate of the Ionian cities they became merely groups of individuals for philosophical discussion or for conversation on topics of interest. Such groups long preserved the form of a brotherhood. With the Sophists the learning of these small groups became public property, and the centers of discussion multiplied. Often they were formed by several young men attaching themselves as pupils to an older man as teacher. However, as philosophy became an established intellectual interest, special schools for its study appeared, and in them a diversified pursuit of knowledge was undertaken. If Plato was the first "college president," as he has been called, Aristotle was the first "director of a research institution."

contact with the older culture, namely, northern and western Greece and most of the Peloponnesus, there was no intellectual development at all."

Socrates, it should be noted, spoke contemptuously of those who depended upon "books" for their knowledge, just at the time when they were becoming cheap and plentiful.[1]

GREEK LITERATURE

The literature of the Greeks was more diversified as to form and motif than the literature of their contemporaries.[2]

THE GREEK EPICS: THE ILIAD AND THE ODYSSEY.

The *Iliad* and the *Odyssey* were the culmination of the poetic efforts of the court minstrels of the early kings; undoubtedly they contained elements of Mycenaean origin and possibly some of Minoan origin. Composed in the ninth century B.C., they survived in verbal form until early in the sixth century B.C., when they were first written down. About 550 B.C. they were given a canonical rendering in Athens. The *Iliad*, concerned chiefly with an account of the wrath of Achilles, exalts the military virtues of honor, courage, discipline, and patriotism. In the scenes depicting the death and burial of Hector, the Trojan hero, the horrors of war are faithfully rendered and the sufferings of noncombatants sympathetically treated. The *Odyssey* narrates the wanderings of Odysseus and the circumstances of his homecoming, setting forth well the dangers of the sea, the tricky intelligence of successful sailors, the disorders of an ungoverned community, and the domestic virtues that the Greeks admired.

In the Homeric view men were real in both their physical and their moral qualities, and evil was mingled with virtue, stupidity with intelligence, and passion with self-control in understandable proportions. The accurate portrayal of natural phenomena, the brilliant use of simile and metaphor based on natural imagery,

[1] See J. F. Dobson, *Ancient Education and Its Meaning to Us* (1932); E. C. Moore, *The Story of Instruction: The beginnings* (1936); K. J. Freeman, *Schools of Hellas . . . 600–300 B.C.* (1907); and Frederick G. Kenyon, *Books and Readers in Ancient Greece and Rome* (1932).

[2] The standard history of Greek literature is A. Croiset and M. Croiset, *Histoire de la littérature grecque* (5 vols., 1887–1895). See also A. Croiset and M. Croiset, *Abridged History of Greek Literature* (1904); H. N. Fowler, *A History of Ancient Greek Literature* (rev. ed., 1923); Gilbert Murray, *Ancient Greek Literature* (3d ed., 1911); G. Norwood, *Greek Writers* (1923); T. A. Sinclair, *A History of Classical Greek Literature from Homer to Aristotle* (1934); J. W. A. Atkins, *Literary Criticism in Antiquity: A sketch of its development* (2 vols., 1934); and Wilhelm Schmid, *Geschichte der griechischen Literatur* (1929); T. B. L. Webster, *Greek Art and Literature* (1939). A summary account may be found in *The Cambridge Ancient History*, Vol. 4, *The Persian Empire and the West* (1930), Chap. XIV, "Greek Literature from the Eighth Century to the Persian Wars," and Vol. 5, *Athens, 478–401 B.C.* (1935), Chap. V, "Attic Drama in the Fifth Century."



By the courtesy of the Museum of Fine Arts, Boston

HOMER

This is not an actual portrait, for Homer's existence is doubtful. It is, therefore, a culture symbol, representing that combination of age, wisdom, and integrity which formed the ideal type of Greek culture.

and the detailed description of domestic activities brought even the gods to earth. At the same time men, fully aware that they faced a harsh fate, attained something more than mortal stature in a greatness of spirit and nobility of action. The imagination of Homer rose above the bounds of the merely natural, not by inventing otherworldly traits and qualities but by wedding intimate detail to majestic pattern so that both detail and pattern transcended the empirical materials of which they were fashioned. The *ideal* was only the perfected, complete form of the *real.* In

later centuries philosophers and artists were to make much of this Homeric discovery.[1]

The Homeric poems formed the core of the Greek cultural tradition. They were the primary expression of the only unity which the nation ever achieved, that of outlook and feeling. From them stemmed not only the chief religious developments but also the early philosophical speculations. They provided the chief motifs for artists and dramatists. They served as an epitome of moral knowledge, their verses falling from the lips of men on almost any occasion. And they became the source of the original literary and artistic values of the Western world.

The works of Hesiod, who expressed the peasant-minded tradition of European Greece, lacked the grace and elegance of the Homeric epics. Hesiod discussed the gods after the manner of a man seeking to impart information. The same outlook permeated his important work, *Works and Days;* it dealt with rules for farmers and sailors, calendaring the days which were best for different enterprises.[2]

Greek Lyric Poetry.

Early Greek lyric poetry was an expression of the individualism produced by economic and social revolutions of the seventh and sixth centuries B.C. Then poetry lost its epic and didactic qualities and became more personal and emotional.[3]

The chief works of the lyric poets were political verse, war and recruiting songs, love poems, lamentations, and epigrams. A somber mood, well expressed in "The Best Lot," pervaded the poems of Theognis of Megara (fl. *ca.* 545 B.C.):

> Not to be born—never to see the sun—
> No worldly blessing is a greater one!
> And the next best is speedily to die,
> And lapt beneath a load of earth to lie.

[1] See Gilbert Murray, *The Rise of the Greek Epic* (1907); A. T. Murray, *Homer The Odyssey* (2 vols., 1930); A. T. Murray, *Homer The Iliad* (2 vols., 1937); Walter Leaf, *A Companion to the Iliad for English Readers* (1892).

[2] T. A. Sinclair, *Hesiod's Works and Days* (1932); Hugh G. Evelyn-White, *Hesiod The Homeric Hymns and Homerica* (1936).

[3] C. M. Bowra, *Greek Lyric Poetry from Alcman to Simonides* (1936); W. R. Paton, *The Greek Anthology* (5 vols., 1927); J. M. Edmonds, *Elegy and Iambus, Being the Remains of All the Greek Elegiac and Iambic Poets from Callinus to Crates with the Anacreontea* (2 vols., 1931); J. M. Edmonds, *Lyra Graeca, Being the Remains of All Greek Poets from Eumelus to Timotheus, excepting Pindar* (3 vols., 1934); J. M. Edmonds, *The Greek Bucolic Poets* (1938); John Sandys, *The Odes of Pindar, Including the Principal Fragments* (1937); and E. Lobel, *Sappho* (1925).

The mood of Archilocus of Paros (fl. *ca.* 650 B.C.) was buoyant:

> Rejoice in joyous things—not overmuch
> Let grief thy bosom touch
> 'Midst evil, and still bear in mind,
> How changeful are the ways of human kind.

The greatest of the Ionian songsters was Sappho of Lesbos (fl. *ca.* 600 B.C.); just as Homer was known as "the poet," she was known as "the poetess." She gave an unrestrained expression to personal feelings of beauty and love. Anacreon of Teos (*ca.* 560–475 B.C.) dealt sweetly with the pleasures of youth, especially wine drinking.

The Ionian poets produced songs for individual recitation or singing with the accompaniment of the lyre; the Doric choral poets preserved the primitive tradition of group singing and dancing. Terpander (fl. *ca.* 676 B.C.), known as "the father of Greek music," probably introduced many musical innovations; the seven-stringed lyre, long regarded as his invention, is now known, however, to have been Minoan. Alcman (fl. *ca.* 670–630 B.C.), the chief lyric poet of Sparta, fixed the form of the choral ode, coordinating the movements of the dancers with the stanzas. Arion of Corinth (fl. *ca.* 625 B.C.) elaborated the *dithyramb*, the choral hymn to the god Dionysos, whose festivals were prominent in Greek religious life. The last and greatest of the choral poets was Pindar (*ca.* 518–448 B.C.), whom all Greece recognized as a supreme poetic genius. His hymns and odes, chiefly for celebrations of national festivals, public occasions, and victories in games, were characterized by noble feeling and magnificent phrasing.

Greek Drama.

The distinctive literary achievement of the Athenians was the drama, first the tragedy and then the comedy. Both developed from the chorus of the Dionysos worship. Late in the sixth century B.C. Thespis (fl. *ca.* 534) introduced a speaker, probably to explain episodes or incidents which were related to the movements of the dance. This innovation led to the development of a dramatic narrative. Aeschylus (*ca.* 524–456 B.C.) invented dramatic dialogue by introducing a second actor and transformed the narrative into an evolving dramatic situation having a climax. Aeschylus retold the old tales, turning them around conflicts between custom and individual desires. Custom, of course, was identified with "the will of the gods," so that religious feelings were emphasized. Dramas of this type were known as tragedies. Dramatic dialogue

was written in iambic verse. In a general sense it seems correct to see the drama as a fusion of the Dorian and Ionian poetic traditions.[1]

In 468 B.C. Sophocles (*ca.* 496–406 B.C.) introduced a third actor and the use of scenery; more important, however, was his vigorous treatment of individual characters, which necessitated the refinement of the traditional plots. Like Aeschylus he drew the subject matter of his plays from Homer. But Euripides (*ca.* 480–406 B.C.), the product of the Periclean age, peopled his plays with Athenians, used their language, and made the drama an instrument of intellectual analysis. By separating the action of the chorus from the movement of the plot he opened the way for the composition of plays with speaking parts only. He also introduced the motif of romantic love into the plots. But the intellectual quality of his work was its outstanding merit. He warred against priests, politicians, plutocrats, and imperialists with both the genius of a poet and the courage of a prophet. His younger contemporary, Aristophanes (*ca.* 448–388 B.C.), was the greatest of the comedians. Comedy, originally derived from a religious celebration, the Dionysiac revel, was at first little more than a boisterous exhibition. But with Aristophanes it became an instrument of social criticism, so much so that in 414 B.C. comedians were forbidden to comment on public affairs.

In final forms, therefore, the Greek drama can be seen as an achievement no less remarkable than the philosophical speculations which matured in the late fifth and the early fourth century B.C. Together they stand as the supreme intellectual expressions of the secular and individualistic tendencies of Greek mentality. Perhaps *The Knights* by Aristophanes and *The Trojan Women* by Euripides are satisfactory examples of a dramatic art which must always rank among the noblest literary works of Western men. Both plays were attacks on Athenian imperialism.

[1] The most complete history of the classic theater, drama, and art of acting is Margarete Bieber, *The History of the Greek and Roman Theatre* (1939); this work is exceptionally well illustrated with pictures of masks, plans of theaters, and miscellaneous representations showing players of various kinds. See also A. W. Pickard-Cambridge, *Dithyramb, Tragedy, and Comedy* (1927); R. C. Flickinger, *The Greek Theatre and Its Drama* (2d ed., 1922); G. Norwood, *Greek Tragedy* (1920); J. T. Sheppard, *Greek Tragedy* (1920); H. W. Smyth, *Aeschylus* (2 vols., 1930); F. Storr, *Sophocles* (2 vols., 1932); T. B. L. Webster, *An Introduction to Sophocles* (1936); Arthur S. Way, *Euripides* (4 vols., 1930); W. N. Bates, *Euripides, A Student of Human Nature* (1930); F. Lucas, *Euripides and His Influence* (1928); Gilbert Murray, *Euripides and His Age* (1913); B. B. Rogers, *Aristophanes* (3 vols., 1930); M. Croiset, *Aristophanes and Political Parties at Athens* (1909); L. E. Lord, *Aristophanes, His Plays and Influence* (1925); Gilbert Murray, *Aristophanes: A study* (1933).

The Knights. The plot of *The Knights* turns about the experiences of two slaves, who, having read a book of oracles, set out to find a man to overthrow the current ruler of the city. This ruler, a leather monger, has despoiled the rich, bribed the poor with doles, left the sailors unpaid, and treated the allies of the city unfairly. In accordance with the oracles, the slaves find just the candidate to upset him—an offal monger—"street-bred, brazen faced, and low." After much argument he is convinced of his mission and sets out to win the support of Demos, who is characterized as a selfish little old man who feeds on vote-beans. By means of methods even more brazen than those of the leather monger—

> 'Tis not for learning now the people call,
> Nor thoughtfulness, nor men of generous make,
> 'Tis brute beasts without conscience—

the offal monger gained the seat of government. And then he turned reformer, boiling Demos in a brew of sweet herbs and restoring an old order of justice and honor to the city. The defeated leather monger ended his days selling sausages of dogs' flesh and asses' meat.

The bitter comedy was aimed at Cleon, who, as successor to Pericles, was the foremost democratic leader in Athens from 429 B.C. to 422 B.C. As the representative of the commercial classes, he advocated a strong imperial policy and the winning of the war against Sparta at any cost. His most ruthless measure was a decree ordering the killing of the citizens of Mytilene and the selling of their wives and children into slavery; this punishment for revolt was prevented only by a quick reconsideration of the decree by the Athenian assembly. The designation "leather monger" was derived from the fact that Cleon had inherited a tannery. "The good old days" to which Aristophanes called upon Athenians to return were those of Miltiades and Aristides. Unfortunately the comedian, whose aristocratic sympathies were expressed in several other comedies, including *The Clouds*, which satirized Socrates, never revealed the contents of the boiling brew in which old Demos was purified.

The Trojan Women. This tragedy deals with the fate of the Trojan women after the fall of their city. As captives they are to become the slaves of the victorious Greeks, and the action of the play turns about the way in which three of them—Cassandra, Andromache, and Helen—meet their fate. Hecuba, the queen of Troy, serves as an instrument for interpreting their combined reactions. Cassandra, daughter of Hecuba, who is given to Agamemnon, foresees her murder by his jealous wife. Andromache, wife of Hector, is given to Pyrrhus, the son of Achilles, who had slain Hector. Not her fate but that of her youthful son, Astyanax, is supremely interesting to the poet. Hecuba urges her to accept slavery in order to bring up her son, who is the sole hope of the Trojans. But the Greeks, realizing that danger exists in allowing Astyanax to grow up, decide to kill him. The scene which describes the parting between the boy and his mother has been called "the most heart-rending in all the tragic

literature of the world." Menelaus, who reclaims Helen, decides to send her home for punishment. The play ends with Hecuba, driven from burning Troy, making her way along with the other women to the ships which are to carry them to the embraces of foreign men.

The play is a psychological study of the sufferings brought by war. Only in a most superficial manner is conquest glorious, because for victor and defeated alike its ultimate effects are cruel. And its violence only nurtures more violence. The curse of war is not physical suffering alone but utter moral desolation. Only those who, enduring war's bitterest punishments, find in anguish its true meaning gain in moral stature.

The incident which probably moved the poet to express this conviction occurred in 416 B.C. when the Athenians starved recalcitrant Melos into submission, slew its adult males, and sold their women and children into slavery. This was the punishment wrought upon a handful of Melians—Dorians like the Spartans, it is true—who, seeking to remain neutral in the war, dared to refuse the financial demands of the Athenian imperialists.

Originally the dramatic poets were also the actors. Aeschylus, who was his own chief actor, trained a second, and initiated the practice of actors speaking to the chorus. Sophocles introduced the third actor, the maximum number allowed in the classical Greek drama. Of course, the actors carried more than one role. By 460 B.C. the function of the poet and the actor had become completely separated. At Athens, after 449 B.C., the archons selected both the poets and the actors for the state plays. Comedy was originally played by nonprofessional actors and the number of actors was unlimited. In Greek acting posture rather than facial expression was the chief mode of portraying emotions, and masks, which played such a large part in the actor's art, were means of submerging the actor in a role. Like the drama itself, they were derived from primitive religious ceremonials. Actors of great reputation appeared in the fifth century B.C.; by the next century actors were regarded as more important than the poet in the presentation of a drama.

Greek History.

The literary art of prose composition began with the historians Herodotus (*ca.* 484–425 B.C.) and Thucydides (*ca.* 465–396 B.C.).

Herodotus, who chose for his subject the war between the Persians and the Greeks, wrote in order that the "great deeds of the Greeks might be long remembered."[1] Although he dealt

[1] See J. T. Shotwell, *The History of History* (1939); L. Pearson, *Early Ionian Historians* (1939); J. B. Bury, *The Ancient Greek Historians* (1909); A. J. Toynbee, *Greek Historical Thought* (1924); A. G. Godley, *Herodotus* (4 vols., 1931); C. F. Smith, *Thucydides* (4 vols., 1935); C. L. Brownson *et al.*, *Xenophon: Hellenica, Anabasis* (3 vols., 1930); G. B. Grundy,

with the history and cultures of the Asiatic peoples involved in the struggle, his treatment was essentially Homeric, especially in the sense that for the maintenance of interest he depended upon the narration of exciting episodes. Today his work is more valuable for its digressions, which describe the life and institutions of many peoples, than for its narrative of the war.

Thucydides composed a contemporary account of the Peloponnesian War. He gathered materials about its main events and wove them into a straightforward narrative. His most remarkable passages are speeches, written as he thought the various participants in the negotiations and public discussions occurring in the course of the war would have spoken. Although his own inventions, these speeches undoubtedly are true to the outlook and temper of the men to whom they were ascribed. Thucydides confined his attention to politics and war and, as a result, helped to establish them as the chief interests of future historians; Herodotus is commonly regarded as having been the first historian of civilization. Women are conspicuously absent from the pages of Thucydides; his was a man's world—indeed, the great man's world. His style, influenced by the current interest in words, grammar, and rhetoric, reveals a conscious effort to make the form of expression add to the interest of the narrative.

Xenophon (*ca.* 430–354 B.C.), an Athenian soldier, wrote a clear and lively account of the retreat of ten thousand Greek mercenaries from the heart of the Persian empire and a rather dull continuation of Thucydides' history of the Peloponnesian War. His *Memorabilia*, or Reflections of Socrates, was the first Greek effort at biography. As a whole his works, although filled with interesting details, lack the literary excellence of the compositions of his predecessors; he is sometimes regarded as the founder of the journalistic approach to history.

These authors not only created Western prose as an artistic form but also started its career of usefulness as an instrument of intellectual discourse.

GREEK ART

The earliest forms of Greek art appeared in the tenth and ninth centuries B.C.[1] Then pots were decorated with narrow bands and

Thucydides and the History of His Age (1911); and G. F. Abbott, *Thucydides: A study of historical reality* (1926). For a summary discussion see *The Cambridge Ancient History*, Vol. 5, *Athens, 478–401 B.C.*, (1935) Chap. XIV, "Herodotus and Thucydides."

[1] For a summary discussion of Greek art see *The Cambridge Ancient History*, Vol. 4, *The Persian Empire and the West* (1930), Chap. XVI, "Early Greek Art," and Vol. 5,



By the courtesy of the University of Pennsylvania Museum

HERCULES AND THE LION

This vase is an example of the style of painting which became popular in the fifth century B.C.; it is said to be the work of an Athenian artist.

geometrical designs; sometimes they were covered only with a black glaze. Both Minoan and Mycenaean forms and motifs are identifiable in this early vase painting. After 800 B.C. oriental motifs were introduced and local styles began to develop. The earliest examples of architecture and sculpture also survive from this time, and they, as well as the vase painting, reveal the simplicity of execution and the direct approach to nature which were to give

Athens, 478–401 *B.C.* (1935), Chap. XV, "Greek Art and Architecture." See also A. De-Ritter and William Deona, *Art in Grèece* (1925); H. B. Walker, *Art of the Greeks* (2d ed., 1922); and Percy Gardner, *The Principles of Greek Art* (1914).

enduring distinction to all Greek art. After the displacement of geometrical motifs, the frieze of animal and human figures became the usual decorations for vases, and finally, in the sixth century B.C., this frieze was broken up into scenes or, in some cases, reduced to a single scene. Besides its fine line and sharp angle, vase painting, which reached maturity in Attica, was distinguished by a free rendering of human, animal, and plant motifs in simple rather than elaborate decorations. Notable also were the many human types and moods introduced into the decoration. There were two distinct styles of vase painting. From 575 to 520 B.C. the figures were done in black on the natural red color of the baked clay; from 520 B.C. to the end of the fifth century B.C. they were left in the natural red color, while the backgrounds were painted in black.[1]

Except for vase painting, metalworking, and the making of terra-cotta figures, which were industrial arts, the Greek arts were mainly religious in motivation, civic in function, and monumental in design; in fact sculpture, architecture, and painting were so closely allied that they almost formed a single great art. And its makers, especially in the fifth century B.C., were more interested in the education of their fellow citizens than in art for art's sake.[2]

Greek Sculpture.

The earliest statues were carved from wooden posts.[3] Stone statuary appeared late in the seventh century B.C., and bronze came into common use about a century later. The early motifs were types—the naked male figure and the draped female figure—which stood rigidly erect, gazed straight ahead, and smiled weakly. After 550 B.C. this rigidity of treatment broke down under a rapid development of freedom of pose and action. This trend was first clearly evident in the work of Myron (fl. *ca.* 450 B.C.), whose Discus Thrower is a typical product of early fifth century B.C. sculpture. Myron's skillful treatment of the human figure modeled muscles with high accuracy and gave the effect of poised energy, ready for instant release. His efforts at facial expression were hardly suc-

[1] On Greek vase painting see C. T. Seltman, *Attic Vase Painting* (1933); E. Buschor, *Greek Vase Painting* (1922).

[2] See T. B. L. Webster, "Greek Theories of Art and Literature down to 400 B.C.," *The Classical Journal*, Vol. 33 (1938), p. 171.

[3] See Gisela M. A. Richter, *The Sculpture and Sculptors of the Greeks* (1930), for a pictorial record; R. P. Hinks, *Greek and Roman Portrait Sculpture* (1935); Stanley Casson, *The Technique of Early Greek Sculpture* (1933); A. J. B. Wace, *An Approach to Greek Sculpture* (1935); E. A. Gardner, *A Handbook of Greek Sculpture* (2d ed., 1915); C. A. Hutton, *Greek Terra Cotta Statuettes* (1899); A. H. Smith, *The Sculpture of the Parthenon* (1910); Charles Walston, *Alcamenes and the Establishment of the Classical Type in Greek Art* (1936).

cessful. Polycletus (fl. *ca.* 430 B.C.) produced numerous figures of young athletes. In his work was fully expressed that view of man—not in distemper and decay but in full possession of his physical, emotional, and intellectual powers—which was at the heart of Greek culture. The human body, it should be remembered, was always the chief motif of Greek art.

In general the fifth century B.C. treatment, although it escaped the earlier rigidity, gave only a surface impression of the body, for the flesh seemed to be made of a neutral stuff and the internal organs seemed to be lacking entirely. Phidias (*ca.* 500–432 B.C.) was famous for colossal but exquisitely finished statues of the gods. His Athena of the Parthenon was 40 feet tall, and his Zeus of Delphi, a seated figure, was nearly as high. These statues, which were placed in temples, were the one break in the unity of proportions which characterized both sculpture and architecture.

Contemporary with Phidias and also a contributor to the decoration of the Parthenon was Alcamenes (fl. *ca.* 440–402 B.C.), who, it seems, created the classic style of representing the human head. The distinctive elements of this style are the straight line from the forehead to the nose, the turning of the head downward, and the posing of the head so that it is viewed best in profile.[1]

In the fourth century B.C. Praxiteles (fl. *ca.* 370–340 B.C.) and Lysippus (fl. *ca.* 330 B.C.) carried further the free and realistic treatment of the human body. They set it in easier positions, rendered the head and face more accurately, gave the skin a luster of life, and made the pose a readiness for action itself. At the same time the conventionalized pattern of the male chest and abdomen and the heavy renderings of the hips and legs gave way to subtle blendings of muscles and a free movement of energy from the feet and legs into the body proper. The same tendencies gave a rhythmical symmetry to the female form which, still draped, seemed to be alive beneath folds that moved with the body they covered.

In addition to individual figures, groups and scenes in relief were typical products of the sculptor's art. The groups, chiefly of seated and semi-prone figures, were designed to fill the pediments of the temples. The reliefs, in which the horse was quite as prominent as man, formed the friezes that encircled the upper walls of the temples. The subjects of these compositions were drawn almost exclusively from religious sources. The fifth century B.C. sculptors also produced portrait busts, exemplified today by surviving representations of Pericles, Herodotus, Thucydides, Euripides, Socrates,

[1] See illustration facing p. 631.

and others; the portrait sculptors seem to have overemphasized the serenity and dignity of their subjects.

Statues were generally painted; blue and red were favorite colors. Often the hair, the lips, the eyes, and the drapery of a marble figure were painted, while the flesh was left uncolored. The backgrounds of the reliefs were commonly painted blue, so that the marble figures stood out in sharp contrast.

Greek Painting.

No examples of Greek painting have survived, but literary materials tell of frescoes and murals which rivaled the statuary. Polygnotus (fl. *ca.* 475–450 B.C.), influenced by Aeschylus, grouped individual figures in scenes which depicted great events such as the destruction of Troy and the battle of Marathon. He liked to picture the scene which followed great action. His techniques were simple. Distance was represented by placing figures at different levels. Besides the black and red of the vase painters he used only yellow or gold and blue; he seems to have experimented with the blending of colors. Scenes depicting death were always painted in blue. He gave considerable attention to the rendering of individuality. Apollodorus (fl. *ca.* 415 B.C.) was a pioneer in the use of shading. Zeuxis (fl. *ca.* 430 B.C.) was fond of contrasts. Apelles (fl. *ca.* 330 B.C.) excelled in the portraiture of heroes. Only the simplest elements of landscape, still life, and perspective appeared in Greek painting.

Greek Architecture.

Sculpture and painting developed as adjuncts of architecture, and in spite of their excellence architecture was the truly great art of Greece.[1] The universal structure was the temple, the house of a god. Originally, like the statues of gods, this building was made of wood, posts and beams, and mature Greek architecture remained true to its origins, all construction being based on the column and the lintel. Both design and construction were simple. The temple consisted of an inner oblong room, surrounded by pillars and covered with a low gabled roof. In the larger temples when the roof span was too wide for a beam it was supported by pillars inside the room. The beauty of the temple was chiefly external, for generally only the natural light which found entrance through the door of

[1] See D. S. Robertson, *Handbook of Greek and Roman Architecture* (1929); Edward Bell, *Hellenic Architecture: Its genesis and growth* (1920); H. L. Warren, *The Foundations of Classical Architecture* (1919); A. Marquand, *Greek Architecture* (1909); W. J. Anderson and R. P. Spiers, *The Architecture of Greece and Rome* (2d ed. rev., 1927).

the temple reached the interior, although some of the temples had apertures in the roof.

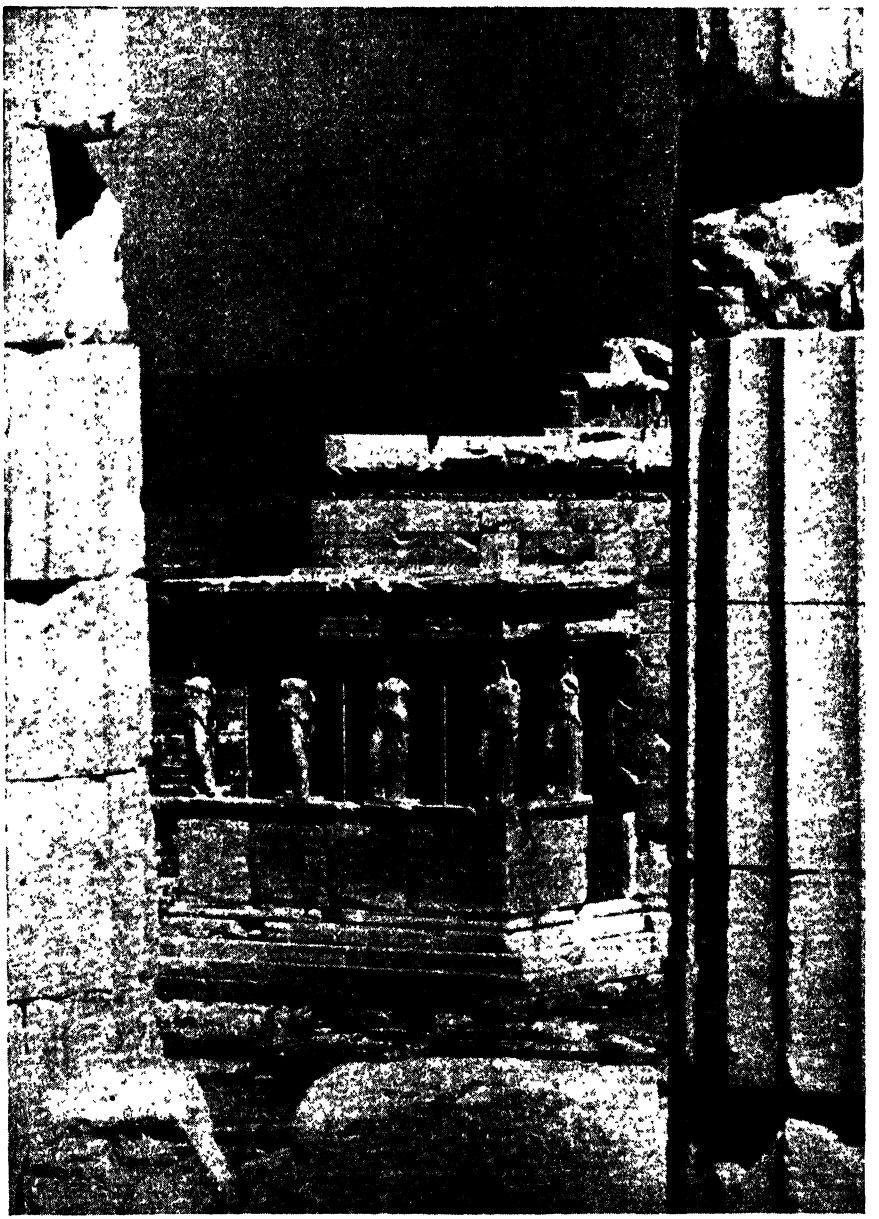
The secret of the beauty of the temple was in the relation of its parts to the whole. During the sixth and the early fifth century B.C. the proportions of the parts, particularly the diameter and height of the columns as related to the size of the temple, were worked out. Even more remarkable were such refined treatments as the outward curvatures of the columns, their inward slant from base to capital, and the upward curvature of horizontal lines, which obviated the optical illusions created by the use of straight lines. By such refinements Greek architects achieved a unity of effect in which every part blended into the whole without distortion. The use of decoration harmonized with these principles of design and construction. Statuary was usually confined to those positions which bore no stress, and relief was carried only around the uppermost portions of the walls.

These principles were worked out in three architectural styles—the Doric, the Ionic, and the Corinthian—familiarly known in types of columns. These columns were shaped partly by ancient-oriental influences. The Doric order, supreme until the end of the fifth century B.C., had its greatest exemplification in the Athenian Parthenon. This structure—the climax of Greek architecture—was designed by Ictinus (fl. *ca.* 450–430 B.C.) and decorated under the supervision of the sculptor Phidias. Apparently its Doric columns, which were built up from drums, were fitted together by grinding them one against the other. Even now in the least damaged columns the lines of the joints are barely visible. The Erechtheum was built in the Ionic style which emphasized lightness, as contrasted with the Doric solidity. The Corinthian style had origin in the desire to produce columns having symmetry on all sides.

To simplicity of construction and balance and proportion in design the Greeks added a technical perfection in execution that allowed no crudity to mar their conception of beauty. For decoration they depended upon sculptured figures in the pediments and friezes of figures in high relief, which, like the moldings that accented certain lines of their buildings, were painted. Today the ruins of the Parthenon stand as mute evidence of the aesthetic genius of a people who were artists even more than they were builders.

GREEK RELIGIOUS DEVELOPMENT

The primitive base of Greek religion was described in a preceding chapter; here it is necessary to note that as the result of



Photograph by BERT ENGEL, *Black Star*

THE ERECHTHEUM, ATHENS

In this photograph, the famous Maiden Porch of the Erechtheum is seen from between the pillars of the Parthenon.

the economic, political, and social changes of the seventh and sixth centuries B.C., especially as they produced new uncertainties of life, new religious currents appeared. The primary element in these currents was the feeling that the individual could be *close* to the gods, and their outcome was a religious reformation having two main forms: (1) the Eleusinian and Orphic mystery cults and (2) a reinterpretation of the characters and roles of the gods.[1]

THE ELEUSINIAN AND ORPHIC MYSTERIES.

The Eleusinian mysteries were elaborated from the peasant-village belief about the death and rebirth of vegetation. According to the myth of Demeter, the Earth Mother, Pluto stole Persephone, Demeter's daughter, and carried her to the underworld. When Demeter learned of the abduction she refused to return to Mount Olympus and, as a token of her mourning, forbade the fruits and grains to burgeon forth. On the men who received her kindly she bestowed favors, but to those who shunned her she brought famine. Finally she appealed to Zeus, who in order to prevent the death of all mortals undertook to bring justice to the disconsolate mother. He summoned Persephone from the underworld and questioned her. During her captivity grief had kept Persephone from eating, although Pluto had plied her with tempting foods, knowing that if she accepted his bread and salt she would thus partake of the marriage feast and be bound to him and his realm forever. And on the very day the messenger of Zeus arrived she had eaten six pomegranate seeds. For these six seeds Zeus had to award to Pluto six months of the year; for the other six months Persephone could return to her mother. Demeter, happy at her return, allowed the fruits of the earth to grow again.

Originally the worship of Demeter at Eleusis (some fifteen miles outside of Athens) was monopolized by a hereditary family of priests, but in the sixth century B.C., under Pisistratus, the mysteries celebrated there were opened to all Greeks, and the government of Athens became responsible for their conduct. Each year two celebrations were held—the "little mysteries," in the spring

[1] The history of Greek religion is treated in Clifford H. Moore, *The Religious Thought of the Greeks from Homer to the Triumph of Christianity* (1916); Martin P. Nilsson, *A History of Greek Religion* (1925); Gilbert Murray, *The Five Stages of Greek Religion* (1925); F. M. Cornford, *Greek Religious Thought* (1933), a selection of writings from various authors; Clifford H. Moore, *Ancient Beliefs in the Immortality of the Soul* (1931); E. R. Bevan, *Sibyls and Seers* (1928); A. B. Drachmann, *Atheism in Pagan Antiquity* (1922); J. M. Robertson, *A Short History of Free Thought Ancient and Modern* (3d ed., rev., 2 vols., 1914); L. E. Farnell, *Cults of the Greek States* (5 vols., 1909).

when vegetation reappeared, and the "great mysteries," in the autumn when new corn was sown. In the spring candidates for initiation were "purified." The fall celebration was a ritualistic initiation which involved (1) the bathing of the candidates in the sea, (2) their sacrifice of pigs, (3) a great procession to Eleusis, during which hymns to Bacchus were sung, (4) the presentation in the initiation chamber of a sacred drama which symbolized the marriage of Heaven and Earth and the birth of new corn, and (5) finally the hearing of sacred words and the seeing of sacred objects. Admission to full knowledge of the mysteries put the candidates in a "new frame of mind" and assured them of immortality beyond the grave. In life the individual soul had no moral responsibility, in fact no significance of any kind; after death, however, if its consciousness had been heightened by the individual's participation in the Eleusinian rituals, it had an everlasting existence far more vivid than that which Homer had envisaged for the shades in Hades.

Recent excavations at Athens have produced evidences of a deeper Asiatic influence among the Greeks in the seventh and sixth centuries B.C. than was previously believed to have occurred. As yet, however, particular influences have been neither identified nor traced.

Chief among these influences was the cult of Dionysos, originally, it seems, a primitive deity of Thrace. He was worshiped in a mad dance performed in a wild place. The central doctrine of the cult was that the soul is a god imprisoned in the body. This doctrine turned men's attention away from the life of the soul after death to the life of the soul in this world, and the result was the development of the concept "catharsis," *i.e.*, the belief that the soul, if purified of passion, can escape from the earthly prison. In the cult of Dionysos the dance, which produced a most intense religious excitement, was the means of release; later men were to elaborate many other means. When assimilated into the religion of the Olympian gods, the cult of Dionysos was associated with the worship of Apollo.

Orphism was an offshoot of the cult of Dionysos. Its purported founder, Orpheus, was probably an early priest-king, who, according to legend, having lost his wife as the result of a serpent's bite, went to Hades to bring her back to earth. The gods of the underworld, charmed by his music, permitted her to return to the upper world but stipulated that he should lead her without glancing back at her face. At the very threshold of Hades he looked back, and she

became a shade again. Some time after this episode Orpheus was supposed to have founded the cult of Dionysos. The main conceptions of this mystery were embodied in the works of the sixth century B.C. sages, Pherecydes and Onomacritus.

These conceptions formed a well-rounded theology which explained (1) the origin of heaven and earth, (2) the descent of the gods, (3) the creation of man and his nature, and (4) a life after death in which righteousness was rewarded and evil punished. According to the myth, Zagreus, son of Zeus and Persephone, was torn to pieces by the Titans. Zeus then killed the Titans, burning them to ashes, and swallowed the recovered heart of Zagreus. From this heart, as a result of Zeus's union with Semele, an earth-goddess, was born Dionysos, the god of all living things, the giver of wine, and the inspirer of passion. In the light of this legend Dionysos was twice-born. Because men had been created from the ashes of the Titans, who had eaten Zagreus, they possessed both a bit of divinity and a heritage of ancient sin. Thus men had a dual nature, part heavenly and part evil, and their lives were struggles to release the divine part, the soul, from the evil part, the body.

Fear of punishment for evil had much to do with entrance into Orphism. In contrast to the initiates of the Eleusinian mysteries, who maintained no organization, the followers of Orpheus formed brotherhoods and followed rather strict rules of daily life. The aim of these practices was to achieve, chiefly by a ceremonial asceticism and prayer, release from "the sorrowful wheel of life." According to Orphic beliefs a soul passed through many reincarnations until finally, escaping rebirth, it entered upon an immortal life in heaven. The number of reincarnations, not necessarily all in human form, was not fixed; an ordinary soul probably required ten thousand years to escape from "the wheel of life."

Orphic worship was carried on mainly in festivals, featured by choral singing and orgiastic revels.[1]

[1] On Orphism see W. K. C. Guthrie, *Orpheus and Greek Religion: A study of the Orphic movement* (1935), the most recent and best study; J. Watmough, *Orphism* (1934); *The Cambridge Ancient History*, Vol. 4, *The Persian Empire and the West* (1930) Chap. XV, "Mystery Religions and Presocratic Philosophy"; Martin P. Nilsson, "Early Orphism and Kindred Religious Movements," *Harvard Theological Review*, Vol. 28, (1935), pp. 181–230; Martin P. Nilsson, *The Age of the Early Greek Tyrants* (1936), p. 45: "It came as near as possible to a revealed religion having sacred books and certain doctrines, it had a touch of intolerance and developed perhaps something not unlike our congregations, it was a religion of the elect. It addressed itself to the poor and humble, to those who had a contrite heart and longed for justice. It taught the composite nature of man being a mixture of good and evil and his duty to conquer his Titanic nature by asceticism and righteousness. It demanded justice and the punishment of wrong-doing, if not in this world, at any rate

Analysis of the chief conceptions of these mysteries reveals that they gave a new religious importance to the individual. The leading new doctrines were: (1) the dual nature of man, the body being evil and the soul divine, (2) the corrupting character of earthly life, (3) a keen sense of the individual's spiritual helplessness, (4) the theory of the transmigration of souls, with their ultimate release from evil in heaven or punishment for evil in hell, and (5) the achievement of salvation through a knowledge of, or a communion with, a god who had died and lived again. Viewed in terms of Homeric beliefs, the central facts in this new faith were the conception of the individual soul as a profound reality and a high concern with its fate in a life after death. The new religious practices were organized in the *mystery*, a secret rite in which only privileged persons were allowed to participate. This privilege was won by a formal initiation. Each individual initiated passed through four stages: (1) a moral purification, (2) the performance of a sacrifice, (3) the preparation for the reception of a knowledge of divine things, and (4) a crowning revelation of divine things. Ordinary acts in the course of the initiation were: (1) fasting and bathing, (2) singing and reveling, (3) witnessing a symbolic drama, and (4) partaking of a sacramental food or drink. The sacred drama portrayed the life, death, and rebirth of a god; in theory, the soul of the individual witnessing this drama passed through the course of life, death, and rebirth of the god and won with him victory over death. Participation in a sacred meal made the communion with the god more intimate.

Two primitive survivals gave character to the celebration of the mysteries. Since Dionysos was the god of wine, his worship involved intoxication as a means of attaining the emotional ecstasy necessary for communion. This was a common practice among the Indo-Europeans; both the Persians and the Aryas, besides the Greeks, resorted to it. Since Dionysos was the life-giving god, his worship also involved sexual expression, and chief among

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in another, it transformed the lower world into a place of punishment by the adaptation of the demand for retribution to the old idea that the hereafter is a repetition of the present, it believed in the happier lot of the purified and the initiated. The most original ideas of the Orphics are that they scorned this life and attributed a higher value to the other life, comparing the body with a tomb in which the higher part of man, his soul, is enclosed, and that they made the individual in his relationship to guilt and retribution the centre of their teaching."

For a consideration of Greek religious developments from the point of view of the reorientation of the primitive conception of the soul see William Ellis, *The Idea of the Soul in Western Philosophy and Science* (1940).

the symbols of the cult were the male generative organs. These elements of the mysteries, repulsive to the later Christians, had their roots in the primitive concern with survival, which was possible only as, each year, children were born and food came from the earth. Two other elements of religious practice highly significant for the future appeared in the mysteries: (1) a universalist tendency—any individual recognized as morally pure could become an initiate—and (2) an ascetic tendency—by punishing the body the soul could be helped in its struggle for purity. The Orphic sects developed a mildly ascetic discipline, their members wearing only white garments, abstaining from eating eggs and beans, and refusing to bury the dead in woolen garments. Certainly most of these doctrines and practices can be best understood as reorientations of primitive beliefs about the individual and his soul, his personal relation with the spiritual overworld, and the existence of his soul in a life beyond the grave. Those social circumstances, which gave new importance to the individual in earthly affairs, also assured that his soul and its fate would become supremely important in otherworldly affairs.

In the course of the fifth century B.C. the mysteries spread through Greece and, as will be noted, were later diffused throughout the Mediterranean Basin. Indeed, inasmuch as Christianity has the general pattern of a mystery it is quite correct to see these Greek salvation cults as one of the sources from which developed the enduring religious element of the Western cultural tradition.

New Views of the Old Gods.

In the Homeric epics the feeling of the Greeks against outgroups—barbarians—was weak; after the emergence in the eighth, seventh, and sixth centuries B.C. of their poetry, music, art, and games this prejudice became the dominant element in the national feeling. It found institutional expression mainly in religious associations and the Olympian games. The religious associations clustered around the leading shrines, notably those of Apollo at Delos and Delphi, whose priests played important roles in the politics of the cities. Thus Apollo rose to prominence in the pantheon and was worshiped universally. Probably of all the gods he best symbolized the national ideal—the union of physical beauty and strength with aesthetic feeling, kindliness, and intellectual vigor. The Olympian games, celebrated in honor of Zeus and to which competitors came from all the cities, gave expression to the unity as well as the rivalry of the cities and the individualism that characterized Greek society.



Ewing Galloway

DELPHI

These are the ruins of the great shrine of Apollo, which was a center of the religious worship that, more than any other factor, except language, united the Greek people.

In the advent of Apollo as the national god was manifested the humanizing tendency which gave new character to the gods; they became less companionable and more majestic—all-seeing and powerful, supremely concerned with justice. Zeus, raised high above the other gods, became the ruler of the universe and the judge of men. His divine will established an unchanging moral order in the universe. Pindar, who along with the other poets abandoned the grosser elements of the old myths, praised the righteousness and justice of Zeus and Apollo; he also insisted that sin is always punished and visioned clearly a happy life for the dead in another world. Aeschylus gave Zeus even higher praise as a wise ruler and declared that men gain moral strength only through suffering. Sophocles had complete faith in a divine government. He was also

greatly concerned about the injustice everywhere evident in the suffering of the righteous and the prosperity of the wicked; this concern was the root of a yearning for a pure life—a yearning which became more and more powerful among all the Greeks:

> O may I live
> Sinless and pure in every word and deed
> Ordained by those firm laws, that hold their realm on high!
> Begotten of Heaven, of brightest Ether born,
> Created not of man's ephemeral mould,
> They ne'er shall sink to slumber in oblivion.
> A power of God is there, untouched by Time.

By the fifth century B.C. the Greeks had a clearer conception than the Hebrews of the afterlife which the Christians were to see as the goal of all earthly struggle; they were, however, far less certain of the earthly way of a righteous life.[1]

THE DEVELOPMENT OF GREEK PHILOSOPHY AND SCIENCE

The development of Greek thought in religious and literary circles held fast to the traditional mythology until late in the sixth century B.C., when a new intellectual trend, secular in outlook but often religiously orientated, appeared.[2] The source of this trend was the poets who undertook to explain universal order in terms of the moral action of the gods. Orphic poets, who wrote poems to explain the origin of the world, were particularly important in turning thought toward new interests. At the opening of the sixth century B.C. this trend gave rise in Miletus to a quest for a universal explanation of order and change in the physical world.[3]

The Nature Philosophers.

This quest turned about two questions: (1) What exists? (2) How does change occur? Homer had answered these questions,

[1] R. K. Hack, *God in Greek Philosophy to the Time of Socrates* (1931).

[2] The origins of Greek speculation are discussed in F. M. Cornford, *From Religion to Philosophy: A study of the origin of Western speculation* (1912).

[3] For general accounts of the history of Greek philosophy see Leon Robin, *Greek Thought and the Origins of the Scientific Spirit* (1928), the best one-volume treatment; J. M. Warbecke, *The Searching Mind of Greece* (1930); Theodor Gomperz, *Greek Thinkers* (4 vols., 1901–1913), the best extensive study; Eduard Zeller, *Die Philosophie der Griechen in ihrer geschictlichen Entwicklung* (3 parts, 6 vols., 7th ed., 1923); Eduard Zeller, *Outlines of the History of Greek Philosophy*, (14th ed., 1931), a condensation of the preceding work, with revisions; W. Windelband, *History of Ancient Philosophy* (1889), a suggestive work; Robert Adamson, *The Development of Greek Philosophy* (1908). For selections see C. M. Bakewell, *Source Book in Ancient Philosophy* (1907).

as had all primitive men, in terms of daimonism: The gods exist, and changes occur according to their whim or will. By abandoning the answers of daimonism in favor of explanations involving physical substances and processes, the early philosophers created the concept "nature" as opposed to the concept "supernature." Because they were the first thinkers to disentangle natural processes from daimonistic influences, they are known as the nature philosophers.[1]

1. *The Milesian School of Philosophy.* Thales (*ca.* 640–546 B.C.), the first of the nature philosophers, declared that originally everything was water, and that it, endowed with an animating power, assumed the forms of the natural world. He was impressed by the fact that water exists as a vapor, a fluid, and a solid, but he found no explanation for the change of one form into the other. That he had more than a fanciful conception of order in the physical universe is indicated by the fact that in 585 B.C., by interpreting Babylonian astronomical records, he prophesied an eclipse of the sun. Anaximander (*ca.* 611–547 B.C.) taught that the original material of the universe was "the boundless"—an eternal, indestructible, and divine mass from which heaven and earth arose as a result of the separation of opposites. This conception of the conflict of opposites as the universal natural process was derived, it may be believed, from two sources: (1) the state of social conflict in the Ionian cities and (2) the observation of opposites in nature, such as day and night and winter and summer. The most general form of this conflict was the opposition of hot and cold, and, in these terms, the universe was said to consist of rings of fiery bodies surrounding the cold earth. In the course of the separation of opposites, vortex motion arose as the characteristic movement of the universe. A further deduction from these propositions was a schematic view of the universe. The earth was a cylinder; men lived on its upper surface; and water, air and clouds, the stars, the moon, the sun, and the other heavenly bodies moved round it in concentric circles. This was the first advance over the Babylonian cup-and-saucer conception of the universe. Since nature, said Anaximander, never allowed opposites to annihilate each other, there was a "justice" in the universe. This justice was organized in the regularity of natural occurrences. Anaximenes (*ca.* 560–500 B.C.)

[1] On the nature philosophers see John Burnett, *Greek Philosophy*, Part I, "Thales to Plato" (1928); Robert Scoon, *Greek Philosophers before Plato* (1928); F. Enrique and G. De Santillana, "Les Ioniens et la nature des choses," *Actualités scientifiques et industrielles* (1936), No. 384, pp. 3–75; No. 385, pp. 3–66; No. 386, pp. 3–43.

brought these abstractions nearer to the physical world by conceiving that air was the original primal stuff and explaining all change as its rarification and condensation. Thus fire, clouds, water, and earth were only air having different degrees of density. Following the Homeric notion that the breath is identified with man's soul, Anaximenes held that air was not only the universal substance but also the principle of life.

The significant achievement of the Milesian school of nature philosophers was to create a view of the physical universe as a connected whole in which occurrences are regular and orderly.[1] At the same time, although abandoning traditional beliefs about the gods, they extended the attribute of divinity to all nature, conceiving that divine power moves through it.

2. *Pythagoras.* Pythagoras (*ca.* 582–507 B.C.), who is known today chiefly for the proof of the geometrical theorem that the square of the hypotenuse of a right-angled triangle is equal to the sum of the squares of its two sides, was famous in his own and immediately succeeding centuries both as a philospher and as a religious reformer. As his mathematical innovation indicates, he was familiar with the general body of secular learning that was developing in Ionia.

The source of the ideas of Pythagoras was a mingling of Orphic beliefs and the ideas of the nature philosophers, with a sharp accent on mathematical conceptions. Having discovered that musical intervals are proportional to certain numerical ratios of length of strings at the same tension, such as 2:1 for the octave, 3:2 for the fifth, and 4:3 for the fourth, he concluded that number is the essence of all things, and that man knows anything only by knowing its number. From this fact of musical harmonies he also

[1] Robert Scoon, *Greek Philosophy before Plato* (1928), pp. 16–17: "If we compare men's ideas of nature with the legalistic constitution of society at successive stages, we shall find a remarkable analogy between them. Both from Homer and the evidence of anthropology, there are discernible traces of a period in which the events of the physical world were regarded as the isolated and particular effects of a divine whim or will; and the societies in which these conceptions are found were held together by the isolated and particular ordinances of a supreme chieftain. This condition is superseded by another, represented in different degrees by Homer and the Hesiodic poems, in which certain regularities of nature, such as death and the seasons of the year, which had long been emphasized in many local cults, have been generally appreciated and are considered as the custom of the divine agents; and at the same period, the social organism is bound by the usage and custom which have been accumulating. After this, we shall not be surprised to find that the era in which societies regulated their existence more or less extensively by uniform rules of legal procedure was also that which witnessed the discovery that the outside world was likewise regulated by principles of uniform activity." By permission of the Princeton University Press.

deduced that harmony is the essential characteristic of the universe. He identified the numbers from 1 to 10 with certain facts of existence: for example, 1, as unchanging unity, was the number of "reason"; 2, as an undetermined combination, was the number of "opinion"; 3, because it included 1 and 2, was "the sacred unity"; 4, as the square of 2, was the number of "justice"; 5, as the sum of 3 and 2, was the number of "marriage"; 7, without factors or products in 10, was the number of "virginity"; and 10, including all numbers, was the number of "divinity." The universe as a whole was "the great monad." From the simple fact of odd and even numbers, he deduced that all existence is organized in the relations of opposites, of which there are ten pairs: "limited" and "unlimited," "odd" and "even," "many" and "one," "left" and "right," "female" and "male," "rest" and "motion," "curved" and "straight," "dark" and "light," "bad" and "good," and "oval" and "square." The elements of matter were conceived as having particular geometrical shapes; thus earth was a cube, fire a tetrahedron, air an octrahedron, water an icosahedron, and ether, the celestial element, a dodecahedron. When projected into astronomy, these views produced the conception of movable heavenly bodies revolving around a central fire at distances proportionate to the musical intervals; from this idea was elaborated the notion of "the music of the spheres." The process of physical change which went on in the interaction of the "limited" and the "unlimited" was thought of as the intrusion of air into a mass of earth and water.

In the light of these facts and speculations Pythagoras taught that deity exists in nature as the principle of universal order and that the soul (described as having circular motion) exists in man as the principle of harmony. Virtue was defined as the healthy state of the soul. But the soul was actually a prisoner of the body; to escape this punishment the soul progressed, in accordance with the Orphic belief in transmigration, toward perfect oneness, *i.e.*, a state in harmony with universal oneness. The motes seen dancing in the sunlight were souls awaiting entrance into bodies of men or animals. Pythagoras, like the Orphics, placed a tabu on the eating of flesh.

Pythagoras gave his ideas practical application in (1) a regimen of individual life and (2) a form of government. These were united in the brotherhood which he founded at Croton in Magna Graecia, where he fled after a democratic revolution in his native island, Samos. Similar brotherhoods were established in other cities of

western Greece. Any member who revealed their mystery, the knowledge of numbers and geometrical principles, was subject to the death penalty. The brotherhoods had the same aim as the Orphic sects upon which they were modeled and from which they borrowed rules of ascetic discipline.[1] Both sought purification of the soul through the possession of "knowledge"—the former through a beatific vision inspired by ritually directed emotions, the latter by the cooler activities of reason, specifically by the study of mathematics. Within the brotherhoods the members were organized in classes suited to their rate of advancement. Pythagoras claimed to be able to tell if a man was worthy to enter a brotherhood merely by looking at his face, for the heart, which was the thinking organ, transmitted thought through the pores in the skin. As a brother advanced in learning his soul became purer, until at last he attained perfection. To this pursuit of moral purity through intellectual effort, Pythagoras seems to have given the name "philosophy," *i.e.*, love of wisdom. As practiced in the brotherhoods "the love of wisdom" consisted of meditating on the revelation of "the master," whose intellectual and moral authority was absolute, and contemplating the beauty and goodness which were evident in the movements of the heavenly bodies. By such "theorizing" the soul was tuned to universal harmony. Since this order and harmony were known only in numbers and music, the Pythagoreans neglected the study of most natural phenomena; in fact, their master taught that below the moon the universe is chaotic and not worthy of the philosopher's interest.

By birth Pythagoras was an aristocrat, and the brotherhoods quickly undertook to exercise an influence over the governments of the cities. At Croton the brotherhood became highly exclusive and arrogant; its members refusing to extend the hand of fellowship to any but colleagues. Probably Pythagoras played only an indirect part in the political activities of the brothers. But he declared them a new aristocracy, worthy to rule because of their purity of soul. The social projection of Pythagorean teaching was a new ruling class, recruited by education but having most of the attributes of a priesthood. Thus, as was to be the case many times in the Western world, the philosopher by a little knowledge and

[1] James Adams, *The Religious Teachers of Greece* (1908), p. 193: "The great aim of the original Pythagorean brotherhood was identical with that of the Orphic communities—moral salvation or 'release' (λυσις). But whereas the Orphics endeavoured to attain this object principally by means of abstinence and ceremonial rites, Pythagoras held that the pursuit of knowledge might also contribute to spiritual emancipation." T. & T. Clarke, Edinburgh.

much theory justified the continued rule of the few over the many. Of course this rule was in the interest of universal order and social harmony, and under it all men could be happy insofar as they were able to know order and harmony. Social distress existed not because rulers were selfish or ignorant but because individuals were incapable of the purity of soul necessary for the attainment of peace and concord.

Pythagoras was the first Western teacher of the doctrine that secular knowledge has a moral value and a social function, but his fantastic ascription of soul-purifying qualities to the study of numbers, geometric patterns, and musical harmony involved an almost complete misunderstanding of the true role of secular learning. In fact, since his chief aim was to reconstitute religion, the result of his work was an interpretation of primitive beliefs in mathematical terms. Later writers described him either as the son of Apollo or as an "inspired man" and attributed to him many prophetic and miraculous powers. It would be wrong, however, not to credit Pythagoras with having contributed greatly to the development of a rational view of the universe.[1]

3. *Heraclitus.* Heraclitus of Ephesus (*ca.* 540–475 B.C.) not only repudiated the traditional mythology but also criticized the Milesian and Pythagorean theories. How, he asked, does the universal stuff, like water and air, become the many objects known to men? He objected to the Pythagorean doctrine of universal harmony on the grounds that natural phenomena everywhere seem disorderly. He answered these objections by asserting the universality of change. The fundamental fact of all existence, he held, was flux, which existed as a cosmic fire. "Fire lives the death of air; air, the death of fire; water lives the death of earth; and earth, the death of water." "God is day and night, summer and winter, peace and strife, hunger and repletion." Within the universal flux opposites changed into each other according to measure, each turning to the other in a similar proportion. Thus nature, although variable, possessed regularity.

Fire, however, was not merely flame; it was also heat, warm vapor, and breath. Thus Heraclitus identified the cosmic stuff with the human soul. The soul was best able to know universal truth when in a perfectly dry condition, for then it was able most completely to apprehend the cosmic fire which was the soul of the universe. Thus, having condemned the Milesian philosophers for

[1] See Léon Brunschvicg, "Le Rôle du pythagorisme dans l'évolution des idées," *Actualités scientifiques et industrielles* (1937), No. 446, pp. 3–25.

basing their systems on a sensory observation of transitory phenomena, Heraclitus made the gaining of knowledge a matter of insight. His thought was completely subjective. Running through all things, he proclaimed, was a universal intelligence which he called the *logos;* "fire," "deity," "soul," "insight," "law," and "virtue" were simply its manifestations. He was the first thinker to postulate a universal mind ordering nature, *i.e.*, God, in the sense now generally understood by Western men. Although the soul was the principle of intelligent self-direction, it was, on account of the universal flux of nature, constantly reincarnated. In these reincarnations, as it approached nearer to the divine fire, it glowed more and more brightly, like living embers; and as it was farther away it lost both light and heat.

Heraclitus did not introduce his doctrines into politics. But he found in them a justification of aristocratic rule. Not all men, he held, had a divine and indestructible soul—there was a natural inequality among men—and ordinary men, because they were lost in the world of sensory experience, never really possessed intelligence. The rightful ruler was the man who, knowing the divine world through understanding, attained wisdom; through him the logos spoke to other men. A religious mood, not unlike that of the Pythagorean and Orphic systems, pervaded his thought. He was the first "gloomy" philosopher.

4. *The Eleatic School of Philosophy.* The emphasis upon thought as the real substance of the universe, which was implicit in the teachings of Pythagoras and Heraclitus, as well as in the religious thinking of Xenophanes (*ca.* 570–480 B.C.), who called upon men to worship joyfully a deity that neither looked nor thought like men, became an explicit doctrine with Parmenides (fl. *ca.* 500 B.C.). He began his explanation of the universe not with an observation of natural phenomena but with a predication, "Being is, non-being is not, and cannot be." This proposition is true only in terms of logical argument, for, according to the principle of contradiction, if "being" is, "non-being" cannot "be." Thus Parmenides divorced philosophical speculation from the consideration of sensory data and rested it upon thought and the processes of thinking.[1] "Being," which he identified with "thought," was eternal, immutable, and homogeneous—the "One." To know it was to know "truth." The physical universe was merely an illusion of the senses; to have a knowledge of it was

[1] See D. S. Mackay, *Mind in Parmenides: A study in the history of logic* (1924); H. D. P. Lee, *Zeno of Elea* (1936).

merely to possess "opinions." Opposed to the senses was "reason," and it alone could give man a knowledge of "being"; in other words, if a proposition was logically true the fact that it contradicted sensory experience did not affect its validity. This was the original step which differentiated the *materialism* taught by the Milesian philosophers from the *idealism* developed by the successors of Parmenides. The physical world, although an illusion, Parmenides conceived as changing under the force of the opposites "love" and "discord."

Zeno (fl. *ca.* 450 B.C.) supported the teachings of Parmenides with subtle and refined arguments, whose validity depended purely upon their logical consistency:

> If a tortoise has the head start of Achilles, Achilles can never catch up with the tortoise, for, while Achilles traverses the distance from his starting point to the starting point of the tortoise, the tortoise will have moved forward another certain distance; and in the time Achilles will traverse this distance, the tortoise will move forward another distance; and so on, *ad infinitum*, Achilles always remaining a constantly decreasing distance behind the tortoise.[1]

By other paradoxical propositions Zeno proved that space and motion are illusions. The merit of his arguments lay in the fact that they called attention to the realm of thought and indicated that it is governed by principles peculiarly its own.

5. *The Attempt to Systematize the Early Speculations about Nature.* As these speculations multiplied, they exhibited irreconcilable contradictions and the problem of bringing them together in a coherent system began to attract the attention of philosophers.

Anaxagoras (*ca.* 500–428 B.C.) united the notion of material elements and the idea of a divine intelligence in a comprehensive explanation of the universe. There were as many "elements," he said, as there were "simple things" observable in nature. Such "simple things" he defined as those which, when divided, always remained the same. There were also countless qualities—colors, tastes, and smells—which existed as "parcels." All things observable to the senses were mixtures of elements and parcels, and in each thing there was something of every element and parcel. Distinctive attributes arose through the dominance of some quality or combination of qualities. In the beginning elements and parcels existed in an indescribable chaos. Then they divided, on the

[1] See article "Zeno" in the *Encyclopaedia Britannica*, 14th ed.

principle of opposites, into the cold mist and the fiery ether. Water and earth developed from the cold mist. Vegetation sprang originally from seeds brought to earth by rain. Animals and men developed from moist clay. The process of integration and disintegration of elements and parcels went on endlessly. One element—the "force" element—was the lightest of all substances; it alone gave motion to all other elements. Motion, in original form, was always "circular." The force element was identical with "thought" and proceeded from a single directing "mind"—*nous*—which governed the universe. In other words, nature was orderly, rational, and purposeful, realizing in its motions and developments a design implanted by a supreme intelligence. This view of nature is called *teleological.*

Empedocles (*ca.* 490–430 B.C.), who combined the roles of philosopher and miracle monger, recognized four elements—earth, air, fire, and water—each without beginning or end, unchangeable and homogeneous. But they were divisible, and the parts were capable of change of position in space. All individual things arose from mixtures of these elements; individual beings ceased to exist when the elements of which they were composed separated. These elements were made dynamic by "love" and "strife." Love impelled unification, strife disintegration, and both processes were continuous.

Since one or the other process was always dominant, the universe developed in alternate reigns of order and disorder, *i.e.*, in cosmic cycles. Living creatures arose out of the earth. Animals were formed from limbs and organs which, having sprung from the earth, were brought together by love; pure chance governed the assembly of limbs and organs in any particular animal. Man appeared in the same way. The masculine sex, having a warm temperament, developed in a southern climate; the female sex, being more cold-blooded, developed in a northern climate. Individual temperaments were determined by the grossness or fineness of the mixture of elements; the finer the mixture of elements in a man, the better he could think.

By identifying each of the four elements with one of the gods, Empedocles brought them under a moral rule and restored religion to its traditional position as the guardian of order in the universe. He also accepted the Orphic and Pythagorean doctrine of the transmigration of souls, which he explained as the passage of divinity from element to element since it was at home in no single one of them. After Empedocles, philosophers were compelled to

consider the processes of earthly change and organic life; they could no longer merely contemplate the heavenly spheres or the divine mind or universal harmony.

More important than Anaxagoras and Empedocles were Leucippus (fl. *ca.* 450 B.C.) and his pupil, Democritus (*ca.* 460–370 B.C.), for with them nature philosophy culminated in an effort to explain the universe in purely physical and material terms. They are known in the history of philosophy and science as atomists, materialists, and mechanists. They abandoned the idea "element" in favor of the concept "atom." The atoms were infinitely small indivisible particles of matter, having irregular shapes but possessing no attributes such as color, taste, smell, and sound. Falling in the void, these atoms collected by chance into the universe; the heavier atoms at the center formed the earth, the lighter ones the air, and the lightest ones the heavenly fires. As a result of collisions the original falling motion of the atoms was transformed into vortex motion. The universe consisted of many spherical worlds, some with and some without a moon and a sun. The stars were bodies like the earth but, owing to more rapid motion, were fiery. Fiery atoms—round, smooth, and mobile—pervaded all structures, passing through the interstices among the irregularly shaped atoms. The *soul* of every living being was composed of these fiery atoms; the *mind* was merely their activity. At no time did souls exist apart from structures of material atoms; at death they, like the material bodies which they pervaded, merely disintegrated. The gods were similar to men but less liable to disintegration; they lived in the upper atmosphere and communicated with men in dreams. They caused lightning, thunder, and earthquakes.

As expounded by Democritus the atomistic theory of nature was more consistent than the views set forth by the other early Greek philosophers; its main propositions can be briefly summarized:

1. There is nothing but atoms and space; all else is an impression of the senses.

2. Out of nothing comes nothing; nothing which is can be reduced to nothing. All change is merely an aggregation or separation of parts.

3. Nothing happens by chance or intention, everything through cause and of necessity. The laws of nature inhere in the mere combination of atoms.

In a universe so constituted and ordered, man was a microcosm, *i.e.*, he possessed in minute form every attribute of the universe as

a whole. From this proposition the atomists deduced that the most pleasurable state for man was tranquillity of the soul, *i.e.*, a state of rest for the fiery atoms. Thus the atomists crowned their conception of the world and man with a mechanistic explanation of happiness and virtue.

The Beginnings of the Sciences in Greece.

In the course of the foregoing speculations many ideas about the various aspects of nature were put forward, and from them developed in time the specialized sciences whose pursuit has been among the chief intellectual enterprises of Western men. Most of these early scientific ideas arose as a result of the assimilation of Egyptian and Babylonian learning with information gathered by traders and merchants. But they drew their unique quality from the tendency of the Greek mind to generalize in secular terms.[1]

1. *Greek Mathematics.* The Greeks used two systems of numeration. One system, probably the older, consisted of special signs, most of which were the first letters of the names of numbers. The second system consisted of the letters of the alphabet and a few other symbols; they were arranged in three groups:

Α = 1	Ι = 10	Ρ = 100
Β = 2	Κ = 20	Σ = 200
Γ = 3	Λ = 30	Τ = 300
Δ = 4	Μ = 40	Υ = 400
Ε = 5	Ν = 50	Φ = 500
Ϛ = 6	Ξ = 60	Χ = 600
Ζ = 7	Ο = 70	Ψ = 700
Η = 8	Π = 80	Ω = 800
Θ = 9	ϙ = 90	Ϡ = 900

The sign M, borrowed from the older system, was used for tens of thousands—for example, BM was 20,000. One thousand was written ,A, 'A, 'A, or Α. The symbols were combined to express large numbers, sometimes in the order of the largest unit to

[1] There is no adequate general study of Greek science as distinguished from Greek philosophy. For a sketch of Greek scientific development see Benjamin Farrington, *Science in Antiquity* (1936). On the origins of Greek scientific thought see W. A. Heidel, *The Heroic Age of Science: The conception, ideals, and methods of science among the ancient Greeks* (1933). As a biographical and bibliographical guide not only for Greek but also for Hellenistic, Roman, Iranian, Hindu, and Chinese science, George Sarton, *Introduction to the History of Science*, Vol. I, *From Homer to Omar Khayyam* (1927), is indispensable. Of the general histories of science William C. D. Dampier-Whetham, *A History of Science and Its Relation with Philosophy and Religion* (1929), and R. J. Harvey-Gibson, *Two Thousand Years of Science* (2d ed., rev., 1931), contain suggestive chapters on Greek science.

the smallest (ΧΗΓ = 683) and sometimes in the reverse order (ΓΗΧ = 683). In cursive writing when numbers were part of the text they were distinguished by a horizontal line above the letters. Unlike the Romans, the Greeks did not form numbers by subtraction. The Greeks, it should be remembered, never developed the concept "zero."

The calculations of traders were regarded as mere technicalities. However, some skill was developed in arithmetic. Addition, subtraction, multiplication, division, and the taking of square and cube root were ordinary operations, and fractions were handled adeptly. For some fractions special signs were devised.

Geometry was the first body of scientific learning differentiated from philosophy by the Greeks. Thales, who was said to have introduced geometry from Egypt, invented the geometry of lines, defining such concepts as "point" and "line." Propositions such as the bisection of the circle by its diameter, the equality of the angles at the intersection of two straight lines, and the equality of two triangles having one side and two angles equal were associated with his name. He was said also to have computed the distance of ships from the shore.[1]

Pythagoras created mathematics as a science of purely abstract concepts. He treated numbers as abstractions and developed such concepts as "odd," "even," "quantity," "point," "line," "surface," and "angle." He introduced the now familiar system of theorems and proofs. In addition to proving the theorem of the hypotenuse of a right-angled triangle that is known by his name, he demonstrated that the area about any point may be divided into four squares, three regular hexagons, and six equilateral triangles. He also discovered at least three of the regular solids: the cube, the tetrahedron, and the octahedron. His investigations in music led to the development of the idea of proportions. His religious attitude toward numbers had a great deal to do with the introduction of the study of mathematics into higher education.

After Pythagoras the pattern of Greek mathematics remained much as he fixed it. In the fifth century B.C. his followers developed the three famous problems: (1) the squaring of the circle which turns about finding an exact value for π, (2) the trisecting of an

[1] On Greek mathematics see Thomas Heath, *A History of Greek Mathematics* (2 vols., 1921); Thomas Heath, *A Manual of Greek Mathematics* (1931); J. L. Heiberg, *Geschichte der Mathematik und Naturwissenschaft im Altertum* (1925); J. L. Heiberg, *Mathematics and Physical Science in Classical Antiquity* (1922); D. E. Smith, *History of Mathematics* (2 vols., 1925).

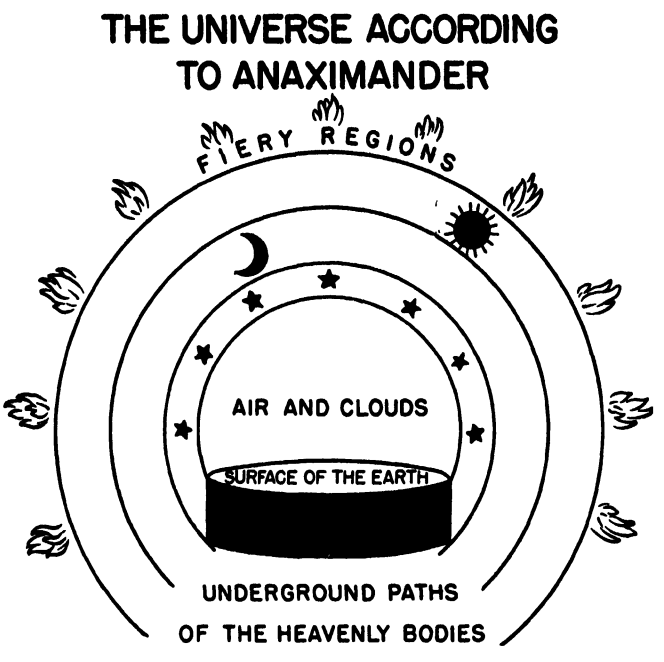
angle, and (3) the duplicating of a cube. And their solutions were not improved upon until the nineteenth century. Hippocrates of Chios (fl. *ca.* 430 B.C.) wrote the first treatise on geometry. He also applied the concept "proportion" in computing the areas of circles having different diameters. Under the leadership of Plato, who was considerably influenced by Pythagoreanism, progress was made in dealing with the cone, the cylinder, and the pyramid.

A large part of the technical terminology of mathematics, as well as its methods, especially in geometry, originated with these early Greek thinkers. But they never combined the ideas "number" and "magnitude," so that except for the rudimentary application of arithmetics in commercial calculations, their mathematics had no practical uses. They were the most expert rule-of-thumb engineers the world has ever known. Throughout the development of Greek culture mathematics, except theoretical geometry, remained almost entirely in the hands of foreigners.[1]

2. *Greek Astronomy, Physics, and Chemistry.* Speculations about the original stuff and the structure of the universe necessarily produced ideas that now are recognized as belonging in these related scientific fields. The Greek term for nature—*φυσις*—is the source of the modern word "physics."[2] Abandoning the ancient-oriental cup-and-saucer view in favor of a conception of a spherical universe, the Greek thinkers necessarily had to find new explanations for eclipses and other heavenly phenomena. They arrived at correct explanations of eclipses and meteors and made the first computation of the size of the sun and the distances of the sun and moon from the earth. Anaximander, as previously noted, first conceived of the earth as suspended in space and surrrounded by heavenly bodies. The Pythagorean idea that the earth is a sphere was deduced from the mystical conception of number; it hardly deserves to rank as an astronomical conception. Anaximander said the sun was twenty-seven times as large as the moon; Anaxagoras described it as a mass of burning rock larger than the Peloponnesus. He believed that the Milky Way was the shadow of the earth. Empedocles seems first to have conceived of the earth as rotating in space. Parmenides identified the morning and evening stars.

[1] D. E. Smith, *History of Mathematics* (2 vols., 1925), Vol. I, p. 56.

[2] On Greek astronomy, physics, and chemistry see T. L. Heath, *Greek Astronomy* (1932); J. L. E. Dryer, *History of Planetary Systems from Thales to Kepler* (1906); J. R. Partington, *A Short History of Chemistry* (1937); J. M. Stillman, *The Story of Early Chemistry* (1924); J. L. Heiberg, *Geschichte der Mathematik und Naturwissenschaft im Altertum* (1925); F. M. Cornford, *The Laws of Motion in Ancient Thought* (1931); M. Shipley, *Greek Physics and Modern Science* (*ca.* 1935).

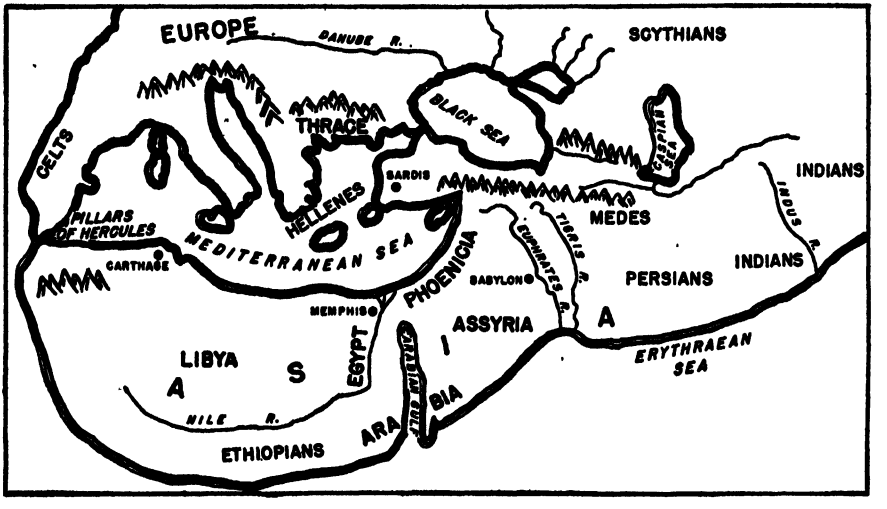


Anaximander held that the moon shone by reflected light. The distinction between the celestial spheres and the sublunary universe, which long remained a dominant astronomical concept, was originally drawn by Pythagoras.

These early thinkers dealt generally with the concept "motion." They described two forms of motion—"linear" and "circular" or "vortex." In the sublunary world linear motion dominated; in the celestial spheres circular or, as they said, perfect motion prevailed. The idea that one form of motion can be transformed into the other was generally accepted, but only the atomists found in such mechanical action an explanation of natural phenomena. The failure to develop physics was due chiefly to the lack of the concepts "mass" and "force." Most of these early thinkers found the sources of the energy which moved in nature in some conflict of moral or emotional opposites, such as the Empedoclean doctrine of love and strife. Condensation and rarification were commonly regarded as universal processes. Few of these ideas can be said to belong peculiarly to the field of physics.

The concept "element" was the most important chemical idea produced by the nature philosophers, and, as elaborated by

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Empedocles in the doctrine of the four elements, it became the foundation of chemical knowledge for two thousand years. "Combustion," conceived philosophically rather than chemically, was the only chemical process to receive general recognition.

3. *Greek Geology and Geography.* Anaximenes held that earthquakes were caused by the falling of mountains which in the course of time had been undermined.[1] Xenophanes inferred from the fact that seashells were found on dry land that it had once been covered by the sea, and Herodotus recognized that river silt originated in the mountains from which rivers flowed. These few ideas mark the limits of Greek geological science.

Greek geography was hardly richer. Hecataeus (*ca.* 550–475 B.C.), the first Greek geographer, believed, as did the Babylonians, that the earth is circular in shape; he was the first to observe that Egypt is the gift of the Nile. Anaximander, who made the first map of the Greek world, seems to have known something about the earth's features from the Tin Islands (England) to the Caspian Sea, which he believed was open to the encircling ocean. Herodotus repudiated the ideas of a circular earth and an encircling ocean. He thought that the earth was oblong, with the longer extension

[1] On Greek geography see R. E. Dickinson and O. J. R. Howarth, *History of Geography* (1933); E. H. Warmington, *Greek Geography* (1932); H. E. Burton, *The Discovery of the Ancient World* (1932); H. F. Tozer, *A History of Ancient Geography* (1935); and W. A. Heidel, *The Frame of the Ancient Greek Maps* (1937).

running east and west, and lay between the Nile and Danube rivers, which rose in the west and ran parallel until they turned toward each other at the eastern end of the Mediterranean Sea. Hecataeus recognized two continents, Europe and Asia; Herodotus gave reasons for recognizing a third, Africa. He declared that the outer limits of the continents were unknown, recognized the Caspian Sea as a closed body, and seems to have been the originator of the concept "zones." Anaxagoras explained variations in climate as caused by the inclination of the earth on its axis. Herodotus mistook the Alps for a river. Thucydides, the historian, had a detailed knowledge of the topography of Greece.

4. *Greek Zoology, Anatomy, and Physiology.* Greek biological speculation began with Anaximander, who held that organisms developed first in water and then passed to dry land. Man, he said, was descended from a fish.[1] Empedocles elaborated this theory by marking four stages in the evolution of the living world. Chance, not purpose, was the basis of evolution. His idea that favorable variations determined the direction of evolution was not taken up by other thinkers. Anaxagoras seems to have studied the structure of animals by dissection. Diogenes of Apollonia (*ca.* 500–430 B.C.) wrote the first anatomical treatise; it described the venous system of mammals. He thought that organisms developed from the moist earth under the warming rays of the sun; he also held that embryos grow through heat obtained from their mothers. Greek biological thinkers generally recognized that human and animal embryos develop in similar ways. Democritus differentiated between animals according to the quality of their blood and drew the distinction between vertebrate and bloodless animals which Aristotle made the basis of a classification of organisms. By 400 B.C. the theory that the heart sends fire, air, and water through the body was commonly accepted. Democritus described the heart as the seat of courage, the liver as the organ of sensuality, and the brain as the source of thought. Empedocles thought that the blood was the seat of intelligence.

The functions of the sense organs attracted a great deal of attention. Parmenides said that the eye sent out rays which touched the external world. Alcmaeon (fl. *ca.* 500 B.C.) explained

[1] On Greek zoology, anatomy, and physiology see Eric Nordenskiöld, *The History of Biology: A survey* (1928); H. O. Taylor, *Greek Biology and Medicine* (*ca.* 1922); Charles Singer, *The Evolution of Anatomy* (1925); Charles Singer, *A Short History of Biology* (1931); Joseph Needham, *A History of Embryology* (1934); E. O. Essig, "A Sketch History of Entomology," *Osiris*, Vol. 2 (1936), pp. 80–123.

vision as due to the mixture of fire and water in the eye; he is credited with having discovered the optic nerve. Empedocles declared that the more water there is in the eye the better one sees at night. He first described the labyrinth of the ear. He held that sound was produced by the entrance of air into the ear. Alcmaeon said that the ear is a sounding board. He ascribed the sensitivity of the tongue to its moisture. Democritus conceived of breathing as the obtaining of fresh supplies of fire atoms and explained sleep as due to the loss of them. The hydrophobia of dogs and the madness of men were caused, he argued, by inflamed nerves.

5. *Greek Medicine.* Although the typical Greek science was geometry, the Greeks approached nearest to the spirit of modern Western science in medicine.[1] The early Greek medical schools, three in number, were modeled on the Egyptian temple schools, and the medical cult of Asklepios was similar to the Egyptian cult of Imhotep. The school of Cnidus, following Egyptian practices, sought a specific cure for each disease. The school of Croton, under the influence of Pythagoras, correlated the phases of the course of a disease with numbers and arrived at the concept "crisis" in its development. Alcmaeon, mentioned above, was the greatest figure of this school. The school of Cos created the Hippocratic tradition, which dominated Western medical theory and practice until modern times. This school rose to prominence about 460 B.C., when the first and greatest of a series of men known as Hippocrates flourished. This "father of Greek medicine" seems to have led a wandering life, making observations of diseases and compiling notes about them. Probably the sixty or seventy works ascribed to him were written by several other men; they were not put together in a single collection until the third century B.C.

The Greeks originally believed that disease was caused by daimons entering the body through the mouth, and in order to prevent such entrance they ate strong foods. This view of disease never died out; in fact, it gave rise to the cult of Asklepios, a healing god, whose shrines spread throughout Greece. Its chief center was at Epidauros in the Peloponneus, but it appears to

[1] On Greek medicine see W. H. S. Jones and E. T. Withinton, *Hippocrates* (4 vols., 1923–1931); Arthur J. Brock, *Greek Medicine, Being Extracts Illustrative of Medical Writers from Hippocrates to Galen, translated and annotated* (1930); C. N. B. Camac, *Imhotep to Harvey: Backgrounds of medical history* (1931); Charles Singer, *A Short History of Medicine* (1928); C. G. Cumston, *An Introduction to the History of Medicine* (1926); F. H. Garrison, *An Introduction to the History of Medicine* (4th ed., 1929); E. R. Long, *A History of Pathology* (1928); and Charles H. Lawall, *Four Thousand Years of Pharmacy* (1927).

have originated in Thrace, where peasant-village ideas prevailed. Asklepios was regarded as a restorer of life. The ill frequented his temples in hope of miraculous cures, and the mentally distressed sought in their precincts divine dreams that would still the commotion within them. Cures were believed to be achieved not only through the gift of Asklepios but also by the faith of those who sought them. The cult of Asklepios was at its height between the fifth and the third century B.C.[1]

The school of Cnidus studied particular diseases. The school of Cos emphasized pathology, *i.e.*, diseased conditions, and produced a theory that explained disease as having natural causes and healing as nature's own work. The Hippocratic repudiation of the daimonic and related theories of disease is a landmark in the evolution of all science as well as in the development of medicine:

> The fact is that invoking the gods to explain diseases and other natural events is all nonsense. It doesn't really matter whether you can call things divine or not. In nature all things are alike in this, that they all can be traced to preceding causes.

The Hippocratic explanation of disease and health, known as the "humoral theory," was based on the four Empedoclean elements, from which were derived four bodily humors—the blood, the yellow bile, the black bile, and phlegm. Disease, it was said, was a disarrangement of their natural proportions; health, of course, existed as long as they remained in natural proportions. The healing power of nature consisted in the tendency of the humors to return to their proper proportions.

By observing the course of some diseases the Hippocratic physicians acquired an accurate knowledge of their development. As was inevitable under the circumstances, they specialized in prognosis rather than diagnosis. They were especially interested in the signs of death that a disease produced. Among the causes of disease they recognized the odors of marshes and mire, bad air, and stagnant water; they also discovered that rain water is best for human consumption and that its good qualities are preserved by boiling. From these facts they developed—as a partial defense against the disease which came to be the greatest environmental curse of Greece, namely, malaria—the rudimentary sanitary practices of draining swamps and building cities on the lee side of marshes, swamps, and lakes.

[1] Stephen D. Istray, "The Cult of Asklepios," *Bulletin of the Institute of Medical History*, Vol. 3 (1935), pp. 451–482.

Hippocratic therapeutics varied with each disease and altered according to their progress. The usual treatments were bloodletting, purging, sweating, and dieting. Special studies were made of plants in order to obtain drugs. Some of the empirical judgments recorded by the Hippocratic physicians reveal both their outlook and their methods.

Weariness without cause is a sign of disease.

When sleep puts an end to delirium, it is a good sign.

Convulsions supervening on a wound are deadly.

Apoplexy is commonest between the ages of 40 and 60.

Old persons bear fasting most easily, next adults, and young people yet less; least of all children, and of these least again those who are particularly lively.

Pythagorean medicine, influenced by the religious belief in purification, also emphasized dieting as a treatment for disease. Philistion of Sicily (fl. *ca.* 400 B.C.) developed many dietetical cures.

Diocles of Euboea (fl. *ca.* 380 B.C.), known as "the second Hippocrates," believed that fever is not a disease but a sign of some other kind of disturbance. Fever was looked upon as a heating of the bile. Epilepsy, commonly regarded as the "sacred disease," was recognized as a disease of the brain, caused by a failure of the phlegm to drain away from the brain. This condition occurred in later life because the phlegm had not drained from the brain properly in childhood.

Many modern Western medical terms, such as "chronic," "acute," and "crisis," were first used by the Hippocratic physicians; in fact the word "physician" is derived from the Greek word for nature. The Western tradition of medical ethics also stems from the Hippocratic physicians; the Hippocratic oath, although it hardly expresses the current attitude toward the social responsibilities of the medical profession, contains principles which have long been the ethical guides of the individual physician:

The regimen I adopt shall be for the benefit of the patients to the best of my power and judgment, not for their injury or for any wrongful purpose. I will not give a deadly drug to anyone, though it be asked of me, nor will I lead the way in such counsel. . . . Whatsoever house I enter, I will enter for the benefit of the sick, refraining from all voluntary wrongdoing and corruption, especially seduction of male or female, bond or free. Whatsoever things I see or hear concerning the life of men, in my

attendance on the sick or even apart from my attendance, which ought not to be blabbed abroad, I will keep silence on them, counting such things to be as religious secrets.

THE SOPHISTS.

About 460 B.C., when Athens became the intellectual as well as the political and commercial center of the Greek world, new circumstances of life which released the energies of ordinary citizens began to influence the development of philosophy. The victory over Persia inspired a feeling of superiority over the ancient-oriental peoples whom the Greeks had long looked up to. The expansion of trade and industry made fortune getting easier but more competitive. At the same time the victory of the democratic party opened the way for popular political activity. Together these releases generated "a fierce and tumultuous individualism." At this time also the new drama became a medium for speaking to the people about moral and social issues, and the spread of literacy opened the way for all kinds of new ideas. Under these circumstances skepticism became for the first time in history a significant intellectual outlook, and thinkers examined critically not only tradition but also what in any form was purported to be knowledge.

Thus the questions which the nature philosophers had sought to answer—What exists? How does change occur?—were replaced in the minds of thinkers by new questions, such as: How can man know anything as a certainty? What is knowledge? What are the uses of knowledge? What is the good or the just life? These new intellectual issues quickly aroused the opposition not only of the aristocratic element, which held to tradition as the support of its social position, but also of the democratic party, whose members bore the prejudices carried in the low intellectual tradition. Pericles praised the Athenians as the lovers of liberty in any form, but his successors, the democratic Cleon and the aristocratic Nicias, alike denounced speculations disturbing the public mind. The execution of Socrates in 399 B.C. was the culmination of the intellectual strife which, as a result partly of the controversies of the philosophers and partly of the emotional reactions to the disasters of the war with Sparta, became more intense as the fifth century B.C. moved toward its close.

From this changed intellectual temper came the chief movements of the last half of the fifth century B.C.: (1) the spread of mystery religions, (2) the elaboration of Pythagoreanism, and

(3) the rise of Sophism. The mysteries became more and more popular among the people. Pythagoreanism absorbed the Empedoclean doctrine of four elements and developed the concept "form," *i.e.*, each thing has a measured shape or size that can be known by a number. Any object of the day-by-day world was then a body of matter upon which had been impressed a particular form, and all forms were bound together by "harmony," a force that acted throughout the universe. Sophism embodied the shift of interest from the physical to the social world that was the distinctively new element in the intellectual outlook of the times.

The Sophists were generally teachers of grammar, rhetoric, and oratory, whose clients were young men aspiring to be politicians or lawyers. This type of learning apparently first became popular in Sicily where, after the expulsion of tyrants from Syracuse, about 465 B.C., there were a great number of lawsuits. Like Parmenides, the early rhetoricians appealed not to facts but to logic and prided themselves on their ability to argue both sides of a question. They specialized in devices that strengthened the weak side of an argument. On the surface, therefore, Sophism was essentially an educational movement; in its best aspect it aimed at promoting civic intelligence and in its worst aspect it merely prostituted learning to selfish ends for a price.[1]

But Sophism, as evidenced by the teachings of its leading representatives, was much more than an educational movement; it was, indeed, an ethical development, concerned with the practical problems of *virtue* rather than with the subjective validity of *truth*. Prodicus (fl. *ca.* 475 B.C.) posed the ethical problem in the myth of Heracles, according to which young men must make a choice between a life of voluptuous pleasures and a life of noble deeds. To those who chose the noble life, Prodicus argued, came the sweetest sleep, the praise of their fellows, the love of the gods, and "the most blessed happiness." Protagoras (*ca.* 481–411 B.C.), who conceived that education can develop good citizens, held that all men are endowed with a sense of justice and a sense of shame which make possible not only individual but also collective action serving a common well-being. In other words democracy rests upon the sentiment of the masses rather than upon the intellectual abilities of the few. The greatest of the Sophists, Protagoras, was the author of the famous apothegm, "Man is the measure of all things." This proposition, at least by implication, asserted

[1] On the Sophists see article "Sophists" in the *Encyclopaedia of the Social Sciences;* also Werner W. Jaeger, *Paideia: The ideals of Greek culture*, (1939), pp. 283–328.

that all knowledge is relative to man's point of view. Protagoras, who derived the proposition from the conception of flux as expounded by Heraclitus, argued, as had Empedocles, that man's sense organs are too feeble to know reality. Gorgias (*ca.* 485–380 B.C.), a man of encyclopaedic learning, reasoning from the concept "being" as set forth by Parmenides, contended that if reality exists man cannot know it. Thus the Sophists developed the idea that all knowledge is relative to man as the knower.

From this point of view the Sophists saw institutions and laws as the work of men, who were, in fact, the revealers of their own morality. The significance of this idea is apparent when it is realized that it promoted, then as now, a vigorous social criticism. The Sophists first asked why men should follow customs and obey laws which are socially evil. Why, they asked, should there be nobles and slaves, one law for the rich and another for the poor (or rich and poor at all), and one morality for men and another for women? Such criticisms—strong acids upon traditional beliefs and practices—culminated in the invention of the fascinating concept "an ideal society." Hippodamus (fl. *ca.* 440–400 B.C.), who laid out the Piraeus and invented town planning, was the original Utopian. Anyone, he said, who discovered or invented anything that contributed to the good of the state ought to be honored and rewarded.

The Sophists deserve full credit for having first turned the attention of Western men toward the problems of social life. Knowledge for its own sake is a shortsighted ideal; knowledge for man's sake—the Sophist view—is a conception whose possibilities have not yet been fully exploited. But the Sophists sold their knowledge to those who could pay for it, and the power of money to subvert knowledge became then as now a curse upon men. The doctrine that the masses, although ignorant, have a natural feeling for justice served only to provide opportunities for the subversion. If knowledge is relative to the knower, how can man ever be certain of distinguishing between right and wrong? The Sophists elaborated logic, only to discover ethics. At least, however, when they freed morals from the bonds of tradition and religion, they revealed the old ignorance that had long masqueraded as knowledge.

THE SYSTEMATIC PHILOSOPHERS: SOCRATES, PLATO, AND ARISTOTLE.

As social and intellectual confusion increased in late fifth-century B.C. Greece, the need for achieving a new conception of universal order became paramount. The true founders of the Western high intellectual tradition were the philosophers who, by

bringing the many conflicting ideas into harmonious systems, set the patterns of thought that were to endure in the Western world quite as Brahmanical speculations and Confucianist ideals persisted in India and China. Until recent decades there was little thinking among Western men that fell outside the systems which Plato and Aristotle developed from the critical work of Socrates.

1. *Socrates.* Socrates (*ca.* 469–399 B.C.) was the product of the withering period of Athenian greatness.[1] After the beginning of the war with Sparta in 430 B.C. defeat, plague, earthquake, famine, and intestine strife fell upon the city, while hysteria, intolerance, and quackery ran rife. Medical superstitions multiplied. The spread of the cult of Asklepios dated from the time of the plague that swept the city. Mystical cults from Thrace, Phrygia, and Syria won many adherents. And charges of impiety were made against philosophers and artists as well politicians. When Protagoras, the Sophist, was accused of blasphemy, all who had purchased his book were ordered to burn it in the public center of the city. The rising superstitious mood was clearly evidenced by the fact that ventriloquists stood on street corners calling upon daimons to speak about anything a questioner might ask.

Socrates, very early in life, felt that his daimon had urged him to become the savior of the city. In the face of uncertainty of knowledge and insecurity of life, he raised again the questions: Can a man know the right from the wrong? Is there order in the universe? After repudiating the nature philosophers' quest of a knowledge of nature and the Sophists' theory of the relativity of knowledge, he gave answers which were developed along original lines from the Pythagorean doctrine of form. He postulated forms not only for physical objects but also for moral and aesthetic qualities, such as justice, equality, and beauty. And these forms, like the Pythagorean numbers, were knowable only through reason.

Reason, he held, was the essential function of the soul:

> And surely the soul then reasons best when none of these things disturb it, neither hearing, nor sight, nor pain, nor pleasure of any kind, but it retires as much as possible within itself, taking leave of the body, and, as far as possible, not communicating or coming in contact with it, it aims at the discovery of that which is. . . . If we are ever to know anything

[1] On Socrates see E. C. Marchand, *Xenophon: Memorabilia* (1938); A. E. Taylor, *Socrates* (1932); F. M. Cornford. *Before and After Socrates* (1932); P. M. Schuhl, *Essai sur la formation de la pensée grecque* (1934).

purely, we must be separate from the body, and contemplate the things by themselves by the mere soul.

In ascribing the function of reasoning to the soul Socrates advanced a new conception of the soul's nature and made possible the formulation of a new theory of moral certainty. It should be noted, however, that he retained several Orphic and Pythagorean notions. Generally he conceived of the soul as an indivisible, immortal, and intelligent entity which always exists in the same state; as indicated in the above quotation, he agreed with the Orphic doctrine that this soul is imprisoned in the body and contaminated by it. Wicked souls, he held, were frequently reincarnated in animals having attributes like those they had exhibited while embodied in men. Tyrants, perhaps, became hawks or wolves; happy souls entered into bees, wasps, and ants. The soul attained the purest knowledge when in a state of madness sent by the gods.

In postulating the existence of forms of moral and aesthetic qualities and ascribing to the soul the function of knowing them, Socrates did not abandon the consideration of ordinary day-by-day affairs. His practical intellectual method involved a full discussion of such matters. After the soul had arrived at a clear conception of qualities such as justice and beauty, which could be stated in definitions, it was desirable to illustrate the concepts with examples from daily life. Socratic argumentation, or dialectics, as revealed in Plato's *Dialogues*, consisted chiefly in turning an opponent's argument to the support of a Socratic position.

This method brought philosophical speculation down to earth and men. The justice and beauty Socrates sought were not merely pervasive in the universe; they were vital in everyday life. Thus Socrates held that knowledge should function as the basis of ethics. Revelation, custom, and desire were false guides to right conduct. Only knowledge acquired by reason or insight was a safe guide. And its function was not only to purify the soul but to rectify individual conduct and social organization as well. Men could know justice and beauty and knowing them would act accordingly; and such action would make them happy. The goal of Socratic learning was a way of individual life that, resulting in the service rather than the oppression of others, promoted individual happiness and social well-being.

Viewed as a philosophy of the universe, the Socratic teaching postulated a multitude of *forms*—physical, moral, and aesthetic—bound together by one ultimate form, the "good." At the heart



By the courtesy of the British Museum

SOCRATES

Socrates set Western men on the quest for a social and moral order or, in other words, a conception of justice, which can be justified on intellectual rather than on traditional or religious grounds.

of the universe was a moral order, arranged, Socrates said, by "a certain wonderful intellect," which was supremely righteous. Thus Socrates enlarged the doctrine that behind the world of sense there is an ultimate reality and that through the flux of events there is order, into the grand conception of an orderly universe through which a moral purpose runs. He elaborated the metaphysical and teleological conception of the universe which became the core of the high intellectual tradition of the Western world. It

is, therefore, quite correct to describe Western civilization as Socratic civilization because this conception of a universal moral order knowable by reason has provided the basis for an ethics that, while releasing Western men from the fear of a blind fatalism and a vengeful caprice, has set them at the hard task of achieving their own moral salvation. In one way or another, from the days of Socrates to very recent decades, Western men have accepted moral responsibilities only upon warning from their own souls and, as a result, have sacrificed the achievement of social well-being in the pursuit of individual virtue.[1]

Socrates had the courage of his convictions, for he was willing to act according to his doctrine. Having learned what he believed to be *truth*, he would not repudiate it, not even in the face of death. He has been the supreme example to Western men of intellectual integrity. Confronting his enemies at his trial for corrupting the youth, he gave them to understand that even when dead he would find delight in Hades, as he had among them, in going about questioning everyone, including the greatest sages of the past. When his friends urged him to escape from prison, he replied to their entreaties with an exposition of the citizen's duty to obey the law and of his belief in the immortality of the soul. But his courage and integrity were not greater than his humanity and humor. When a young friend came to him saying that a woman too beautiful to describe had arrived in Athens, he promptly insisted upon going to see her. Furthermore, it seems that he—"the ugliest man in Athens"—charmed her with convincing talk about the reasons why she would fall in love with him although he would not fall in love with her.

In the long perspective of intellectual history, Socrates symbolizes secular intelligence directed toward the discovery of a universal good that man himself can achieve. That he failed to understand the place of natural science in human affairs and misconceived the universal moral order as a metaphysical rather than a social order merely reveals the limits of the Greek mind at its best.

[1] A. E. Taylor, *Socrates* (1932), pp. 132–133: "It was Socrates who, so far as can be seen, created the conception of the *soul* which has ever since dominated European thinking. For more than two thousand years it has been the standing assumption of the civilized European man that he has a *soul*, something which is the seat of his normal waking intelligence and moral character, and that, since this soul is either identical with himself or at any rate the most important thing about him, his supreme business in life is to make the most of it and do the best for it." By permission of the author and Peter Davies, Ltd., Publishers, London.

2. *Plato.* It was the role of Plato (*ca.* 427–347 B.C.), the greatest pupil of Socrates, to systematize the conception of a universal order existing behind the chaos of sensations and opinions.[1] From the Socratic rendering of the Pythagorean theory of form, he developed the conception of a hierarchy of forms. These forms, or *ideas*, existed as absolute and unchanging entities, thoughtlike rather than material in character; the power of men to think about such entities was proof that they existed. For every object and quality in human experience there was a corresponding form or idea. For example, empirically, there are various kinds of dogs but the truly *real* is the idea "dogness." At the summit of the ideal hierarchy was the form "goodness," identified with God. God was the highest soul, the ultimate source of all motion and morality. He animated the universe, and His goodness would not allow Him to destroy it or the souls that existed in it. The universe was a product of two things: *necessity*, the inchoate substratum of matter, and *soul*, the thought of God as manifest in ideas, or forms. Individual objects were created by stamping these forms on matter. Changeless reason was the soul of the universe; in man the soul was the reasoning element. Thus both the universe and man were animated by the divine principles which dominated the chaos of matter that, alone, gave rise only to unintelligibility. The universe was at once a natural and a moral order; perfect reason operated as universal law.

In view of this conception of reality man's experiences were only shadows of actualities, for, as described in Plato's famous myth of the cave, man was fettered so that he could see only the cave's back wall, across which flitted the shadows of the real objects that moved past the cave's mouth. Knowledge, therefore, was not to be acquired by attending to experiential data. But the soul, which stood between the hierarchy of eternal ideas and the lower world of transitory experiences, could acquire knowledge by reasoning, which was in fact only a form of reminiscing. Since the soul had existed before its incarnation in a corporeal body, it had had contact before birth with the hierarchy of ideas, and reasoning was the remembering of this prior experience of reality.

[1] Plato and his philosophy are treated in A. E. Taylor, *Plato the Man and His Work* (1927); G. M. A. Grube, *Plato's Thought* (1935), the best concise statement; F. M. Cornford, *Plato's Theory of Knowledge* (1935); F. H. Anderson, *The Argument of Plato* (1935); A. M. Adams, *Plato: Moral and political ideas* (1913); Paul Shorey, *What Plato Said* (1934); Constantin Pitter, *The Essence of Plato's Philosophy* (1933); W. F. Hardie, *A Study of Plato* (1936); G. C. Field, *Plato and His Contemporaries* (1930); F. W. Bussell, *The School of Plato: Its origin, development and revival under the Roman Empire* (1896).

Science consisted of a knowledge of the relations of ideas, their classification, and their logical dependence; its method was deduction rather than investigation. The theory of knowledge by reminiscence, supported as it was by the belief in the revealing powers of dreams, mania, and daimons, further retarded the development of those techniques of observation and verification which give modern scientific inferences validity. Dreams, Plato held, were prophetic visions released through the liver. Mania, as witnessed in the priestesses of Delphi, was vastly superior to the reason of individuals as a means of attaining knowledge. And daimons—there was one for every individual human being—maintained harmony between the real world of forms and the chaos of experience; divination, the means of reading their messages, was the most beautiful of the arts. Plato declared sensory experience an illusion and sought knowledge in pure subjectivity.

Since the *good* was the highest reality, Plato concluded that the best life for an individual was the quest of the knowledge that would bring him face to face with *beauty* and *truth*. But such a life, it was obvious, was possible only for a select few. For ordinary men the best life was that one which achieved the *harmony* of the soul by bringing the cardinal virtues, wisdom, justice, courage, and temperance, into daily conduct. Wisdom guided an orderly conduct, justice inspired upright dealings with other men, and courage and temperance, held in proper balance, directed vigorous action without excesses. Such a life was pleasurable not in the gratifications of the senses but in satisfactions that delighted the soul. Education could bring ordinary men to know the right ways of action in daily life, and these ways could be organized into habits. Plato's theory of ethics did not, therefore, condemn all but the few to a conduct determined by custom; he believed that moral progress is possible for the race as a whole.[1]

Plato's Republic: The Philosopher's Ideal State. Plato saw the outcome of moral progress as a practical realization of the universal forms "truth," "beauty," and "justice" in an ideal state; and the philosopher was charged with the duty of guiding society toward this goal. The *Republic*, the first systematic discussion of social organization in the Western world, described both the structure and the process of creating

[1] For the works of Plato see Irwin Edman, editor, *The Works of Plato, Abridged* (1928); B. Jowett, *The Works of Plato* (4 vols. in 1, 1936); B. Jowett, *The Dialogues of Plato . . . with Analyses and Introductions* (5 vols., 3d ed., 1924); Paul Shorey, *Plato, The Republic* (1937); C. M. Bakewell, *Plato's Republic* (1928); F. M. Cornford, *Plato's Cosmology; the Timaeus of Plato* (1937); A. E. Taylor, *The Parmenides of Plato* (1930); A. E. Taylor, *The Laws of Plato* (1934); Harold N. Fowler *et al.*, *Plato* (8 vols., 1925).

and maintaining this ideal state in terms of the principles of Plato's philosophy.

Since the human soul possessed the qualities "spirit" and "appetite" in addition to "reason" and in different individuals these qualities were mixed in varying proportions, there were three social classes, each characterized by the dominance of one of these qualities in the souls of its members. That class whose members were most highly endowed with "reason" formed the guardian, or ruling, order. Loving truth for its own sake, they eagerly pursued a knowledge of reality. Despising the pleasures of the body, caring nothing for money, and hating falsehood, they were liberal, just, gentle, and upright. That class whose members were animated by "spirit," *i.e.*, courage and fortitude, formed a military or auxiliary order. Although strong, swift, and brave, they also were gentle and just; possessing nothing of their own, they were the defenders of the property which belonged to everyone. That class whose members were moved by "appetite" formed a working class, *i.e.*, husbandmen, tillers of the soil, and craftsmen. Owning property in common, they sought to maintain the state's economic self-sufficiency. Foreign trade was prohibited because it was a source of socially disorganizing influences.

Education was the chief instrument of organizing and maintaining social order.

First, it was a selective process by which the qualities of the souls of individuals were discovered and trained. After the discovery of the quality of the soul, the child was educated accordingly. At the base of this training was the inculcation of the love of the gods and a development of a fondness for music. Only music that soothed the emotions was approved; only tales that impressed moral precepts were safe to tell the people. Music that aroused the emotions and exciting accounts of historical events were unfit for the people to hear. The workers were given no more than an elementary instruction. The auxiliaries were trained in gymnastics and the arts, for they were regarded as contributing to a harmonious character. Care was taken to prevent the defenders of the state from becoming excitable. For this reason licentious poetry, especially the drama, was forbidden. By studying the sciences those few endowed with reason could learn to think; this study they pursued from the age of eighteen to twenty-eight. Plato believed that only a few could rise to a knowledge of truth, and that the well-being of the entire state depended upon discovering and training them. Science, it will be noted, was not regarded as having technological significance.

Thus the perfect state was ruled by an educationally selected aristocracy, *i.e.*, the best men defined in terms of Plato's conception of reality. And social justice prevailed only when a state was so governed. When the military order dominated, the state became warlike and the people were reduced to serfdom. When the working class ruled, the passion for riches became rife. In such a state party became faction, liberty

license, and labor poverty; after bitter class struggles it ended by falling under a tyrant.

The second function of education was to prevent the occurrence of those disasters which befell the state when the military or working class aspired to leadership. This function was performed by teaching the people a "seasonable falsehood" which explained why each class had a peculiar status:

" 'What kind of fiction?'

" 'Nothing new, but a Phoenician story, which has been realized often before now, as the poets tell and mankind believe, but which in our time has not been, nor, so far as I know, is likely to be realized, and for which it would require large powers of persuasion to obtain credit.'

" 'You seem very reluctant to tell it.'

" 'You will think my reluctance very natural when I have told it.'

" 'Speak out boldly and without fear.'

" 'Well I will; and yet I hardly know where I shall find the courage or where the words to express myself. I shall try, I say, to persuade first the rulers themselves and the military class, and after them the rest of the city, that when we were training and instructing them, they only fancied, as in dreams, that all this was happening to them and about them, while in reality they were in course of formation and training in the bowels of the earth, where they themselves, their armour, and the rest of their equipments were manufactured, and from whence, as soon as they were thoroughly elaborated, the earth, their real mother, sent them up to its surface; and, consequently, that they ought now to take thought for the land in which they dwell, as their mother and nurse, and repel all attacks upon it, and to feel towards their fellow-citizens as brother children of the soil.'

" 'It was not without reason that you were so long ashamed to tell us your fiction.'

" 'I dare say; nevertheless, hear the rest of the story. We shall tell our people, in mythical language: You are doubtless all brethren, as many as inhabit the city, but the God who created you mixed gold in the composition of such of you as are qualified to rule, which gives them the highest value; while in the auxiliaries he made silver an ingredient, assigning iron and copper to the cultivators of the soil and the other workmen. Therefore, inasmuch as you are all related to one another, although your children will generally resemble their parents, yet sometimes a golden parent will produce a silver child, and a silver parent a golden child, and so on, each producing any. The rulers therefore have received this in charge first and above all from the gods, to observe nothing more closely, in their character of vigilant guardians, than the children that are born, to see which of these metals enters into the composition of their souls; and if a child be born in their class with an alloy of copper or iron, they are to have no manner of pity upon it, but giving

it the value that belongs to its nature, they are to thrust it away into the class of artisans or agriculturists; and if again among these a child be born with any admixture of gold or silver, when they have assayed it, they are to raise it either to the class of guardians, or to that of auxiliaries: because there is an oracle which declares that the city shall then perish when it is guarded by iron or copper. Can you suggest any device by which we can make them believe this fiction?'

" 'None at all by which we could persuade the men with whom we begin our new state: but I think their sons, and the next generation, and all subsequent generations, might be taught to believe it.' "

Where liberty is lacking, not even philosphers can rule without a "seasonable falsehood"—in the contemporary vocabulary, "propaganda."

Although not now so well known as the *Republic* and the great dialogues that deal with the problem of knowledge, the *Timaeus*, a cosmological treatise, was among Plato's most influential works. It developed a theory of creation and organization of the universe. Plato held that such a theory was necessarily provisional, for a semblance of the truth was all that was possible because the material world was constantly changing. The universe was made not by God, but by a Demiurge, a creator-god, who planted divine reason in material existence. Material existence was a living whole, having a world soul, and men possessed divine souls. All material things were composed of the four elements—earth, air, fire, and water. Material processes were moved by *same* and *difference*. *Same* bound the universe into a harmonious whole; *difference* gave rise to the separate motions, such as those in the planetary circles. There were four levels of living creatures. Each star had its own intelligent soul, and each planet was a god. The birds of the air had the souls of light-witted men. The beasts of the earth had the souls of men who cared nothing for philosophy. The things of the water had the souls of polluted men. Men alone had souls that could do wrong by acts of their own wills. Altogether there were as many individual souls as there were stars. Considerations about the organization of the human body led Plato to advocate a regimen of exercise and diet as the means of maintaining health. The goal of the human soul was to achieve by rational conduct the beauty and harmony of action which is divine. For modern readers, orientated toward scientific conceptions, the *Timaeus* is a highly obscure treatise; its influence was great, especially after the contact of Hellenic and oriental ideas which gave rise to Gnostic, Neoplatonic, and Christian speculations.[1]

[1] See pp. 990, 999, 1114; also F. M. Cornford, *Plato's Cosmology, The Timaeus of Plato, Translated with a Running Commentary* (1937).



PLATO

From Plato issued the Western faith that behind the gods is truth, that before men is saving knowledge. He, more than any other man, established the quality, if not the content, of the Western high intellectual tradition.

The significance of Plato as a contributor to the high intellectual tradition of Western civilization can hardly be overestimated, for his ideas not only have pervaded philosophical thought but also have greatly affected political conceptions, literary standards, and religious beliefs. Recent attempts to discover in his works a coherent theory of secular affairs in no way affect the historical fact that his influence was for centuries chiefly religious. He has been called the "creator of the age of faith" and a "Christian

before Christians." In the *Timaeus*, the dialogue noted above, Plato developed the position known as *theism*, a conception of God and His relation to man and the world which, on purely rational grounds, holds God to be not identical with the universe and yet not aloof from it. Theism postulates "a personal God"—in Plato's view "a knowable God." Plato's doctrines of universal standards of moral and aesthetic excellence have been the sheet anchor of an opposition to ethical and aesthetic innovations; in terms of these standards "the classical forms" of Western education, literature, and art have been defined and justified. Indeed, the Platonic concept "ideal" joined with the Christian concept "righteousness" to vindicate for Western men a faith in inward truth and suprasensual knowledge in opposition to moral theories and aesthetic principles having origin in the doctrines of the relativity of knowledge and the practice of empirical criticism.

What Plato actually thought may be undiscoverable; what Platonism has been as an intellectual influence in the Western world is well known. It established subjectivism both as the content of knowledge and as the method of arriving at it. It declared the existence of absolute truth and asserted that men, through meditation, can translate it into a just social order. In supporting the illusion that men can know absolute truth, Platonism denied them the supreme satisfaction of struggling to escape other illusions. By identifying subjective experience with reason and deity, Platonism established it as the dominant element in the high intellectual tradition of the Western world.[1]

3. *Aristotle.* The trend of thought developed by Aristotle (*ca.* 384–322 B.C.) began with the Milesian nature philosophers and came to him through Empedocles and the atomists. As a pupil of Plato, he was familiar with the theory of ideas, but he never gave it a leading position in his thought. On the contrary he conceived reality as existing in particular objects. Every individual object was a substantial *form;* at the same time every individual member of a species or class shared attributes that came only from a universal *essence.*[2] The common attributes of the

[1] A. E. Taylor, *Platonism and Its Influence* (1924), p. 131: "In truth, the story of all our civilization owes to Plato could only be told adequately in a complete history of the thought and literature of the western world from his day to ours." By permission of Peter Davies, Ltd., London. On Platonism see also article "Plato and Platonism" in the *Encyclopaedia of the Social Sciences;* John Burnet, *Platonism* (1923); P. E. More, *Platonism* (1931); J. H. Muirhead, *The Platonic Tradition in Anglo-Saxon Philosophy* (1933).

[2] The best treatments of Aristotle and his thought are W. D. Ross, *Aristotle* (3d ed.,

objects of a species or class were determined by its essence but existed only as properties of its form. Thus *this* horse was a real object. But the likenesses of *this* and *that* horse (or any number of horses) were determined by the universal essence, "horseness." Such an essence existed only in individual horses and was known by men only as an abstraction from experience of horses. This theory provided a view of nature as an orderly system of essences unfolded in specific substantial forms that were real entities. The world of sensory experience was not, therefore, an illusion. Whereas Plato turned his eyes toward the suprasensual and the abstract, Aristotle looked at the earth and nature. But order existed in nature for Aristotle as for Plato because God, the essence of all universals, was identifiable with reason, and man, whose essence was a rational soul, was able to transcend the chaotic world of objects by reasoning in terms of universals. As *being* and *reason* God existed beyond the confines of the universe, to which He imparted motion, order, and purpose. He was "the unmoved mover" of the universe who, always busy in the highest form of activity, was therefore busy contemplating the selfhood of God. Plato and Aristotle agreed in grounding their metaphysics upon the ultimate reality of abstract thought; they disagreed chiefly as to the way of man's knowing this reality.

As a result of declaring the reality of individual objects, Aristotle found it necessary to describe their organization in the universe. At the center of the universe was the earth, spherical in shape and always in a state of rest. This state, more honorable than the state of motion, was proper to the center of the universe. Imperfect motion, horizontal and vertical, existed in the sublunary world, *i.e.*, between the earth and the moon. Matter was composed of four elements: earth, air, fire, and water, which were in turn combinations of the qualities "wetness," "coldness," "hotness," and "dryness." Earth was cold and dry, water cold and wet, air cold and dry, and fire hot and dry. Aristotle conceived that matter had potentiality, *i.e.*, the power to become objects; it was not, as Plato held, inert material upon which forms were stamped. Beyond the moon the universe consisted of fifty-five concentric circles, made of the divine element, aether, and having perfect, *i.e.*,

1937); Werner Jaeger, *Aristotle: Fundamentals of the history of his development* (1934); G. R. G. Mure, *Aristotle* (1932); H. F. Cherniss, *Aristotle's Criticism of Presocratic Philosophy* (1935); and J. L. Stock, *Aristotelianism* (*ca.* 1925). Robert Shute, *On the History of the Process by Which the Aristotelian Writings Arrived at Their Present Form* (1888), gives an account of the survival of Aristotle's works.

circular motion. This motion was imparted to the stars by spiritual beings less powerful than God.

Soul was the *essence* that animated all living things. In a low degree soul was nutritive, generative, and common to all plants and animals; in a high degree it was sensitive, appetitive, and active, and belonged to animals; in the highest degree it was rational and peculiar to man, giving him the power of thought and the capacity for making moral choices. The rational element in man's soul alone was divine and immortal. Since, however, the human soul was vegetative and appetitive as well as rational, man has always acted from both low and high motives. From this conception of the motivation of human conduct Aristotle derived the leading principle of his ethics, namely, the principle of the *mean.* According to this principle, the virtuous man, exercising prudence, sought always to avoid extremes: for example, he was neither avaricious in the pursuit of wealth nor prodigal in spending it. As elaborated in the *Nicomachean Ethics,* this principle became the basis for the ideal personality, "the high-minded man":

A highminded man, then is especially concerned with honors and dishonors. He will be only moderately pleased at great honors conferred upon him by virtuous people, as feeling that he obtains what is naturally his due, or even less than his due; for it would be impossible to devise an honor that should be proportionate to perfect virtue. Nevertheless he will accept honors, as people have nothing greater to confer upon him. But such honor as is paid by ordinary people, and on trivial grounds, he will utterly despise, as he deserves something better than this. He will equally despise dishonor, feeling that it cannot justly attach to him. . . . The highminded man is justified in his contempt for others, as he forms a true estimate of them, but ordinary people have no such justification. . . . The highminded man is not fond of encountering small dangers, nor is he fond of encountering dangers at all, as there are few things which he values enough to endanger himself for them. But he is ready to encounter great dangers, and in the hour of danger is reckless of his life, because he feels that life is not worth living without honor. . . . He will not bestir himself or be in a hurry to act except where there is some great honor to be won, or some great result to be achieved. . . . He will, of course, be open in his hatreds and his friendships, as secrecy is an indication of fear. . . . He is the kind of person who would rather possess what is noble, although it does not bring profit, than what is profitable but not noble, as such a preference argues self-sufficiency. . . . It seems, too, that the highminded man will be slow in his movements, his voice will be deep and his manner of speaking sedate; for it is not likely that a man will be in a hurry, if there are not many things he cares for, or that he will

be emphatic, if he does not regard anything as important, and these are the causes which make people speak in shrill tones and use rapid movements.

The "high-minded man," like God above the universe, was above the concerns of ordinary men; he was an aristocrat, conscious of his virtues and justified in a superior attitude which, in some other ages, might easily have been called mere snobbishness. If the Aristotelian ideal has shortcomings from a modern point of view, it should be realized that it is an ideal at least possible of realization, for it is not unearthly either in aim or in quality.[1]

Like Plato, Aristotle believed in the possibility of moral evolution through the inculcation of right habits. He also understood that leisure, which he distinguished from idleness and play, was necessary if individuals were to achieve the best ideals they could conceive. Nor did he deny that external goods have significance in terms of inward satisfactions. Unfortunately, however, he was under the spell of the Socratic illusion that men, knowing the good, will seek it, and so, although his ethical system was secular in outlook and objective, it provided no guide to right conduct except an abstract intellectualism—the life of reason—of which meditation, conceived as "the laying hold of immortality," was designated the highest form. Like Plato, Aristotle ended by sublimating ethics in religion. To "ordinary men" he offered no positive guide to the good life: if, under the rule of custom and habit, they fell not too much under either the fear or the urge of desires, *i.e.*, the appetitive soul, they lived as well as they could hope to.

Aristotle's social philosophy was far more realistic than Plato's. Aristotle held that men were social beings and as such lived naturally in a *state*. Furthermore, the state existed for the achievement of a common well-being. But Aristotle conceived no ideal commonwealth. Instead he examined the constitutions of one hundred and fifty-eight Greek cities in an attempt to differentiate between good and bad governments. Successful government, he held, depended on the virtue of the people, *i.e.*, the choices they made between extremes. If a wise and virtuous man were chosen king, monarchy was the best government; if a corrupt man became king, monarchy was a very evil form of government. Under

[1] For the works of Aristotle see W. D. Ross, *The Works of Aristotle* (11 vols., 1924–1928); W. D. Ross, *Aristotle's Physics* (1936); H. Rackman, *Aristotle, The Politics* (1935); H. Rackman, *Aristotle, The Athenian Constitution; The Eudemian Ethics; On Virtues and Vices* (1935); A. L. Peck, *Aristotle, Parts of Animals*, and S. E. Forster, *Movements of Animals—Progressions of Animals* (1937); W. K. C. Guthrie, *On the Heavens* (1937); John H. Freese, *Aristotle, The "Art" of Rhetoric* (1926); W. S. Hett, *On the Soul* (1935).

ordinary circumstances a government by a middle class of moderately well-to-do property holders was best. A working-class government was worst of all. It was necessary in every state to be on guard against revolution, for men were liable to revolt for many reasons, such as the desire for equality, the hatred of privilege, the weak enforcement of laws, the opposition to war, or the desire to go to war. A state was in special danger of revolution if the lower classes held the upper classes in contempt. Aristotle recognized eight different classes or, as would be said to-day, occupational groups: farmers, mechanics and artisans, traders, wage-earners, soldiers, property owners, bureaucrats, and judges. His failure to mention priests indicates that his outlook on society was thoroughly secular; he ascribed a minor place to religion in the life of a people. He found the chief supports of an orderly society to be law and education. Government was bound by law quite as were individuals; both owed obedience to law as the servant of social well-being. Changes in the law should be made slowly. Education had both an individual and a social aim. It should train individuals to do useful work, to seek virtue, and to pursue knowledge; at the same time it should inculcate uniform opinions among citizens, instructing them in the ideals necessary for the maintenance of the state. Every state had the right to impose such instruction upon its citizens.

Agriculture was the only sound economic basis of a state. Trading and money changing intensified individual selfishness and social antagonisms which disturbed the common well-being. Aristotle condemned the lending of money at interest on the ground that money, since it is useful only as a medium of exchange, is unproductive. He defended private property as the medium of expressing individual personality; he repudiated the communism of Plato's *Republic* as contrary to human nature.[1] And he justified slavery as a form of moral control necessary for men lacking rational souls. The unequal distribution of wealth was a natural condition about which nothing could be done. The political life of any state turned about maintaining the balance of conflicting interests which achieved the highest social well-being. Aristotle did not envision a perfect and consequently a static polity; he saw society always in the process of realizing and maintaining interests: progress but not perfection was possible in human affairs.

[1] On Greek economic thought see E. E. Munro, *Early Economic Thought* (1924); A. A. Trever, *A History of Greek Economic Thought* (1916); and M. L. W. Laistner, *Greek Economics* (1933).

The secular tendency of Aristotle's thought which brought him to take a practical view of ethics and politics also led him to investigate nature. Thus he became the founder of scientific investigation; there is no more remarkable passage in his writings than the plea for a firsthand study of nature:

> The glory, doubtless, of the heavenly bodies fills us with more delight than the contemplation of these lowly things; for the sun and stars are born not, neither do they decay, but are eternal and divine. But the heavens are high and afar off, and of celestial things the knowledge that our senses give us is scanty and dim. The living creatures, on the other hand, are at our door, and if we so desire it we may gain ample and certain knowledge of each and all. We take pleasure in the beauty of a statue, shall not then the living fill us with delight; and all the more if in the spirit of philosophy we search for causes and recognize the evidences of design. Then will nature's purpose and her deep-seated laws be everywhere revealed, all tending in her multitudinous work to one form or another of the Beautiful.

In the long perspective of intellectual history Aristotle stands out as the earliest advocate of the pursuit of worldly knowledge as a proper activity for the scholar.

To the typical Greek science, geometry, he made no contributions, but he was the founder of biology as a science and the author of the first biological treatise, *The History of Animals*. From factual information learned chiefly from farmers, husbandmen, and especially fishermen, his analyzing and classifying mind developed several general principles of biological knowledge. He drew the distinction between inorganic and organic matter. He classified animals according to structural similarities. He recognized such elemental structures of the animal bodies as tissues and organs. He discovered that all foods go to the stomach. He observed the development of the chick in the egg. He knew that the housefly passes its early life in a dunghill, that gnats develop from aquatic larvae, and that drones are isolated in the beehive. He studied anatomy comparatively and probably practiced vivisection. And he made collections of numerous specimens. His most careful and minute studies dealt with fish, about which, it seems, he knew things that have been rediscovered only in recent times. But his errors influenced biological thought quite as much as his discoveries. He considered the heart the seat of intelligence, the arteries the bodily abode of the soul, and the brain a cooling apparatus for the heart. His conception of primary qualities—hotness and coldness, dryness and wetness—was assimilated

into the Hippocratic medical tradition, giving support to the theories of humors and temperaments which dominated medical and psychological speculations until modern times.

His notions in other fields of science were not in advance of his age. His acceptance of the Empedoclean theory of the elements made it the leading principle of physics and chemistry for almost two thousand years. His conception of the heavenly bodies long remained supreme in astronomical speculations. He knew something about erosion and the cycle of movement of water from the sea through rain and snow to the rivers that carry it back to the sea. He seems to have invented the word "geography." His most notable contribution to geology was an explanation of volcanoes and earthquakes as caused by the formation of wind inside the earth. Unfortunately his speculative view of the universe ultimately exerted a far greater influence on the development of science than did his remarkable view that the familiar world is well worth investigation.

Aristotle shares with Buddha the glory of having first distinguished thinking as a particular activity. Buddha formalized the thinking process as a means of attaining a state of spiritual bliss. Aristotle, on the other hand, dealt with it as a means of attaining knowledge: he was the founder of formal logic. Whereas earlier Greek thinkers had postulated mind as reality and assumed a method of formal reasoning, Aristotle described the method and developed rigorous rules for its application so that it could be used constantly in seeking and utilizing knowledge. He expounded the principles of formal logic in a work which his followers called the *Organon*, *i.e.*, the instrument; each of its six parts deals with an aspect of the reasoning process. The "Categories" discusses the kinds of questions which can be made about any object, for example: How is it made? How large is it? Where is it? When is it? What does it do? "On Interpretation" deals with the difficulties of expressing thought in language. "Prior Analytics" sets forth the theory of deduction and describes the syllogism. "Posterior Analytics" explains the process of induction. "Topics" treats of the arguments that can be advanced for or against a proposition. "Sophistic Errors" catalogs the types of false reasoning.

At the base of formal reasoning is a process of abstraction by which the mind, in contact with the world through the senses, perceives real objects. Through the perception of particular objects, general attributes are apprehended. And in general attributes



ARISTOTLE

Although Aristotle was the main creator of Western man's view of nature as an "ordered whole," the development of the syllogism was his most significant achievement, for it, rather than his researches and speculations, fixed the mode of Western scientific thinking until early modern times.

universal essences become known. Thus intuitive reason discovers the intelligible world. But the investigation of this intelligible world is the work of deductive reason, which infers from universals the relations of particulars to particulars and particulars to universals. The chief instrument of this investigation is the syllogism, which, although having several forms, always contains three terms: (1) the major premise, (2) the minor premise, and (3) the conclusion, for example:

Major Premise: All politicians fool the people.
Minor Premise: Any candidate for an elective office is a politician.
Conclusion: Any candidate elected to office will fool the people.

In syllogistic reasoning if the major and minor premise are true the conclusion must be true. The simple example given above leads to another syllogism; this illustrates how deduction can build up a hierarchy of propositions having at least the outward appearance of truth:

Major Premise: Any candidate elected to office will fool the people.
Minor Premise: Mr. D (or Mr. R) is a candidate for the elective office, the presidency of the United States.
Conclusion: If Mr. D (or Mr. R) is elected to the presidency he will fool the people.

In this chain of inferences the truth of the conclusion of the second syllogism rests upon the validity of the premise of the first syllogism. This dependence reveals the great weakness of Aristotelian logic, namely, that it provides no method for examining the basic propositions which serve as major premises. According to Aristotle these propositions were "immediate knowledge" intuitively apprehended by reason from experience. Thus, as a matter of fact, Aristotle's intellectual method allowed propositions which might be held valid on any grounds at all to become the starting points of sequences of deduction.[1]

Aristotle was the first encyclopaedist; his numerous writings, which dealt not only with philosophy, politics, ethics, the sciences, and logic but also with rhetoric, literary criticism, and poetics, so combined fact and theory that they fixed the patterns of Western learning for almost two thousand years. The authority that he gave to a vast body of speculations rested somewhat upon the wide range of his materials but more upon the logic with which he gave system to the materials. His invention of logic was supremely important for the development of the Western high intellectual tradition. Once and for all it removed to the field of literary fabrication the primitive storytelling and myth-making ways of arguing which reached their highest expression in Plato's *Dialogues*. It imposed upon thinking a rigorous discipline which by sharpening criticism and compelling coherence helped amazingly to systematize ideas in all fields of learning. It stiffened all accepted beliefs by refining and elaborating their implications. And finally it widened the gap between the Western high and low intellectual

[1] F. M. Cornford, "Greek Natural Philosophy and Modern Science" in Joseph Needham and Walter Pagel, editors, *Background of Modern Science* (1938), p. 28: "It is probable that Aristotle's deductive theory of science did much to retard the growth of natural knowledge." The Macmillan Company, New York.

traditions, as the former became a more or less closely knit structure while the latter remained a chaotic mixture of primitive beliefs and diffused philosophical speculations.

Unfortunately the emphasis which Aristotle gave to the observation of nature did not exert any considerable influence upon the development of the Western high intellectual tradition, largely because when he grounded logical thinking upon the intuitive apprehension of universals he made it easy to accept propositions with little basis in observed facts. On the other hand, he accepted as "self-evident truths" all those propositions which the individual necessarily declares as true because he receives them under social sanctions. Thus tradition, convention, "common sense," revelation, and authority actually became the sources of intuitive knowledge, and Aristotle's successors have used his logical methods more as an instrument for systematizing socially enforced beliefs than as a means of advancing knowledge. Under the general intellectual conditions of their times, these successors inevitably turned thought more and more into religious channels, and hence Aristotle, like Plato, had great influence upon the development of Western religious doctrines. Furthermore, his teaching of the teleological view of the universe gave to religious speculation the vigorous support that systematic ratiocination always gives to wishful thinking. Aristotle contributed at least as much to the development of religion as he did to the advancement of science.

THE GREEK CORE OF THE WESTERN HIGH INTELLECTUAL TRADITION

The Greek contributions to the Western high intellectual tradition were both general and specific. The general contribution was an outlook on life that, although aristocratic, was essentially humane. The specific contributions set the enduring pattern of Western art, religion, philosophy, and science. In other words, the Greeks originated both the feeling for life and the understanding of it which have distinguished Western from Eastern cultures.[1]

The Greek Feeling for Life.

Greek culture was the product of urban communities ruled by small bodies of free citizens living chiefly on the labor of others.

[1] For evaluations of Greek culture see G. L. Dickinson, *The Greek View of Life* (1909); Lane Cooper, *The Greek Genius and Its Influence* (1917); C. D. Burns, *Greek Ideas: A study*

The essentially aristocratic quality of Hellenic life is revealed in the social attitudes, which were, as a matter of fact, the chief sources of the ethical theories of the philosophers. The Greek citizen was in many ways quite like Aristotle's "high-minded man." Certainly he looked down on the day-by-day activities of his poor and hard-working fellows as necessary trivialities. War and politics were fit professions for a gentleman, and agriculture was the most respectable occupation. But labor, generally, was considered a gross contact with the material world and, if not actually degrading, at least a hindrance to the development of the life of the spirit. Slavery, poverty, and illiteracy were not recognized as abuses to be condemmed and ameliorated. For the unfortunate there was no relief, nor any pursuit of virtue except that to be gained by obedience and the faithful performance of duty.[1] Although the Greek was not as cruel as the typical Asiatic or Roman aristocrat, neither was he as humane as some modern men. His humanity was largely of the negative sort that refused to add intentional cruelty to natural afflictions. Closely allied with these attitudes toward labor, poverty, and distress was a dislike of technology. The Greek, disapproving the manipulation of matter on account of its corrupting influence, showed little aptitude for mechanical invention. Indeed it must always seem a little remarkable that the men who conceived the Parthenon added almost nothing to the technical knowledge which made possible its construction. Also, the Greek was almost completely masculine in outlook. Only a special class of courtesans, some of whom became well educated, appeared with men in public; wives, regarded highly as mothers and managers, were restricted to the confines of the home. Romantic love between the sexes was unusual, but attachment of a man and a boy was quite a normal fact of life. Above all the Greek was pious and patriotic; these feelings were, of course, the two sides of the civic spirit that animated the citizen.

To these qualities the Greek added the crowning attribute of intellectuality. His restive spirit sought to know truth for its own sake, and he valued learning, inquiry, disputation, and speculation for themselves. Of course it must not be supposed that every citizen, even in Athens, was a philosopher, but as

of social life (1919); F. R. Earp, *The Way of the Greeks* (1929); C. F. Lavell, *Biography of the Greek People* (1934); R. W. Livingstone, *Greek Ideals and Modern Life* (1935); and Werner W. Jaeger, *Paideia: The ideals of Greek culture* (1939).

[1] Greek social attitudes are discussed in Adriano Tilgher, *Work: What it has meant to men through the ages* (1930); E. E. Sikes, *The Anthropology of the Greeks* (1914); Henri Francotte, *L'Industrie dans la Grèce ancienne* (2 vols., 1900), Vol. 1, pp. 246 *ff.*

attested by the general interest in the drama, as well as in the issues with which the playwrights dealt, there was a high level of popular intellectual understanding. And from this intellectuality issued the truly remarkable elements of Hellenic culture. The Greek discovered the *mind* and fixed in the Western cultural tradition not only a high valuation of intellectual pursuits but also their chief forms. When the Greek broke away from the traditional beliefs and attitudes, although he did not necessarily repudiate them, he did begin to think about them. In this departure was his true originality. It must always be remembered, however, that the Greeks generally never rose out of the low intellectual tradition and that for them, as well as for other peoples, its essentially primitive materials remained supremely significant for both leaders and masses. Nicias, wasting time before Syracuse in watching the moon for a favorable omen, was far more typical than Pericles convincing his soldiers that an eclipse of the sun was only a shadow like that cast by his shield.

THE GREEK INTERPRETATION OF LIFE.

The specific contributions of the Greeks to the Western high intellectual tradition can be summarized under four main headings: (1) aesthetic standards, (2) religion, (3) philosophy, and (4) science. Together these contributions established an interpretation of the world and man that, in spite of social changes and cultural diffusion, remained at the heart of the Western high intellectual tradition until very recent times.

1. *Aesthetic Standards.* Socrates and Plato thought that there was a form "beauty" which by its presence gave the attribute of beauty to any object. For the Western world Greek aesthetic standards have been such a form; where they have been, there the Western man has always recognized beauty. Technically the Greek conception of artistic excellence embodied the qualities of balance, measure, and symmetry, which united to produce a rhythm of external forms. The Greek never tried to force into stone or bronze, or into prose or verse, or into dramatic situations forms that were unsuited to them as materials; this was the essential element in his artistic restraint. He saw the world and life simply and attempted to render what he saw—or almost what he saw. He had no inclination to develop fantastic forms by bringing together images not naturally associated. The Asiatic peoples developed this tendency in religious symbolism which portrayed men with wings, animals with human heads, etc. Significant perhaps as a negative expression of this inclination was the failure

to develop the literary genre, satire. Nor was the Greek fond of what in recent decades has been known as realism, *i.e.*, that emphasis which brings out the mixture of the good and evil in life, with evil often triumphing. The Greek idealized the natural, or, in other words, he selected for emphasis those forms and feelings which made nature and men seem better than they often are. Quite in line with these aesthetic standards was the love of the open country, bodily vigor, and health, as well as the frank pursuit of the joys of life. The Greek enjoyed sensual experience without becoming a sensualist. He achieved versatility without becoming shallow. And he lived art without becoming an aesthete. In other words his aesthetics and his ethics were interdependent. Perhaps in this relation exists that quality which again and again brings Western men back from experiments with other aesthetic standards to those of the Greeks.

2. *Religion.* All too frequently general evaluations of Hellenic culture fail to consider the significance of the religious departures that were embodied in the mystery cults. The Greeks were the inventors of Western mysticism. They conceived that the soul, which they raised from a primitive animating spirit to a deeply sensitive and rational entity, can have direct knowledge of the divine reality which is beyond all sensory experience. This knowledge was a matter of inner feeling and might be obtained in ecstasy or in meditation or through ascetic practices or, best of all, by intuition, *i.e.*, the direct subjective experience of reality. The Greek cults never elaborated any of these modes of mystical experience into a formal regimen. The doctrine that the body is evil and worldly life corrupting was merely the corollary of this conception of the life of the soul or spirit. The essential service rendered by religious devotion was determined by these two beliefs; it was the means of purifying the soul, *i.e.*, making it fit for a life of immortal bliss beyond the grave. The conception of afterlife which became universal in the Western world through the rise of Christianity was Greek in origin. The allegorical method of interpreting writings was derived from the belief that the early poets, especially Homer, had been inspired. It rose to prominence after the middle of the fifth century B.C. as a way of discovering the true meaning behind the words and, with the spread of the mystery cults in the fourth century B.C., was employed more and more generally in both religious and philosophical circles.[1]

[1] See J. Tate, "On the History of Allegorism," *The Classical Quarterly*, Vol. XXVIII (1934), pp. 105–114.

The union of aesthetics and ethics that gave distinction to Greek life was not completed by uniting ethics and religion, at least not after the mystery cults became popular. Then the central religious fact was the direct personal experience of divinity. Spiritual perfection and its companion, rather than its reward—immortal bliss—were not for mortal man; only as he became truly divine could he attain them. And this becoming was not a matter of ethical conduct so much as a matter of the soul's experience of reality.

3. *Philosophy.* The doctrine that man can know reality intuitively also became a basic philosophical doctrine. For Plato intuition was the sufficient means of knowing all reality; for Aristotle it was only the basis of a formal approach to reality. Thus the philosophical view of reality, rooted in subjectivity, was speculative, and, although secular in the sense that it recognized no authority but human reason, was significantly religious in its ultimate implications. The philosophers agreed generally on the duality of the universe—body and soul, or the material and the ideal. "Reason," "truth," "morality," "beauty," "purpose," and "divinity" were attributes of the "ideal." The philosophers also generally agreed that God is a living being, that His intelligence directs the universe in accord with final ends, and that the human soul is intelligent and immortal. Over against the diverse forms and changes of the material world they set the world of universals, immaterial but real, unchanging but nevertheless dynamic. Mere activity in the *material* world was meaningless; only the *ideal* world had intelligibility. The universe was a closed body, with the earth at its center—a static, eternal, unchanging, and perfect order. The moral universe, no less static and perfect, constituted the universal *good.* And God, the sublime creator and intelligence, was the universal *reason.* His were the ends toward which all purposes run. To this teleological view of the universe Greek philosophy added the concept "absolute," *i.e.*, inclusive and all-pervading real entities, such as *truth*, *wisdom*, *justice*, *beauty*, and *virtue.* Men's reason was the means of knowing them, and in knowing them man could become *good* and *happy.*

Thus Greek philosophy sublimated deity, ennobled man, and justified hope in terms of knowledge (as its devotees defined knowledge). Above all it idealized the life of the mind, at least to the point of discovering in a contemplative intellectualism, almost completely divorced from worldly interests and sensory experience, the goal of the human quest for meaningful and lasting satisfactions.

4. *Science.* In spite of the persistence of the philosophical doctrine of the unreality of the physical world, the tendencies of thought initiated by the nature philosophers bore fruit in an advance from the chaotic primitive view of nature to an organized and, in some respects, an observed view of nature. Perhaps the chief scientific achievement of the Greeks was to draw for the first time a distinction between *nature* and *supernature*, *i.e.*, the conception of orderly physical processes as opposed to capricious daimonistic powers. Nature was a *cosmos*. Originally this word referred to the discipline of an army; the nature philosophers gave it the application that signifies the organization of nature under laws. In explaining nature Greek scientific speculation invented other concepts, such as "element," "infinite," "flux," "cycle," "atom," "number," and "measure," which were to play important roles in many succeeding Western attempts to explain the universe in secular terms.

Most of the observed facts that found their way into the Greek view of nature were drawn either from ancient-oriental sources or from the factual information carried in the low intellectual tradition. The great failure of Greek scientific thinking was the failure to recognize the value of observed and classified factual materials; nor did it devise any methods for their accumulation. The Greeks added much to the speculative account of the universe and almost nothing to its factual description. The early efforts in the latter direction were smothered under the abstracting tendency of the Greek mind, which, besides achieving the philosophical conception of universals, also made the abstract consideration of number and physical forms the most lasting Greek scientific achievement. Almost alone among the scientific conclusions of the Greeks have their mathematical generalizations stood the test of time. The Greeks never "investigated" nature; they "thought it out." The clear evidence of this tendency of the Greek mind is found in the failure to develop an adequate system of quantitative measurement.

The Greek Discovery of Man.

Probably the common denominator of the Greek contributions to the Western high intellectual tradition was the discovery of *man*. In art the dominant form was the human figure. In religion the primary concern was the human soul. In philosophy the great instrument was the human reason. In scientific speculation man was for the first time distinguished as a part of nature.

"Man," said Anaxagoras, "is the most intelligent animal because he has hands." Diogenes of Apollonia explained that man's intellect was the result of his erect posture, which permitted him to breathe purer air than the animals whose noses were turned to the ground. Silly as this notion is, it has the virtue of being an explanation in terms of nature. The Greeks held no dogmatic ideas about the origin of man or the differentiation of the human species into races. Usually they differentiated men on class lines which were believed to reflect different qualitative states of souls. Although the Greek historians made human events the object of literary attention and attempted to describe them accurately, they hardly arrived at a naturalistic explanation of their movement. Herodotus saw human life going on under divine law, while Thucydides postulated an inexplicable providence as its guide. They did not achieve the conception of economic or social forces. Plato had a faint idea of the relation of geographical conditions to the formation of human character, and Aristotle recognized the role of occupational groups in politics. These relatively simple ideas suggest the limits of the Greek scientific consideration of man. They discovered man, not to bring him down to earth but to give him being, moral worth, and immortality. Man did not become nature's noblest product; rather nature became man's point of departure for ascending to supernature.

The Greeks were the first "self-conscious thinkers" in the history of cultures, Eastern and Western. And for them thinking was certainly talking. In the perspective of history their significance appears to lie not so much in what they said as in what they talked about. They raised the intellectual issues and problems which first released man from the pattern of primitive thinking; if they did not greatly alter the content or materials of thinking, they at least defined the concepts and the methods of Western thought for the next two thousand years.

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