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The
Organization of Knowledge

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The
Organization of Knowledge

AN INTRODUCTION
TO
PHILOSOPHICAL ANALYSIS

by
GLENN NEGLEY

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to
T V S

Preface

THE excess of presumption which is implied in so grandiose a project as the "organization of knowledge" will, it is hoped, be tempered by a word of explanation. It is an explanation with admission, first, of limited aim, second, of minimum anticipation of achievement. Such an apologetic implies, however, no plea of pardon for sins of omission and commission, on these let the axe hew and the quips fall where they may

It needs but little circumspection, in the face of a hazardous venture, to remind oneself that fools and angels justify their actions on the ground that "it ought to be done." Nor does it require unusual power of perception to observe that, in the absence of the divine guidance accorded to fools and angels, "oughts" may suffer miscarriage in the painful process of birth. Thus it is most discomfoting to find myself with a house built on untenable ground, for I can think of no reason for having written this book except the very dubious justification that the organization

of knowledge ought to be discussed. Easy it is to say that it is high time some attention was given to the integration of the knowledge contributed by the manifold specialized fields of scientific investigation—an integration which will make possible the fullest use of that knowledge in action—easier to say than to do. But to forestall the satisfaction of complacency is not necessarily to forego the pleasure of experiment. Such must indeed be the mood and temper of any approach to the Gargantua of contemporary scientific knowledge, and if at times there arises a suspicion that the speculation rivals the imagination of that fertile old creator of Gargantua, let me plead in the words of Rabelais himself “I have made bold to choose to chirrup and warble my plain ditty, or, as they say, to whistle like a goose among the swans, rather than to be thought deaf among so many pretty poets and eloquent orators.”

More specifically, it is necessary to remark that a more or less unoriented interest in the classification of scientific method and knowledge was brought into the immediate focus of the present work through an interest in the curricular experiment known generally as “survey” or general courses. In the belief that the integration of the sciences in such courses represents the most significant advance recently made beyond the traditional academic curriculum, the already developing pattern for the organization of knowledge in terms of the control of action was now reoriented with the deliberate purpose of filling the framework of the pattern with the integrations of subject matter and method already undertaken by the various general courses in the sciences.

The implications of such an endeavor soon make evident the advisability of approaching the problem from an elementary level. It would require inconceivable genius to do today what Aristotle did for the ancient world: organize and co-ordinate such diverse fields as physics, meteorology, psychology, biology, ethics, and logic. These integrated general courses afford one of the few available sources of authoritative information, which at the same time is not so specific and technical as to demand specialized competence for an understanding of the description of scientific method and knowledge. Throughout this experimental speculation, the assumption has remained dominant that the sciences must themselves be taken as the source of information about their content and method; philosophers and logicians have often been loath to grant this minimum of independence to their collaborators in the field of knowledge. In fact, it is this very independence of competence allotted to fields of scientific observation that poses the problem of organizing knowledge for action. The degree of competence which we now expect from any expert or specialist precludes the expectation that he will be an expert in more than an extremely limited area. This does not, of course, imply that the expert need confine his interest or attention wholly to the area of his expertness, but it does mean that the extent and complexity of knowledge have now become so great that to ambiv-
alize is to court the charge of inexpertness, and to generalize is to be convicted of the charge.

So be it, but whosoever admits himself guilty of generalization may plead a strong case on grounds of necessity.

For generalize we must, or suffer action to be ignominiously hobbled by a veritable swarm of the Lilliputian offspring of specialized research. The prevalent tendency of the philosopher to generalize without discrimination was remarked by William James: "The more multiple then are the instances, the more flowingly does his mind rove from fact to fact." Indiscriminate roving may be excellent fun, but if the rover anticipates any fruitful or systematic results from his travel, he will do well occasionally at least to consult a map. Generalizations, of scientific knowledge or of anything else, must be made systematically according to some pattern or plan, or the entire point and purpose of generalizing are defeated, and the more complex the subject matter of integration, the more complicated and difficult will be the pattern of co-ordination.

Our subject matter for the integration of knowledge is indeed complex, the pattern for co-ordination necessarily difficult of construction. What is to follow constitutes a tentative suggestion in the formulation of such a systematic plan for the organization of knowledge. The Rome of scientific knowledge was not built in a day, nor will its constitution and relations be clarified except through trial and experiment. I am discussing here one possible pattern for the organization of knowledge which appears fruitful for the purposes of action. That there are numerous other possibilities in classification, in method, in approach to this fascinating problem, is taken without saying. The criteria for judging the value of any such organization of knowledge are dual: first, that it be inclusive, without discrimination, of all that is accepted as science and knowl-

edge, second, that it provide a method for the use of that knowledge in implementing the values which individuals and societies agree upon as the ends and purposes of their action

G. R. N.

Acknowledgment

THE brevity of a formal acknowledgment varies inversely to my appreciation to colleagues for the inestimable value of their discussion, to friends for their kindly criticism, to students for their stimulating interest.

G. R. N.

Urbana, Illinois

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PART I

The Nature of Analysis

CHAPTER I

Thinking as Analysis

MAN, the thinking animal, seeks the revealing light which discloses to his curious eyes the nature of things. The ages of his history in which he learned he calls enlightened, the ages of intellectual sterility are dark. It is in the daylight that man moves and has his active being, yet there is beauty in the night, when the concealing cloak of darkness shrouds the harsh and sordid realities which appear in the penetrating light of day. Why should man not prefer to live in a world of night? Why does he not go to bed with the dawn, pull the covers over his head, and shut out the stark disillusion of a world revealed nakedly in the light?

Why not? We know well why not, and in our answer lie both the stimulation and the sustaining morale of man's continuing search for the revealing light of knowl-

edge. It would be trivial to argue that man seeks knowledge only to provide for himself an easier existence, that the history of thought bespeaks only an animal-desire on the part of man for more comfortable living conditions. It is, indeed, man the animal who seeks only the satisfaction of physical desires, who anticipates no reward but the satiety of bodily pleasures. Had this been the limit of his desire, man's destiny would soon have run its course. True, these physical wants are primary demands which must, of course, be satisfied, and while man is occupied with the task of beating an existence out of a stubborn earth, he finds little time for the indulgence of more sophisticated desires. But when a cave has been found for shelter and the hunt for food has proved successful, even primitive man begins to contemplate the possibility of a carving, a bit of color, perhaps a necklace for his woman—and suiting action to desire, man becomes an artist. Or perhaps in moments of relaxation from the struggle for physical existence, man may look upon the river, curious about the eternal flow of life-giving water. Off he goes, exploring, impelled by the lure of insatiable curiosity, unmindful of the impractical nature of his labor—and man has become a scientist. Again, at evening, when the first star appears, he may sit at the entrance to his cave and watch with awe the unfolding of the heavens, wondering perhaps about the nature of those bright and twinkling points of light. At morning he will greet the rising sun with thankfulness, he may personify this mysterious but welcome light and bow down in reverent wor-

ship—and man's religion expresses his reaching out for knowledge of the mystery of the universe.

This is man—puny creature in a vast universe—and puny he might well have remained but for that aggressive curiosity. An interesting being, man, with his eternal inquisitiveness about the nature of things, his driving interest in all that goes on about him. So much, in fact, does go on in his world, and man has kept himself so busy investigating its many aspects, that only recently has he given attention to an important subject which is proving to be the most interesting of all subjects—himself. Man had traveled far in the world of thought before coming to the startling realization that he had been investigating, observing, thinking, speculating about everything in the universe except man, when he turned to look at himself, he was fascinated with what he saw, like a child who realizes for the first time that it is *his* reflection in the mirror.

This awakening to self-consciousness is one of the most profound experiences in the life of man. What could equal the grandeur of satisfaction in the realization that one is a being possessed of the knowledge claimed by man? Surely man can be pardoned a little conscious pride in his capacity of observing, speculating upon, and analyzing all things that exist. Knowledge is the crown of man's stature, philosophers proclaim that intellectual contemplation is man's closest approach to the essence of divinity. No child is so precious to the heart of man as is his brain-child, and he can conceive no tragedy greater than to be deprived of this coveted capacity to think and to know.

Man deprived of his intellectual capacity is no longer man, but simply an animal organism.

THE USE OF KNOWLEDGE

To analyze, and through analysis to understand, and through understanding to make possible the final fruition of rational and creative action—this is the highest end which man can conceive for himself. But it is not an end which man can grasp simply by reaching out the fingers of desire. Creativity is the end-result of a long process, for both man as a species and man as an individual. Likewise, action, if it is to be more than mere physical movement, must evidence the coherent adjustment of knowledge in the patterned control of thoughtful analysis. We inherit the progress and the attainments of all men throughout history, fortunately, each of us does not have to go through the age-long process, starting from the very beginning of understanding. Our heritage is great, handed to us still stained with the labor of those who achieved it, and it enables us as individuals to start at a point far in advance of those who preceded us in the quest for knowledge. Today a child of ten may possess knowledge which would have thrilled Newton, astonished Galileo, and confounded Aristotle. Each of us may boast with Emerson

I am the owner of the sphere,
Of the seven stars and the solar year,
Of Caesar's hand, and Plato's brain,
Of Lord Christ's heart, and Shakespeare's strain

We should then be untrue to ourselves as modern men if we were to select from the past a system of thought and

cling like parasites to the growing tree of knowledge. The smallest twig at the farthest tip of the highest branch is of inestimable significance as compared with the lichen which fastens itself to the sturdy trunk. The man who would thus sell his birthright of intellectual vigor for the pottage of sterile safety is a sickly coward, unworthy of the heritage of the past in which he finds refuge. However we investigate man and his thinking, it must be in a manner which will comprehend and use that which is handed down to us in the history of thought. Today such a vast complexity of knowledge confronts us that it is indeed no easy task thus to comprehend and use knowledge. How little of man's learning any one of us may hope to acquire becomes apparent when we observe the extensive fields of study available to the curious. Yet, unless we manage to comprehend the extent of this body of knowledge, if we cannot somehow co-ordinate and understand the general nature of this background of thought, it cannot be of any use to us in our own thinking. It is the paradoxical dilemma of our contemporary period that we have actually more "facts," more detailed and specific knowledge, than we know how to use. It is literally the case that we "know" better than we "do", the pressing problem for most of us is not so much the acquisition of more knowledge as the more adequate employment of the knowledge we already have. Men are not hungry because we do not know how to feed them, families are not inadequately housed because we do not know how to build good houses, workmen are not unemployed because they lack knowledge or because we know of nothing useful for

them to do. The least exploited resource of modern society is the knowledge which lies unused for want of skill in adapting it to the problems and demands of activity.

THE ORGANIZATION OF KNOWLEDGE

The primary problem of rational activity is, then, one of method, of organization. If society is to be ordered intelligently, the intelligence which is to serve as the ground of order cannot itself be without organization. Our knowledge must have some order, some method, or its application in ordering activity will be haphazard and of minimal effectiveness. Whatever degree of success we may achieve in ordering the body of our knowledge, it is certain that we cannot hope to progress very far in the use of intelligence and understanding until we have some notion of what we mean by "thinking," or using intelligence. Mainly, it would seem that in thinking about problems we try to bring together into an understandable whole all the knowledge that is available—made available, that is, by the history of thought and by the use of our own capacities of observation and analysis. From some such conjunction in the form of a knowledge-pattern is derived whatever capacity of judgment we may possess. The making of a judgment, in this sense of using intelligence in solving problems of activity, is thus a complex reaction or employment of a man's whole body of knowledge. All our capacities for thought, as well as all the facts that we can adduce, are interrelated in such fashion that there is never a line at which we can break off and say: "This is as much of my knowledge or intelligence as

I need to judge this problem." We must, to some extent, see things whole, the body of knowledge must have some pattern, some unity, or it cannot be used in judgment.

Yet it appears impossible to grasp the whole of knowledge, only by breaking down this vast and complicated whole into pieces are we able to comprehend it. Great as are man's capacities for thinking, few of us have the audacity to claim ability to see in one moment of comprehension the meaning of the whole of human history and thought. Attention and analysis must be restricted, concentrated, and specialized, else our understanding would spread itself so thin that the implications of the simplest of problems would be beyond our grasp. Only by concentrating upon first one segment of knowledge and then another do we add gradually to our understanding of the whole. With regard to any situation of experience, these specialized points-of-view are so many that at first glance it looks almost futile that thought should hope to comprehend them as a whole. Yet, in a very real sense, the effectiveness of any concentrated or specialized analysis depends upon an understanding of the body of knowledge into which that special segment must fit in order to prove useful or meaningful.

Thinking a thing through is, in a sense, taking first one point-of-view and then another, until all aspects of the problem have been observed. But intensive specialization should come only after the examination and understanding of the general structure of our system of knowledge, even though that structure be but vaguely outlined. It is doubtful that much of value could result from a rush into

highly specialized research—that is, exclusive concentration upon one point-of-view—before understanding the far-reaching implications of that which is being subjected to research. Freshman specialists appear as ridiculous as the overanxious builder of a home who wants to place his furniture and hang pictures before the floors are laid. A man need not admit ignorance and incompetence in all knowledge except that of a specialized and restricted area of research. As a matter of fact, it is difficult to conceive how one could think adequately within a restricted area except upon the basis of some understanding of the relations which such specialized investigations bear to other aspects of knowledge.

Analysis in terms of exerting control over activity is, then, in the first place, the recognition and exploration of all points-of-view which can possibly be assumed in regard to the matter under consideration. Quite clearly, an endless task would be posed for thought unless it were possible to generalize these manifold points-of-view under a few major headings. Such generalized points-of-view we shall here call *categories*; however many categories we may define, or whatever we may decide to name them, each will represent not only one important point-of-view which can be taken in thinking about experience, but a point-of-view which must be included in any adequate consideration of the problems of activity. To some extent at least, such appears to be the nature of all categories, and we might, if we liked, consider experience in terms of such traditional categories as relation, quantity, quality, and modality. While such categories are useful for the

purpose for which they are designed, they do not seem particularly appropriate for use in thinking about specific problems of individual and social activity. It will be conducive to clarity, therefore, to attempt the formulation of a set of categories which more precisely represent the significant points-of-view which can be taken in the effort to exert control over experience or action.

The value of such a set of categories is that they enable us to *analyze* experience. Thus, by analysis in this sense is meant, not only the breaking down of experience into points-of-view, but also the use in that process of a pattern or system which includes and relates all the significant factors which must be taken into account in any thorough analysis. This definition implies that the distinction between analytic and synthetic thinking is not an ultimate one. Unless analysis proceeds upon some structural pattern, it becomes an endless process of sheer repetition of various analyses, each of which is limited to a particular point-of-view. The most analytic scientist proceeds with an extensive general framework, he knows in general what he is looking at and what he is looking for, and knows, furthermore, what to do with his analysis when it is accomplished. What it is that specific analyses contribute to the structure of the synthetic whole of knowledge is obvious, and it is likewise clear that synthesis must always remain sufficiently tentative and pliable to admit all analytic facts. But any kind of analysis is inconceivable in the absence of some patterned method for the determination and co-ordination of points-of-view or segments of analytic operation.

Analysis may, then, be defined as the use of a systematic pattern in thinking, but at the same time it must be admitted that all analysis likewise corrects and adds to the pattern already assumed. Such a procedure permits as many kinds and varieties of analysis as are found fruitful in thinking, from the most limited and specialized analysis of a restricted segment of nature or experience, to the most comprehensive analysis which hopes to encompass all limited or segmental analyses

The most important characteristic of analysis as thus defined is the system or organization which it gives to a part or to the whole of the body of knowledge. Analysis as such is not directly concerned with what *ought* to be; it makes no distinction of *good* and *bad*. In short, analysis defeats its own purpose if it attempts to make what are ordinarily called value discriminations. Now, the degree to which any individual can in thinking maintain an attitude and method of analytic objectivity is, of course, limited—severely limited by all the paraphernalia of prejudice, desire, needs, ends, and values which are integral and inseparable characteristics of any and every person who thinks. Bias which derives from partial or distorted observation can, indeed, be reduced to a minimum in our thinking, but to ask an individual to think without allowing desires and values to influence his calculation is like asking him to observe without using his senses. My sense apparatus certainly prevents me from taking an objective view of events and objects, I can see only a limited range of colors, hear but a few of possible tones, I can assume but one perspective or point-of-view at a time, and can but

rarely co-ordinate my sense capacities so as to use them all in a single perceptive experience. This prejudices or distorts my perception, for I am observing objects only *as I see them*. Yet, the desire to escape this limitation of subjectivity in judgment will prove suicidal if it leads to the denial of the senses, or of individual values and desires.

It need not be inferred, however, that the concept of objectivity in thought is meaningless or unattainable. We do attain a high degree of objectivity in observation, the evidence obtained through our senses is verified first by checking one sense datum against another. An object which looks like a rose may be found to be artificial when touched and smelled. Sense experiences which are contrary to what we have experienced in the past are open to suspicion, and an observation which was accepted as correct will come to be doubted if it cannot be verified in the future. Then, too, my individual sense experiences must agree with those of other individuals, we do not have identical experiences, of course, but one of the major tests of sense data is the maintenance of enough agreement with the observation of others to enable us to communicate our experiences to them. Through such a critical process of verification, we achieve objectivity in sense observation, an objectivity which in most cases enables us to detect errors of illusion, distortion, and individual differences such as color-blindness. Thus we arrive at definitions and descriptions of objects and qualities which, while they do not represent precisely the observation of any one individual, are nevertheless by no means arbitrary. They are valid, verifiable, and necessary generalizations.

The method of verification by means of which objectivity is maintained in analysis is much the same. We could no more expect to rid ourselves of values and desires in analysis than to deny our senses in observation. What we want and desire will inevitably influence our analysis, the ends and purposes which we hope to realize in action through the use of knowledge are at once the primary urge to and the ultimate goal of analysis. But we can and do make a distinction between fact and value, as we also distinguish between appetites and sense data. It may be true that there is no disputing individual tastes, but we most certainly can dispute claims of observation which do not satisfy the tests of verification and communication. The question of whether or not I *like* green wallpaper is distinguishable from the problem of whether or not the wallpaper *is* green. We have techniques, both customary and scientific, for maintaining agreement on the latter problem—that is, the “factual” issue. Let us not overstate this distinction between fact and value, in a more speculative discussion we might find at least debatable the question of whether there is any absolute or final difference between the factual and the valuable. Our concern here is to note that, for the practical purposes of using knowledge in activity, we do recognize and agree upon a distinction of verifiable fact from individual wants and values.

There are, as we have already noted, many fields of analysis which attempt to define and classify knowledge by methods which will maintain the highest possible degree of objectivity. This means that all those familiar with the accepted methods and techniques of observation in the

particular field or science will agree upon what constitutes the "facts" of knowledge from the observational point-of-view of that science. This agreement about observation involves the kind of generalization already defined as necessary to agreement and verification, and the classifications of fact made by the various sciences represent segments of agreed-upon knowledge. What is not yet agreed upon must be termed theory or hypothesis. There is, thus, no difference in kind between the function of scientific analysis and the more generalized analysis which we are here undertaking for the purpose of increasing the use of knowledge in action. The difference is one of degree, as the engineer relies upon the accepted facts of applied physics for his analysis, and as applied physics uses the verified data of pure physics, so we shall rely for factual information upon the fields of scientific investigation which have built up systematic bodies of knowledge. We must try to reach an agreement on the principle of classification—that is, on a set of categories—which will enable us to gather all these bodies of scientific knowledge into a systematic whole which will represent as completely as possible the accepted facts of knowledge as they are now agreed upon.

It is admittedly a presumptuous undertaking thus to attempt an analysis which will comprehend by generalizations all the analyses of the sciences which have contributed to knowledge. But how else shall we, in our action, utilize what we know—and if it is not utilized, is knowledge not sterile? The divergence between the facts we know and the values we find possible of realization in action is too

great to be countenanced with equanimity. There is promise of reward in this experiment of using as much knowledge as possible, when intellectual modesty becomes defeatist, it ceases to be a virtue. At any rate, the minimum reward will be the fun of thinking about what we think about

CHAPTER II

Analysis and Action

ANALYSIS is the recognition and description of points-of-view which can be taken in the process of thinking about a problematic situation. To discuss the analysis of action is to make at the outset some kind of distinction between analysis and action. That we normally make some such distinction is patent, we admit that "thinking doesn't make it so." Problems are not solved merely by analysis, the active implementation of analytic solutions is what is meant by control, the direction of activity by thought. Many quibbling problems might be suggested by the distinction of analysis, control, and action, but we shall proceed upon the commonsense assumption that there is a distinguishable difference between the analysis of a problem and the effort to realize a solution of that problem in activity.

The process whereby changes are made in both individuals and objects may result from simple movement in which there is evident no observable purpose, direction, or control other than that which we ambiguously call "natural cause." By action, as distinct from mere movement, we ordinarily mean to indicate the relations which an individual establishes between himself and another individual, or between himself and objects—relations which are, to some extent at least, purposive, deliberate, and controlled. Both movement and action may be assumed to accomplish some degree of change in all the factors involved, whether individuals or objects. The use of knowledge in action is, then, the control of movement in order to accomplish ends or purposes. Obviously, the first problem of control is an understanding of the nature of the act, in fact, some rather widely held views of the nature of action so reduce the possibility of control through knowledge that, if they were correct, our entire discussion would be rendered trivial. Our immediate question is, then, an analysis of the possibilities of control in action through the use of knowledge.

THE NATURE OF ACTION

The simplest explanation of movements in which an individual is a participant is in terms of a stimulus-response mechanism



This is, indeed, a simple explanation, it is, in fact, too simple. It might possibly describe the mechanical move-

ment involved when one billiard-ball strikes another, but it hardly accounts for all the factors involved in the activity of an individual. At the same time, it is true that such a simple relation does seem to describe a large area of human action—those automatic, mechanical responses which we make without any observable thought or analysis. Much of our activity, as a matter of fact, must be of such mechanical nature, else we would never get done the things that we must do in order to live. Had I not learned to react in some such mechanical fashion, I most certainly could not write rapidly, as I am now doing, on a typewriter. However, to take this simple response too seriously would be to confuse rather than to clarify the nature of action. No such stimulus-response pattern could explain why I sometimes react to certain stimuli and at other times do not, or why I react in different manners at different times. Mainly, it gives no clue to the important question of why I reacted with this particular response the first time the stimulus was presented.

The automatic response pattern is, thus, a suggestive, but extremely limited, way of looking at individual experience. Many of our activities in daily life do seem to be almost as automatic as the stimulus-response pattern, especially does this seem true of our so-called "conditioned responses," such as stopping for a red light or writing on a typewriter. We overstep caution, however, when we fail to remember that all such conditioned or automatic responses—all except those purely physiological reactions like batting the eyes or jerking the hand from fire—have been learned and can be unlearned. They should, then,

be automatic only if we want them so and if it serves our larger purposes to dispose of some area of our activity by learning to do some things quickly, without deliberation. The argument that men are in the grip of conditioned behavior-patterns from which there is no escape rests upon a description of experience which is simple to the point of simple-mindedness.

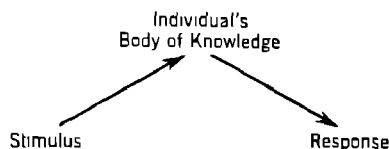
Consider a relatively uncomplicated instance of such conditioned response, such as that of stepping on the brake when a traffic light flashes. This is certainly an automatic—that is, non-deliberative—reaction, if the driver paused to deliberate or think before responding, his car would obviously be past the red light and into the cross-street before it could be stopped. The speed of traffic demands that we condition ourselves so that such responses will be automatic, will operate with the rapidity of a conditioned reflex. But we have unquestionably learned this reaction, there is nothing “natural” about stepping on the brake when a yellow or red light flashes. Then what precisely is the procedure for establishing such a conditioned response as that of “stepping-on-brake” when the stimulus “red light” is presented? There is no necessary relation present in the circumstances of the situation itself, there are only two things, a light and a brake. The light is a stimulus, to be sure, but only to an individual concerned with the flow of traffic. Likewise, the brake will respond, but only when directed or controlled by the driver. Thus, we may say that the two factors of light and brake are the *instruments* of a stimulus-response action.

The individual is certainly an important factor in this

situation, for however automatic or conditioned his response may be, it must be remembered that his entire activity in responding to the light implies on his part some awareness of the general regulations concerning automobile traffic, a knowledge of the purpose and nature of traffic signs—and, in addition, there is an assumption that the driver has a desire to drive a car and to obey the traffic laws, or at least to avoid penalty for infraction of those laws. Thus, we find at the outset that what appeared to be a simple stimulus is not simple at all. Before we can consider the red light to be a stimulus to the driver, we must take account of the whole body of traffic regulations and punishments for violation of the law, of which this particular red light is the symbol. There is, too, the simple but very important matter of being able to assume that yellow lights will always mean “caution,” red lights “stop.” There isn’t, after all, any reason why red should mean “stop,” except on the basis of a general agreement to that effect—and consider how complicated are the means of getting such agreement.

As for the driver involved, when we admit his response to the stimulus, we are assuming many things concerning his nature as an individual. He must, in the first place, be able to distinguish colors, an implication that his powers of perception are normal. If the driver is color-blind, he must learn to respond by distinguishing the lights according to their intensities rather than their colors. He must, also, have certain other physical abilities in order to manipulate hands and feet in this rapid movement of response.

Driving an automobile has begun to take on the appearance of a rather complicated process, and we still haven't the response of "stepping-on-brake." This much is clear—that before such a stimulus-response activity can be understood, there must be assumed two rather complicated systems. One is the social structure, apart from which the red light would not be a stimulus at all, the other is the individual, without whose capacities there could be no response. Activity, even such simple activity as the application of an automobile brake, then, demands an adjustment between these two systems. The individual, of course, lives within the social structure, what he knows of it constitutes his body of knowledge and experience. When he is presented with a new stimulus, before he can respond, that stimulus must make some connection and association within the body of knowledge which he already has. The meaning of the stimulus must be learned, in the sense that it must be adjusted within the individual's experience. If such a process could be put into a diagram, it would look something like this

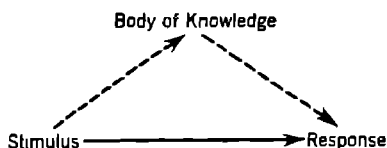


After the individual has learned the stimulus by adjusting and relating it to what he already knows—becoming aware of traffic signals, learning the mechanism of his car, accepting the regulation of traffic, evidencing a desire to drive, and demonstrating the physical ability to manipulate

an automobile—only then is the individual able to make what may be called a response to the red light. There are, of course, various degrees of thoroughness with which such an adjustment to knowledge and experience may be made. I may be content to accept someone's word for the nature of traffic regulations, I may have assimilated the nature of traffic signals from childhood by acquaintance, I may take without question the advice that when the red light flashes, I should step on the brake. No evidence need be cited that it is not necessary to learn traffic rules in order to drive a car, but such failure means that the learning process has been incomplete and that the individual does not know exactly what he is doing. We are trying to understand the nature of activity as response, not to describe or to minimize the instances of unintelligent or haphazard action.

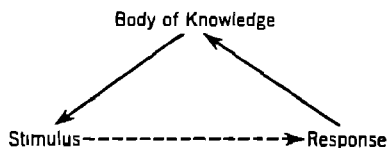
As soon as the driver has understood enough of these systematic implications to make the response of stepping-on-brake, however casual or inadequate may be his knowledge, he may then continue to respond with less and less deliberation. If he continues to meet this same stimulus and if he is willing to go on responding to it, mere repetition will crystallize through habit to make his response automatic. The driver could, if he wished, continue to think about the systematic implications of his response each time he set the brake, but to do so would, in this case, be to deny the purpose of the learning—namely, the acquisition of sufficient skill to drive safely in traffic. After the response has become sufficiently automatic that de-

liberation is not necessary, the pattern of action looks more like a simple response than it did in the beginning.



Now the driver may actually forget all the systematic implications involved in the learning process and still continue to respond.

If the individual should at any time wish to change or to rid himself of such a conditioned response, he would find it necessary to retrace the steps of the original learning process.



While the conditioning of much of our activity seems advisable and necessary, the price for the individual is high. It is easy to drop into habitual patterns of response, which soon become conditioned, and carelessness or ignorance in learning the implications of those responses make the unlearning process extremely difficult. It is not easy to remember that which was only half learned or attended only casually, yet unless the individual can understand why he is reacting as he does, it is extremely difficult for him to break the pattern of response. He moves, reacts, and responds, but literally does not "know what it is all about." Such response patterns may often become conditioned in individuals who are not aware of the implications, either

because of ignorance or because of the pressure of circumstances at the moment. Many such conditionings are established in infancy, when the understanding is limited, perhaps the only adjustment which is made in the child's body of knowledge is an association involving corporal punishment. Yet, later in life, this individual may find himself reacting in a definite manner to a certain stimulus and be unaware of the reason for his reaction—and, worse, he may find it almost impossible to restrain himself from the response, however much he may desire to do so. It may be a foolish or embarrassing response which he makes, but it is difficult for him to break the condition until he knows what caused the original association—that is, until the individual is able to trace the activity through the original systematic pattern which it followed

As an extreme example, consider the case of an intelligent man who exhibits marked fear upon encountering a dog. His fear is foolish, for it makes no difference whether the dog is large or small, vicious or amiable, yet there seems to be nothing he can do to control this unreasonable response of fear. Sometimes, in such a case, a psychiatrist may be able to draw from the individual, after long and tedious questioning, a story of childhood experience which the patient had forgotten. Perhaps he had been terribly frightened by a vicious dog, so that one experience was sufficient to condition him to fear. Perhaps, for five or six years, the child had been scared away from forbidden premises by the warning. "The dog will get you." Whatever may have been the cause of the association, the individual has long since forgotten the experience,

but the conditioned response remains effective in later adult life.

In many such cases, the mere realization of the manner in which the response was conditioned is sufficient to break it. The individual, that is, realizes that the relation which he made between fear and dogs was an unreasonable one, made because of inability to understand the implications involved. No psychiatrist, however, can guarantee that complexes will always be so happily resolved. The tremendous power of habit sometimes does not submit to mere "breaking." In other words, it is probably not enough simply to unlearn a conditioned response, after having traced back the pattern of the original response, the individual must then take pains to construct and learn an intelligent pattern of action as a substitute for the response he has unlearned. The man who unlearns fear of dogs would thus do well to buy a dog and learn the canine capacity for affection, just as the man who realizes he has a conditioned attitude toward people of races or religions other than his own would do well to acquaint himself with some of these people, in order to establish in himself not merely an absence of irrational response, but a positive tendency to respond intelligently.

INDIVIDUAL ACTION

Let us not overstate the case for individual deliberation in activity, we know too well the many limitations which circumscribe our attempts to employ what intelligence we have. That the area of ineffectiveness can be diminished, however, and kept at a minimum of interference is the

common assumption of all attempts to clarify thought and action, the tendency of routine and habit to condition our responses is itself a danger-signal to the individual who would make his action intelligent. It is not surprising that people who "hate" one thing are likely to determine their action according to a whole gamut of such "hates", it is, rather, to be expected that psychiatrists will continue to be discouraged (or enriched) by the observable tendency of patients, when cured of "complexes," to go straightway and find themselves other "complexes." The fundamental complex is the individual's inability to analyze the situation which demands some response on his part. The apathy or ignorance or hurry of the individual short-circuits analysis by encouraging responses which have not come as the result of deliberation or thought.

We have seen that actions which may develop through repetition into conditioned responses involve all the facts, relations, and knowledge which have to do with the activity in question. True, most of the situations which demand an active response from individuals have implications so far-reaching that exhaustive analysis seems out of the question, therefore, a fringe of possible, even probable, error will always remain, for some of the things we fail to include in our analysis may turn out to be of great importance in their effect upon the response. Man is not God, and omniscience is not a characteristic of man's thinking. But we can realize the nature of the *process* which is activity, learn as many facts as circumstances will permit, and thus employ an analytic approach to the problem of making our responses rational rather than unthink-

ing. Analysis is simply thought applied to the problem of action, as such, analysis must give proper consideration to each of the three essential factors stimulus, body of knowledge, and individual.

Our sanity as individuals depends upon our success in making this adjustment of the stimuli of experience, the body of knowledge, and our own responsive activity. The final end of study and learning is, of course, the response, activity is the end-product of the thinking process. It is, as a consequence, most unfortunate when the process is reversed—when a man acts first and thinks afterward, if at all. To be sure, hindsight is easier than foresight, we can always see after we act how much better it could have been done, but this hindsight analysis is not entirely in vain, for we use that addition to our knowledge in our next analysis of a problem.

No man is inherently wise or rational in his activity. Intelligent analysis and activity necessitate, first, a body of knowledge available to the individual, and second, a method for using that knowledge in action. It is with this method of using knowledge that we are primarily concerned in this discussion. Perhaps it sounds paradoxical to say that it is not enough simply to know, and of course there is considerable ambiguity in the word “know.” But when Socrates asserted that the man who knew the good would do the good, he was using “knowledge” broadly to include all of man’s capacities of thought and action. While it is true that we cannot separate the functions of knowing and doing in a particular individual, putting knowledge in one pigeonhole and action in another, yet

we certainly can make a distinction in these functions or capacities of the individual. The difference between separating and distinguishing is fundamental, in fact, the casual assumption that what can be distinguished by thought must be separable in reality has occasioned perhaps more confusion than any other single piece of carelessness. We can and do distinguish for purposes of analysis that which is not separable. So it is with the distinction of an individual's body of knowledge, the method of using that knowledge, and the action of the individual. This means simply that for the moment we are defining the body of knowledge as available factual information, and method as the relating or adjustment of that information to the circumstances of a particular problem of activity. However vague may be the distinction between the content of thought and the operation of thought, it seems reasonable to admit the distinction to the extent of asserting that rational activity will result only from the intelligent use of what is known. An encyclopedia is full of knowledge, but only a thinking process can make use of that knowledge. We may marvel at the capacity of the individual who talks like an encyclopedia, but his ability seems freakish if we discover that he has no skill whatever in using those facts in the analysis of common problems.

METHOD IN ACTION

Method is itself of the greatest importance, in a sense, it even takes precedence over the content of knowledge, for method determines largely how that knowledge is to be used. What knowledge is as an end will depend upon

what use is made of knowledge as a *means*. One of the most barbaric propositions ever enunciated by man is that of "any means to an end." Under the banner of this misbegotten slogan of irrationality have been committed the greatest crimes in history—wars, inquisitions, persecutions, and purges. Is it not one of the obvious facts of experience that method is the largest factor in determining what end is actually achieved? What does it matter, for example, that I proclaim with sincere and vociferous fervor the end of a classless society, if I achieve the liquidation of classes by mowing them down with machine guns? The end is here determined by the method employed, and any method of violent revolution will result in ends determined by violence, regardless of how the end was originally defined. We may have ever so perfect an ideal and ever so much knowledge, but if due consideration is not given to the problem of method, the end will remain ideal, the method adopted without consideration will bear its fruit of inescapable results. This does not mean that the provision and definition of ideals are not important, planning and utopianizing are the very essence of progress. But to state an end or ideal without at the same time saying, "And this is the way to get it"—this is to indulge day-dreaming to the point of fantasy. No amount of conviction or "rightness" will achieve an end in the absence of a method specifically devised for the achievement of that end. What, as a matter of fact, could be more vicious than an individual so convinced of the "rightness" of his end that he is not concerned about how he achieves it—one who, clothed in the cloak of his self-righteousness,

employs an utterly ruthless method, all the while shouting idealistic ends? This is the essence of fanaticism, the convert-or-kill technique of the crusader

Yet, it apparently requires our greatest concentration to realize that knowledge and purpose must be activated or implemented. We seem to make a tacit assumption that knowledge itself possesses some peculiar efficacy which makes it necessary only that we know in order to resolve all practical problems. At the same time, nothing could be more apparent than that there exists a tremendous gap between knowing and doing, to know *what* is not necessarily to know *how*. The man of "knowledge" may be a practical or methodological fool. The reputation of the professor for practical stupidity may be exaggerated, but it is not entirely without foundation, confidence-men, it is said, consider university faculties 'fertile soil for get-rich-quick schemes. How shall we estimate the specialist in logic who talks contradictions in politics, the authority on legal evidence whose casual opinions betray irrational prejudices?

The failure to keep clear the distinction between knowledge as a body of factual information, and the method of utilizing that knowledge, results in an oversimplification of the problem of activity, as, for example, in the assertion of Karl Mannheim (in *Ideology and Utopia*) that social conflicts can be resolved only by a "socially unattached intelligentsia." Mannheim assumes that, in order to attain adequate knowledge to adjust social problems, one must be removed from the scene of practical activity, but the difficulty is that the knowledge attained by such a "socially

unattached intelligentsia" is not likely to be effective in the arena of activity. The primary question is not what is known, but how to use that which we already know. The knowledge of the "unattached intelligentsia" stops short of the active aspect of the problem because of the quite unjustifiable assumption that an expanding content of knowledge implies a more consistent and useful method of using that knowledge in activity. On this view, it is not surprising to find a most discouraging ineffectiveness of knowledge in practical affairs, to find that the man of action, ignorant though he may be, so often proves able to impose his methods upon activity—even when they are contrary to what we know. The socially unattached scientist—that is, the scientist as a scientist—is powerless before the politician, witness the death of science in "scientific" Germany. No, it is not socially unattached knowledge that we need, we have today, in almost every field, certainly not more of such knowledge than we need, but more than we know how to use. How else shall we explain the periodic and disillusioning phenomenon of a monopoly of power over activity wielded by a small minority who, by comparison even to the average of man's achievement, are ignorant, unlearned, and immoral?

At the outset, we described analysis as the systematic application of knowledge to problems of action. Such a description has a presumptuous ring when one considers the extent and complexity of the knowledge that is available today. The very complications of knowledge tend to make all problems appear more complex and difficult than they would if we didn't know so much, the Hoosier

sage, Abe Martin, once remarked that nobody could talk so fluently about a subject as "them that ain't hampered by facts or information." We should hardly be satisfied, however, to simplify our problems at the expense of eliminating or restricting knowledge, for it is only by analysis, which makes use of all knowledge pertaining to a problem, that our action becomes more adequate, more exhaustive, and more rational. Two or three centuries ago, before modern developments in transportation and communication brought all peoples of the world into closer contact, the problem of international relations was really simple by comparison with the picture of world events today. During that period, nationalism and isolation were understandable policies for the adjustment of relations between those nations which had any relations at all. Modern conditions have tended to make the conception of isolation increasingly inadequate, descriptive of a condition which few, if any, nations could maintain today. True, this has so complicated the problem of international relations that the situation appears even worse than it was when we looked upon all other peoples as "furriners." Today we know many peoples, hear their radio broadcasts, frequently visit their lands, exchange students, and from this growth of intercourse spring the elements of sympathy, understanding, and friendship. If and when we do work out some rational solution of international relations, it will be infinitely superior to nationalism and isolation, for it will make use of a vast amount of knowledge which we have acquired in the meantime.

PROPAGANDA AND ACTION

If not control of action by analysis, what? Three major alternatives might be suggested. There is, of course, the simple resort of letting action resolve itself, the individual may be the docile victim of circumstance, adopting whatever course of action is immediately presented or appears easiest. Not even a self-respecting animal, however, would admit such indeterminacy in behavior, this is not a real alternative. Ignorance or lack of knowledge is not an alternative, either, for no normal individual is so devoid of knowledge as to escape responsibility for his action on the ground of ignorance—not, that is, until that individual has used as much knowledge as he has available. Yet, it must be admitted that individuals can and do act without using more than a minimal fraction of the knowledge which they have or could get. Too, we cannot discount the appreciable control over action which is exerted by feeling, emotion, habit, and the pressure of circumstance. But if our purpose is to act intelligently—and this is assumed—then our effort must be to reduce the operation of these non-rational factors to a minimum rather than a maximum of control in action, or, as Plato advised, the rational charioteer must control the spirited and appetitive steeds.

The most important and the most common alternative to the control of action by analysis is the control of action by propaganda. The complexity of knowledge and the tempo of modern existence both contribute to make propaganda the most effective and vicious instrument of control

available in the world of active affairs. The more we know, the more complicated become the problems which we try to analyze, at the same time, the demands of activity are such that we are compelled to make rapid decisions, quick responses. As a matter of fact, much of our experience is such that the co-ordination of thinking and acting becomes, for all practical purposes, instantaneous. We are compelled to "think on our feet," and this is the point at which analysis as a pattern for the use of knowledge is indispensable. Sitting in the quiet retreat of one's own room, one may contemplate a problem with sufficient leisure to take account of all its many aspects, but how many problems of action can be put aside and done like homework? The confusion which results from the failure to keep thinking abreast of activity provides the most fertile soil for propaganda.

Propaganda may be defined as the effort to inculcate in individuals a movement of response which is not adequately understood and related within that individual's body of knowledge. This is admittedly a somewhat restricted definition of propaganda, but it seems advisable to make such a distinction of propaganda, education, and publicization. Although in its original form, the word "propaganda" meant simply the publicizing of opinions, it has come through common usage to convey implications not consistent with any method of analysis. Education and propagation of information are indispensable to the clarification of individual bodies of knowledge, but propaganda is something more than this. The distinguishing characteristic of propaganda is the deliberate and inten-

tional avoidance of clarity in any analytic sense; as a consequence, what we now call propaganda is the very antithesis of analysis. Propaganda is an irrational method for the solution of problems of action. The purpose or function of analysis is to observe and adjust all factors and points-of-view which are pertinent to the problem under consideration. The essential methodological feature of propaganda is the deliberate ignoring or suppression of certain factors in order that individuals may be influenced to a certain response. Thus, to use a simple illustration, a political party will ignore or minimize all the praiseworthy acts of the opposing party, stressing only what it considers to be mistakes.

In terms of our earlier statement of action as involving stimulus, body of knowledge, and response, what the propagandist tries to do is to provide a ready-made adjustment which will produce a desired response from the individual whenever a certain stimulus is presented. The determination of what constitutes a rational response is no easy matter, especially when the individual has not organized his knowledge into some systematic pattern of analysis. In moments of perplexity, when the individual feels the demand for action and yet is unable to analyze the situation presented, the propagandist holds forth an alluring suggestion of analysis which may appear to the individual to be the rational solution for which he has been searching. No individual is likely to be conditioned in his responses by one such instance, but repetition is vital to propaganda, and if the individual continues to respond to the ready-made adjustment of the propagandist, he will

gradually become so conditioned that his action takes on the appearance of a stimulus-response mechanism. Thus may an individual forego rationality in action

It is not unusual to find today statements which attempt to justify the use of propaganda as the only means by which to obtain and wield control in affairs social and political. However those who seek control may justify its use, propaganda means to the individual only the loss of rationality and a submission in action to dictation of which the individual is not even fully aware. This most effective weapon for the destruction of rationality and individuality constitutes the real armament of dictators and demagogues, by its use they fan to frenzied heat the prejudices and dislikes of men by helping them to eliminate thinking in the control of action. Propaganda and counter-propaganda wage a war for control of the reactions of puppet-individuals, the power and the glory belong to him who can produce and propagate the most "significant symbol."

Propaganda is not analysis, nor simply a neglect of analytic design, but distortion and perversion of analysis. What makes propaganda effective and compelling is precisely the fact that the propagandist recognizes the importance of what we have called the analytic pattern within the process of activity. If he is successful, it is because he has made a better analysis of the possibilities of action than have the individuals upon whom he exerts his influence. In other words, the propagandist is a knave but by no means a fool; his trade is not quackery, but chicanery. The background of forceful propaganda is, then, a fairly adequate

understanding of the nature and demands of activity, and a considerable degree of competence in the analysis of problems of individual response. What distinguishes propaganda from analysis is the deliberate suppression by the propagandist of essential factors in the argument presented, the purpose of this suppression being, of course, to influence the individual to a response which he would probably not make if he knew all the factors rather than just those which the propagandist tells him. The deliberate suppression of some facts and overemphasis of others are the essential techniques of propaganda

The procedure of the propagandist is, then, as follows: he begins with the reaction which he hopes to elicit from the individuals upon whom he intends to concentrate his attention. Then, on the basis of the analysis he has made, the process is constructed backward from reaction through body of knowledge to stimulus. When he has worked out a stimulus-knowledge-response pattern, the propaganda is ready for propagation. This is the technique of cruder forms of advertising, from which the propagandist has learned much. If, for example, the purpose of the advertiser is to sell a certain brand of cigarettes, he will first have to find or make a stimulus which will produce this desired response. The quality of the cigarette is not an effective stimulus, for the average consumer either cannot or will not trouble to investigate quality. A much more stimulating stimulus is provided by the picture of a seductively posed, scantily clad female, it is the hope of the advertiser that his audience will behave like Pavlov's dogs—that is, that individuals can be so easily and casually

conditioned that, henceforth, when they see this brand of cigarette, they will evidence a pleased response similar to that made toward a seductive female

Propaganda may range from complete and deliberate falsification to more subtle presentations which evidence a high degree of analytic competence and considerable factual information. As a perversion rather than a denial of analysis, effective propaganda is designed to assist us in our feeble attempt to analyze problems, but to assist us toward an already determined solution It is in this perversion of analysis rather than in specific content that propaganda is really vicious. The specific responses which this or that propaganda induces may be of more or less immediate importance, but the method of propaganda is the destruction of thought in the individual through the establishment of uncritical responses. The more we respond to propaganda, the less critical we become in our thinking and activity, and if we allow ourselves to become puppets for the propagandist, before long he will have managed so to destroy our capacity for rational analysis that we shall be unable to break the conditions which he has established in our activity. So it is that the continuous impact of propaganda has enabled Herr Goebbels to accomplish an almost unbelievable feat of chicanery in eliciting from individuals not morons by nature responses of approval to the statement "Jesus was not a Jew. I don't have to prove that, it is a fact"

If thinking represents the highest attainment of man, then surely the worst disgrace he can suffer, the sin against his very spirit, is to fail in the use of that capacity for

thought. When man permits himself to become a robot for the propagandist, he is in fact no longer a man, he has sacrificed the distinguishing characteristic of man—rational analysis. High time it is that men take stock of themselves and their vaunted capacity for thought! The question is clearly whether we want to think, to analyze problems, and to act rationally—or whether we are satisfied to witness the atrophy of those capacities from the deadening effect of being pushed unwittingly into activity for reasons we know not.

It is not enough merely to “analyze” propaganda. The variety and intensity of pressures which are exerted upon the individual to “help” in the directing of his activity have become so blatant that “propaganda analysis” is now one of the most fashionable pastimes of the intelligentsia. But the process of attaching names to the various devices used by the propagandist, while interesting, is not helpful in regard to the question of what the individual can do about analyzing the problems of action. We must learn to recognize propaganda when we see it and to distinguish the forms it may take, but this is not enough, for we are still left with numerous problems which demand active solution, and all we now know is that one proposed solution is inspired by propaganda sources. What makes propaganda possible in the first place is our ignorance or uncertainty as to what to do, how to act. Our ability to recognize propaganda will be of no value unless at the same time we are prepared to make a rational analysis of our problems, and thus to set up an alternative solution to that proposed by the propagandist. We must learn how

to analyze, how to think about problems, how to utilize the knowledge at our disposal, this is the only real alternative to propaganda.

The most important increment which accrues to the individual through the use of analytic thinking is the avoidance of paralysis in thought and action through fear of propaganda. In recent years, so much emphasis has been placed on the prevalence of propaganda that it is not uncommon to find individuals of considerable intelligence and ability suffering checkmate through fear of this modern witchcraft. Theirs is a philosophy of "What the hell", convinced that all sources of information are propagandistic, they gird up their loins with cynicism and vow not to believe anything at all. This attitude is more irrational than the propaganda which supposedly engenders it—"supposedly," because it is questionable whether this adolescent brand of cynicism is not in reality a mere escape mechanism to avoid responsibility for thinking and acting.

There would be no point in minimizing the irrationality or the prevalence of propaganda, but it is quite another matter to relieve the individual of all responsibility for controlling action because his sources of information are not pure and scientific. A teacher who threw into the wastebasket the examination papers of all students who were obviously not interested in learning, but only in getting a high grade, might miss some very good papers. It is the analysis of information and knowledge, regardless of their sources, that constitutes the rational task of the individual. It is my obligation as an intelligent person to develop a capacity for distinguishing fact from fiction,

and as individuals learn to demand facts, propaganda will decrease in fictional content. There is no excuse whatsoever for the man who accepts with approval the statement of Herr Goebbels quoted above. The individual who finds in propaganda an excuse to evade the analysis of knowledge and the application of control in action has thereby ceased to be an intelligent and rational person.

CHAPTER III

A Pattern for Analysis: Three Points-of-View

AS A preliminary to any discussion of a systematic pattern of analysis, a note of extreme caution must be sounded. Throughout all that follows, while we are suggesting a specific pattern for use in thinking about problems, it must be remembered at all times and in all connections that this is but one suggestive and experimental design for analysis. Any attempt to propose a final system of categories for thought would necessitate metaphysical argument which would be inappropriate and even superfluous in this discussion. This implies, also, a necessary refusal to attribute to the pattern of analysis any metaphysical status, whatever categories are stated must in no sense be interpreted as reflections or symbols of "reality". A pattern for analysis suggests ways of looking at experience, it defines points-of-view which appear fruitful in

terms of *what we know*, not in terms of what we postulate as reality. With this forewarning of the necessary realism of any analytic system, how can we integrate knowledge so as to facilitate its use in action?

When an individual is presented with a problem which demands solution in action, there appear to be three major considerations of which he must take account. If, for example, the problem is the comparatively simple task of constructing a table, the individual's first concern is clearly the *purpose* for which he intends to use this contemplated table. It will make considerable difference in the final form of the object whether he wants to use it for a study table, a decorative piece, or perhaps a work-bench. Immediately it becomes evident that the nature of available *materials* with which to work is also a significant part of the problem. It would be foolish to use iron as a material if the table is to be used only for study purposes, and it would be unsatisfactory to use plywood if a work-bench is wanted. The third consideration involved is the manner in which the actual construction is to be performed—the *system of* procedure and construction. Are adequate tools available? Should the legs be fitted to the top, or vice versa?

The individual must consider and adjust these three essential concerns in the activity of making a table—that is, if he intends to approach the problem of making a table in a rational manner. Otherwise, the makeshift of a plank resting on two soap boxes might serve and at the same time involve a minimum of mental operation. Any

thoughtful pattern or plan for making the table will necessitate an adjustment of purpose, material, and system, the style of the table must be adapted to the available material and to the skill of the individual and to the purpose which is to be served. Each of these three points-of-view concerning the table appears necessary, but they may not always be in harmony. Perhaps a strong table, made of hickory, is desirable, that is a reasonable desire from the purposive point-of-view. But such material is hard to work, and more expensive than pine. Two points-of-view in regard to the table are thus found to be in conflict. The individual may then give up in despair of getting the kind of table he wants, or he may more rationally adjust the points-of-view until they can be balanced and coordinated.

THE INDIVIDUAL POINT-OF-VIEW

We may call these three considerations analytic points-of-view, because they represent essential aspects which must be recognized in the systematic pattern of any rational analysis of action. As for the first point-of-view, that of purpose, it would appear that all thinking and analysis evidence some purpose, but this does not mean necessarily a moral or final "purpose." It means simply that when we find ourselves faced with a problem, it is because we desire or intend to do something. We have some purpose in analyzing this problematical situation, even though the purpose may be nothing more than the satisfaction of our curiosity. It is distinctly our ~~reason~~ for analysis, let us

call it, then, the Individual point-of-view, inasmuch as it indicates the desire which serves as the immediate motivation of analysis

For our purposes here, we may assume that thinking implies a thinker. Whatever may be said about thought in the abstract, it is with thought in terms of action that we are concerned in analysis. Deliberation of this sort is the function of an individual who can think and act—a free agent. This is indeed “thinking to some purpose,” and the purpose is primarily an individual matter, regardless of what “larger” ends may be involved. It is by no means trivial to ask the man who expounds a method just “why” he is using that particular method of analysis, and we will not take too seriously the answer, “Because it is the best method.” Any method includes the purpose for which the method is designed and used, and a method is “best” only in the sense of being best for a particular purpose. If purpose is, then, itself one of the points-of-view which make up a complete analysis, it is clear that no statement of method is satisfactory which does not admit and define its purpose. The most “scientific” of scientific procedures is motivated by the purpose of the individual using it, and the nature of that purpose cannot but have a primary influence upon the nature of the method as it is used.

The individual nature of purpose implies, of course, an assumption that ends and purposes can be fulfilled by thinking and analyzing. This is an assumption, because my process of thought and activity will itself indicate whether or not my purpose is possible of achievement. I

assume that I can construct a table, or I should not undertake the work. It may turn out that I am incapable of such construction, or I may be forced to revise my purpose to suit conditions of which I was unaware when I started. As suggested in the earlier definition, analysis includes the making of hypotheses as well as the active experimentation which serves to verify or to disprove the hypotheses. The hypothesis is the starting point, representing the purposive aspect of analysis, in the absence of such purpose, I should not feel called upon to think or act at all. The hypothesis, then, embodies my purpose and states it in terms which appear possible of fulfillment. When I begin to act or experiment, I assume the possibility of finding some degree of proof or disproof of the hypothesis which I have set up; or, to state it more generally, I am going to do something about the purpose which stimulates my thought and action.

The Individual point-of-view in analysis, therefore, is that which takes into consideration the thinker himself. There is no analysis without purpose, and this individual or personal aspect of the thinking process must be recognized as one of the effective points of approach to any problem of thought and activity. It is, thus, a point-of-view which must be described in any pattern we construct to represent the function of thought as analysis.

THE MATERIAL POINT-OF-VIEW

From our first consideration of the proposed table, it appeared that the final form of the object would depend to a great extent upon the kind of material selected from those materials which were available. If the use of analysis

begins with the recognition of a purpose, certainly the next analytic consideration is the means or stuff by which the purpose is to be realized or implemented. Remember, we are proceeding upon the assumption that our purpose can be attained, can be given actual existence, this means that it will have to realize itself in the actual world of things. The purpose of the artist, for example, is not fully realized when he conceives his statue, no matter how beautiful it may appear in conception. Only when he has reduced that idea to the solid substance of stone will his purpose be fulfilled. If it is the purpose of the artist simply to think beauty, that is one thing, but if he intends to create in the sense of making an object of art, then his assumption at the outset is that the ideal concept can be realized in the material form of stone. It follows, of course, that the conception itself will have to be modified to suit the material with which the artist intends to work, be it stone, pigment, notes, or movement. Artistic design is as much a matter of space-time adjustments as it is of inspiration or spirit. The embodiment of an æsthetic vision means precisely the creation of a body. Whatever the subject of analysis may be, the material implementation of that subject is an essential factor for consideration in the total plan of analysis.

The Material point-of-view thus contributes to the analytic process by setting certain limitations which cannot be ignored unless we are content to see our individual purposes dissolve in the crucible of action. No sane scientist would attempt to experiment with acids using test-tubes made of celluloid, nor would a sane politician attempt to

realize a political ideal which assumes a highly cultured population when he knows well that his constituency averages twelve years of age in intellectual capacity. This does not mean, of course, that material conditions are not subject to change. In discussing analysis as method, we are not concerned primarily with the actual nature of materials, but simply with the consideration that purposes can be realized only in the materials which make action possible. Certainly, if I am not satisfied with the stuff available for use in a table, I may set about making a new material more suitable to my purpose. This but demonstrates the necessity of adjustment among points-of-view, materials are adjusted to purpose and design, purposes to materials and design, and the design itself to material and purpose. The success of analysis and the ultimate control of action depend upon the degree of integration achieved in adjusting analytic points-of-view.

THE FORMAL POINT-OF-VIEW

The third point-of-view, that of design or system, does not seem so obvious as the considerations of purpose and material, at least, it is more often ignored. It is undeniable, however, that any attempt to use thought in action, any analysis or experimentation, requires some kind of systematic design, whether we intend to construct a table or a statue. The difficulty here is that analysis, which is itself a pattern of thought, requires a plan or pattern. That sounds very much as if we were in the predicament of trying to lift ourselves by our bootstraps, and to some extent that is precisely the difficulty we encounter in any attempt

to discuss thought and its operation. The only instrument with which we can analyze thought is thought itself. We are trying to analyze analysis.

The paradox is not, however, quite so hopeless as may appear at first glance. It is one of the most peculiar and interesting of thought's capacities that it can stand off and look at itself. We know this to be true from our own personal experience, as witness the example of one of my young friends, a child of some three or four years. At the dinner table one evening, having spilled her soup, this modern miss reproved herself quite gravely and profanely "Susie, you damned fool" This ability to set off one's own person and activity for observation by one's self is common in children, and each of us at times stands himself in a corner, and then sits on a chair and gives himself a "going-over." In fact, some such occasional essay in self-analysis seems almost necessary to the maintenance of sanity. It indicates what we really mean by self-consciousness, perhaps the proudest of man's possessions

Yes, we can look at our own thought process and describe its operation. We are not only called upon to formulate a plan or pattern of procedure in regard to the use of thought, but in addition, the analysis itself must embody and maintain a plan or system. It is not enough to demand merely that thought about action should evidence a certain pattern, it is equally necessary that the pattern itself be coherent, systematic, and suitable to its purpose, or it will not do what analysis ought to do—namely, control activity. As I think about the table I am going to build, and adjust the points-of-view of purpose

and material, I must also recognize that the construction demands a plan. Even though I may consider it unnecessary to put this plan on paper or to formulate it precisely, I have in mind a general notion of how I intend to proceed. Naturally, the more exact and complete my plan is, the more easily and quickly I shall be able to proceed with the actual construction and the less likely I am to find, when the table is half finished, that some consideration of primary importance has been forgotten. Those who act by "rule of thumb" are following a systematic plan, however vaguely it may be formulated in their thought. Some individuals can, indeed, operate rather effectively without ever quite realizing the rules of their procedure. Such informal analysis is epitomized in the story of the railroad construction foreman sent to replace a bridge washed out by flood waters. When asked by the superintendent, upon his arrival, whether the engineering department had yet provided a set of plans, the foreman replied that he didn't know "if the pictures was drawed yet, but the bridge is in and the trains are a-runnin' over her." Such incidents make good stories, but I, for one, prefer to ride over bridges constructed according to plans more precisely formulated by engineers who know how to adjust purpose, material, and design in bridge construction.

The railroad foreman had, of course, a definite and workable plan of procedure, but he did not know how to communicate it. He could build a bridge with the help of workmen, but it is doubtful whether he could very successfully have explained the process to anyone else. Perhaps the bridge he built was safe, perhaps in this instance

it was as well done as if constructed according to an engineer's specifications. But the knowledge which the foreman was using in his casual analysis was a very limited and inadequate knowledge, it was only what he had learned in his own past experience. In other words, procedure by rule of thumb or on the basis of one's past experience fails to satisfy the requirement of analysis that all available knowledge be recognized and integrated. Naturally, no one of us has all available knowledge, but there are experts, whose specific knowledge is available when needed in analysis. The foreman himself was such an expert, a specialist in the direction and management of workers engaged in a particular kind of construction, but he was not an expert in the tensile strength of steel, geologic formations, and other such matters which are the special concern of the engineer. From this standpoint, analysis is a collaboration of experts upon some ~~problem of activity~~. The importance of analysis to any individual is the fact that it is a method, and the only method, whereby he can use a full range of expert knowledge in the control of his action. Design or plan is the third point-of-view which must be included in the pattern of such an analysis, and, as indicative of its systematic character, this point-of-view will be called the *Format*.

THE ELEMENTS OF ANALYSIS

When an individual concentrates upon any one of these three—purpose, material, or design—he is taking a particular point-of-view in his analysis. A method of analysis which includes all three in a coherent and integrated pattern is

the only assurance that important knowledge is not being ignored or eliminated. One of the fallacies most commonly involved in attempts to control action by thought is that of partial or restricted analysis—that is, analysis in which one point-of-view is overemphasized. If I become so interested in the purpose of my analysis as to ignore the requirements imposed by material factors, or so wrapped up in my contemplated purpose that I forget to plan how to attain it, the resulting analysis will be partial and therefore likely to prove inadequate in action. The points-of-view which I ignore are just as important analytically as the one I happen to emphasize, the ignored factors will become evident when action is attempted, and my analysis will demonstrate its inadequacy in the failure to integrate these vital factors. The man who ignores maps and starts south from St. Louis to go to Chicago is going to have a long and arduous journey, however strong his purpose and however efficient his automobile.

The effort of analysis is to direct and control activity. Experience as activity might be compared to a cake—a combination of many things mixed together to produce a compound in which the things themselves are not distinguishable. Every piece of cake we cut includes part of all the various ingredients (if it is a good cake), and every slice of experience or activity has elements of purpose, material, and design. In order to bake a satisfactory cake, however, one must follow a pattern or recipe in adjusting the various ingredients. Flour, butter, eggs, milk—all these must be measured carefully, and, furthermore, the characteristics of each separate ingredient must be known. Cakes are not

"thrown together," even though mother, like the railroad foreman, seldom refers to a printed recipe. She knows, however, what ingredients to mix together first and how much of each to use, she doesn't dump them indiscriminately into a bowl and start mixing.

It is important to investigate each ingredient of a cake, research in foods has produced much better flour, butter, and the like. Too, a better cake can perhaps be made with an electric mixer than is possible by manual mixing, and granddaughter has available recipes, materials, and utensils of which grandmother never dreamed. Such research is not the investigation of cake as cake, but of the ingredients of cake, just as we are not here talking about experience, but about the ingredients of experience. Our discussion of the points-of-view of analysis is analogous to a dietitian's study of cake-making. So, when we consider thought and activity as divided into three aspects or points-of-view, it must be kept in mind that we are not talking about segments or cross-sections of experience, but only about the ingredients or factors which go into the making of analysis. There are so many ingredients in action that to enumerate them specifically would lead to utter confusion, even if it could be accomplished. It is necessary, then, that we use certain broad and general classifications of the subject matter of experience, such as Individual, Material, and Formal, these terms can then be broken down into more descriptive classifications.

What is proposed for the discussion of thought in terms of action is, therefore, an examination of each of these three factors implied in analysis, to the end of stating as

clearly as possible what it is that each point-of-view indicates to be of importance in analysis. From such a description we should derive some notion of how purpose, material, and design can be integrated in thinking and action. The extent of subject matter which must be covered in such an undertaking makes it impossible to talk in other than very general terms. That might be taken as an indication that the discussion of analysis will be rather superficial, certainly, we cannot investigate and describe specifically every factor suggested by purpose, material, and design. The investigation and description of such particular facts are the task of specialized research, and research is of the greatest importance because it gives us the specific and precise information with which we can construct a comprehensive pattern of knowledge. What we are concerned with here, however, is not the specific content of thought, but rather the impact of thought upon action. The same individual may do specialized scientific research, read poetry, and build a table, this suggests that there is some common denominator in his thought and activity. We may, then, say that the primary interest of the present discussion is methodology, the investigation of analysis as the technique of thought.

ANALYSIS AND SCIENTIFIC METHOD

Among persons who should know better, there seems prevalent an assumption that such an investigation as we are here describing is impracticable because each specialized field of investigation has its own unique method. Especially are we told that so-called "scientific method" is

different from other kinds of thinking and analysis. It would appear that "scientific" analysis is possessed of some miraculous panacea for all the fallacies and inadequacies which thought seems to manifest in other areas of operation. "Science" has declared a monopoly on correct thinking, but the method of thought and analysis does not change in this simple fashion from one field of investigation to another. Thinking is not made more correct by attaching to it the term "scientific", scientific thought is not essentially different from any other kind of thinking. It exhibits the three aspects to which we have already referred: it is purposive, deals with materials, and certainly evidences systematic form. True, procedure in science involves elaborate techniques, precise measurements, and minute differentiations, but is scientific analysis any more elaborate or precise or minute than the technique involved in the composition of a symphony? The micrometer and the metronome are both instruments of measurement, and it is individual thinking which uses both as analytic tools. Usually, science concerns itself with subject matter which can be more easily and precisely measured than the materials of other fields, but this is a difference of degree. Speculation, even accident and chance, are by no means absent from scientific procedure. How similar in appearance are the great Newton sitting under an apple tree, happening to have the law of gravitation bounce off his head, and the great Schubert sitting in a beer garden, scribbling on an envelope the notes of his immortal *Serenade*! A background of expertness in the analysis of certain subject matter was common to both men, this technical com-

petence made possible the "flash of genius" for scientist and for composer. The division of thought into such a dichotomy as scientific versus æsthetic, or scientific versus any *kind* of thinking, is not justified, it is an overstatement of differences of degree.

What we apparently desire when we demand that thought be "scientific" is that thinking be rigorous in analysis, precise in measurement, and systematic in the correlation of its knowledge, but these are the essential characteristics of any adequate analysis in any field of operation. If this is what we mean by "scientific method," then by all means let us have scientific method, but there is no particular difference in saying that we must have scientific method and saying that we must think correctly. Our intention here, for example, is to formulate a system of classification for analysis, and we are using the same procedural method to investigate analysis as is used in any other field of investigation. Many experiments in thought, both inside and outside the laboratory, fall far short of satisfaction in the degree of rigor, precision, and system which is maintained.

This implies, in addition, that different facts or sets of facts do not necessitate different kinds or methods of thinking. Fields of investigation are not distinguished because they investigate different kinds of fact or subject matter, they differ because they have developed specialized techniques for observing different aspects of the same subject matter. A rock is an adequate subject of observation for any science whatever. What geology does, for example, is to restrict its observation to certain aspects of the rock,

economics may look at the rock from another point-of-view, chemistry from still another, and so on through the entire range of sciences. Geology cannot break from the rock a fragment which is of geological interest only; the sciences are distinguished according to the point-of-view taken by each in observing the rock, not by a specific difference of content in the rock.

Specialized research thus provides us with a great variety of information about the same kind of subject matter. Geology gives a geological analysis of the rock, and every science contributes its specialized analysis, so that the complete analysis of the rock is a cumulative process

$$\underline{R_{\text{geology}} + R_{\text{botany}} + R_{\text{economics}} + R_{\text{psychology}}}$$

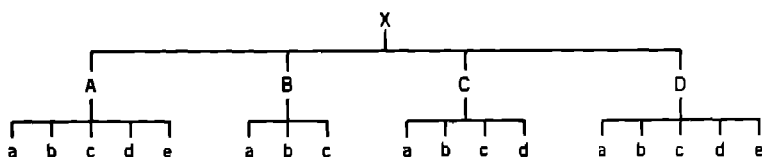
and so on until all possible sciences have stated the meaning of the rock from their specialized points-of-view. The most comprehensive analysis of any subject matter will attempt to co-ordinate all that is said about the subject by all sciences. The geologist and the chemist and all other scientists are busy within their own fields, in order to perform adequately the task of describing objects from the specialized point-of-view of a particular science, it is necessary to ignore aspects which are the concern of other specialized sciences. We cannot expect more of the research specialist than that he tell us the results of observation and analysis within his selected and restricted field of investigation. The geologist is not directly concerned, as a geologist, with botanical or economic or psychological analyses of the rock.

But no one of us exists simply as a research specialist, for most men, the largest part of existence lies within the non-specialized area of social and political action, and for all men action in any real sense is a non-specialized function. The problem of deciding for whom to vote in an election is a much more complex problem than any presented in the laboratory, because it involves the most comprehensive form of analysis. The question is how we can utilize the information contributed by specialized research in the analysis of problems which cut across the boundaries and limits of those special fields.

At the outset, we must grant that the specialist knows the facts in his own field of research. It would be an affront for us to approach a special field without asking the specialist's guidance. We must accept the specialist's competence within his field, and we must allow him to use whatever methods, devices, and techniques have been found most productive in the progress of his research. What we can rightly demand of research is that it recognize the obligation of making information available in terms which will fit into the body of knowledge which we know and understand. As a matter of fact, little complaint is directed against research on this score. There is now available from the sciences a veritable mass of information which we do not yet know how to use. We cannot blame the scientist if a valuable process is patented and withheld from use, or if the same chemical compound is used both to save and to slaughter men. The absence of co-ordination between what science has made available and what we actually use in our action is the clearest in-

dication that our activity is in dire need of analysis and integration.

Each field of specialized investigation furnishes a body of knowledge, the classification of its analytic data. The extent, relations, and terminology of such a classificatory system are naturally as specialized as is the research from which the system results. How many of such specialized bodies of knowledge there are it would be difficult to say; those of the various sciences interlock and overlap. The basic method of classification, of systematizing knowledge, is, however, essentially the same, regardless of the subject matter involved. The pattern for classification is that of division and subdivision, large groups or classes are broken down into smaller sections



This is the general nature of any system that could be called a body of knowledge, and it seems manifest that the more restricted and specialized a body of knowledge is, the more exact its classification can be. The usefulness of a body of knowledge, be it scientific or individual, is proportionate to the degree of precision maintained in classification. The fact that there is no restriction upon the subject matter of an individual's knowledge precludes the possibility of any such precision in classification as is evidenced by scientific bodies of knowledge.

When we consider how extensive are the various systems

of classification in the many sciences, and when we realize that man's knowledge can be defined only as the sum of all these complex classificatory systems, it looks as if the notion of an "individual body of knowledge" were doomed to remain either illusory or inconceivable. And, of course, it would be inconceivable for one individual to comprehend and classify the detailed, technical subject matter of all specialized research. No man has time to comprehend the classifications of all sciences. The more general and comprehensive meaning required by action demands that this vast complexity of classified material be reduced to a simpler and more integrated system. Our purpose of constructing a pattern of analysis for action is thus distinguished from a mere classification of research methods and data, it would not be fruitful, therefore, merely to duplicate the pattern of specialized, scientific analyses on a larger scale. Action must have available a pattern of analysis within which provision is made for the inclusion of any information available from scientific research.

The distinction of three essential points-of-view in analysis has been suggested here as an initial point of departure for the construction of such a pattern. Again it must be repeated with vigor that this triadic division does not represent a slicing-up of action, but only an enumeration of points-of-view or aspects of analysis. The "cake" of action will include all three, inextricably related. But let us not jump at the problem of action without some knowledge of its ingredients. Bridges provide safer and more certain progress than dependence upon jumps. The

bridge between knowledge and action is constructed by analysis, and a pattern of analytic procedure will help to keep the bridge open at both ends. Without this co-ordination, knowledge and action may in their disparateness present a confusion analogous to that of the proverbial little dog.

There was a dachshund once, so long
He hadn't any notion
How long it took to notify
His tail of his emotion,

And so it happened, while his eyes
Were filled with woe and sadness,
His little tail went wagging on
Because of previous gladness

CHAPTER IV

The Individual Point-of-View

IN EVERY problematic situation, certain considerations pertinent to analysis result from the fact that the thinker is an individual. It is certainly justifiable to assert that the only thinking we observe is done by men, and thinking without deliberation and intent is not analysis but imagination or fantasy. Problems would not be problems in the absence of some individual interest or purpose, and it seems reasonable to assume that this individual interest contributes something to the general nature of problems. The Individual is, thus, a significant aspect of every situation which calls for analysis, one of the three points-of-view which must be described if we are to understand what is involved in the process of analyzing. Individual purpose takes many forms and shapes, and the influence which it exerts upon the analysis of action is manifested in

a variety of ways. The individual is a complex and composite being, and what he, as an individual, contributes to the analytic process will be clear only upon a closer examination of the Individual point-of-view.

PHYSICAL MAN AND THE CONCEPT OF FITNESS

The minimum content of an individual is physical existence, whatever else he may or may not be, an individual is at least a *Physical Man*. Let this be, then, the first category of the Individual point-of-view. Physical Man is a being of *wants* and *desires*, an individual cannot continue to live without a minimum satisfaction of his desires for food, shelter, clothing, and so forth. At the physical level, the individual is concerned to avoid the pains of want and unsatisfied desire—that is, to achieve whatever pleasure he can by satisfying these wants.

At this first level of existence, individual purpose can be summarized as the demand for physical existence, and we may say that the defining concept of this category is *Fitness*, as indicative of physical satisfaction. Fitness is thus a primary consideration for analysis, inasmuch as it is the prerequisite of any further development of the individual. It is hopeless to expect a man who is hungry to analyze a problem rationally. Physical Man is the first level of human existence, and while it is certainly true that individuals are more than mere physical men, it is just as true that they remain physical men regardless of whatever other stature they may achieve. An artist suffers pangs of hunger, the most devout of mystics may freeze to death, there is no escape, in this life at least, from the demand for

Fitness expressed by this first category of Physical Man.

The nature of individuals at this primary level indicates that any approach to a rational co-ordination of thought and action involves an adjustment of these physical necessities, without this background of Fitness, our analytic capacities will be restricted to the limited scope of the physical category. How astute is Shakespeare's remark: "There was never yet philosopher that could endure the toothache patiently"¹ It is useless to ignore these physical demands, and the failure to give them rational consideration tends to confuse rather than to clarify analysis. It does not make me less hungry to convince myself that hunger is a base and ignoble desire, unworthy of an intellectual being. The escape method is not adequate for dealing with the characteristics of Physical Man, one might as well try to escape one's own shadow

Thus, the category of Physical Man indicates certain basic needs and wants of the individual which must be admitted as elementary subject matter of the analytic process. If provision is not made for the inclusion of these physical aspects in the pattern of analysis, they will intrude haphazardly and confuse the thinking process of the individual. One would hardly anticipate a rational analysis of justice from a man who had long been at the point of starvation.

These wants or necessities are such as will, in general, be conducive to the Fitness of the individual as a Physical Man. The category thus includes, besides food, clothing, and shelter, such physical needs as medical care, recreation, and sex adjustment. Neither adequate analysis nor rational activity can be expected from an individual who is

deprived of the necessities of physical fitness, for the physical is the minimum level of an individual's operation. On this point, a lesson might be taken from utopian thought, the speculative interest in the future possibilities of social organization. It is not surprising that a majority of Utopias begin with a description of how strong, fit, healthy, beautiful, well-dressed, and happy are the individuals in the ideal state. The utopist who approaches the construction of an ideal society as a problem in analysis realizes that a satisfactory adjustment of the physical nature of the individuals in that society is the very premise of any further speculation.

Provision for the physical well-being of individuals is, thus, the first necessity of social or political organization, an analytic fact which we in the United States have but recently and somewhat grudgingly begun to recognize in legislation. Instead of admitting and dealing with these considerations which are primary observations of the Individual point-of-view, the limited analysis of our Anglo-American political tradition has, on the whole, seemed content to leave the realization of individual fitness to the caprice of chance or the whimsy of philanthropy. Our political expressions vibrate with fervent proclamations of democracy, but it can hardly be denied that democracy is possible only when the members of society are democratic citizens. How, then, can a pattern for democratic action fail to take account of the fact that, even by minimum standards, at least one-third of the individuals in the United States are today ill-fed, poorly clothed and housed, without proper medical care, uninstructed in sex adjustment,

and without adequate recreational facilities? Integrated activity cannot result from an analysis which ignores such obvious factual considerations at the most fundamental level of observation. The contribution of the Individual point-of-view to the pattern of analysis has been defined as that of clarifying the nature and relations of the purposive element in action. What, then, can any analysis say of the purposes of individuals who are hungry, cold, and unfit—except that they need to be fed, warm, and fit? In other words, until some adjustment has been made which admits the necessity of maintaining physical fitness, there is no use to proceed further in analysis. The purpose of any individual who is suffering want at the physical level will naturally be confined to that level of activity, it is expecting too much to ask such an individual to manifest a purpose higher than that of the bare physical level of existence. The analysis and action of each of us are limited to this degree—the demands of the physical level are such that we must make some adjustment of them before we can hope to advance to a more comprehensive pattern of thought for action. When I am hungry or tired or sick, the time is not appropriate for me to attempt the analysis of a complex problem of activity, if I hope to approach such problems rationally, my first obligation is to keep myself fit at the physical level, in order that these wants may not intrude and upset my considerations of more complex problems.

There is no intention here of overemphasizing individual observation and opinion in the clarification of categories which are considered pertinent to the analysis of action.

Although the construction of a pattern for analysis is to some extent arbitrary, it is nevertheless true that the major considerations which appear of analytic importance to us in this discussion are not likely to differ widely or essentially from what other men have considered important. It would indeed be strange and disturbing if the history of thought did not evidence instances of attention to the aspects of activity which we include in an analytic pattern. As a matter of fact, much of the thought which makes up the history of philosophy has been specialized analysis, that is, it has been primarily concerned not with the integration and use of knowledge in action, but with the more intensive and limited investigation of one category or one point-of-view within the entire analytic pattern. Such specialized analysis is as important and fruitful as is that of the laboratory sciences, but only confusion results if any specialized analysis is presented as constituting a comprehensive pattern for all analysis. As we proceed with the statement of categories which appear essential to the analysis of action, it will be prudent to note the historical recognition of the particular category under consideration. Unfortunately, so much is involved in merely stating the categories that we can only mention these analytic theories as a suggestion for future reference.

There is such an analytic theory which concerns itself mainly with the category of Physical Man, a specialized analysis which has been designated historically as Hedonism. Hedonism stresses the observation that no individual can entirely escape the influence upon action of pleasure and pain, that is, every individual has certain wants and

desires which must be satisfied, to some degree at least. The significance attributed to this aspect of the individual by so important a thinker as Jeremy Bentham is indicated by the first sentence of his major work, which asserts dogmatically "Man is under the governance of two sovereign masters—pain and pleasure."¹ However, it is one thing to say that every individual exists first as a Physical Man and is thus under the compulsion of satisfying certain physical necessities, and quite another to contend that these physical desires are "sovereign masters" which govern man. It is true that unless the individual is able to adjust and control his physical desires, he will continue to exist only at the physical level. Bentham was of the opinion, however, that man's analysis and action could be stated in terms of pleasure-pain—that is, that analysis could be confined to a single category.

Bentham indulges in the fallacy to which we have already referred—partial analysis. The observation that every individual is a being of physical wants and desires is certainly valid, consequently, Bentham is quite right in demanding that any analysis of action include the facts of Physical Man, or, as he states it, of pleasure-pain. Thus, the analytic theory of Hedonism has a necessary place in any analysis of action. But the hedonistic analysis explains only one category of the Individual point-of-view—that of Physical Man. It does not explain the individual as

¹ It should be noted that the more "refined" forms of Hedonism include within "pleasure-pain" many wants and desires more sophisticated than those which we have described as physical. The confusion in analysis which follows from this ambiguity of "pleasure-pain" is discussed in Appendix I, where Bentham's individualism is criticized in more detail.

such, but only the individual as a physical being, Hedonism could not, therefore, provide an adequate description of purpose. Hence, it is incompetent as a pattern of analysis for any but this very restricted area of physical existence. When Hedonism attempts to extend analysis in terms of pleasure-pain beyond the limits of the first category of Physical Man, it is stretching a particular and limited pattern of analysis completely beyond its bounds. This is one of the most common, tempting, and vicious of thought's habits, we become so enamored of an analytic pattern which seems to fit a particular category that we forget its limitations and try to fit all analysis into a pattern which is suitable only to a very restricted point-of-view in observation. The patient ass of specialized analysis will bear well a limited load of observation, but it is a betrayal of asininity to overload the beast.

Another example of partiality in analysis of the Individual point-of-view is the tendency of some psychoanalysts to overestimate the importance of sex as an analytic factor. This currently fashionable pattern of analysis starts from the valid and important observation that sex is one of the characteristics essential to the individual as a Physical Man. Hence, it is true that the sexual demands of an individual must be satisfied in some manner and to some degree before any further rational analysis can be undertaken. But this does not mean that the pattern which has been found useful for the analysis of the physical factor of sex is therefore a sufficient pattern for the analysis of the entire Individual point-of-view, much less for the analysis of action in general. The analysis of action solely in terms of a sexual pattern is tantamount to claiming that sex is the only sig-

nificant characteristic of individuals. Surely, no one would contend seriously that sex is the only important consideration in the analysis of purpose, on the contrary, since sex is but one of the demands of Physical Man, the analysis of sex is but one of many such analyses necessary to provide an adequate pattern of the varied aspects of the individual as a Physical Man

The rational statement of problems will, then, necessitate at the very outset that the category of Physical Man be recognized as constituting one important factor of the Individual or purposive point-of-view in analysis. When we are aware of these physical factors in the particular situation which we are attempting to analyze—aware, that is, to the extent of including them in our analysis—we may then proceed to the consideration of further factors or categories. Further observation from the Individual point-of-view suggests immediately the significance of the fact that individuals do not exist simply as physical men. This additional observation may be indicated by the category of *Social Group*, the second division of the Individual. There is no such thing as an isolated Physical Man, the mere fact that each individual has to be born places him in some kind of social group from the very beginning of his existence, for he had a mother and father, and the family is very definitely a social group, albeit a small one.

SOCIAL GROUP AND THE CONCEPT OF COMMUNICATION

The category of Social Group indicates a factor of importance in the consideration of purpose, one which is quite different from the demands of Physical Man. We

cannot make sense out of the category of Social Group if we consider it to be simply a collection or aggregate of physical men. The Social Group manifests characteristics which are entirely different from those peculiar to the individual as a Physical Man. The most general expression of the distinguishing feature of a Social Group is what we may, for want of a better term, call its *commonalty*. This is simply to say that there is in every Social Group some common interest which makes that particular body of men a unit. There is in this community of interest something which is not derived from the sum total of physical men involved. The members of a Social Group have some kind or degree of common purpose, hence, membership in a Social Group is an important consideration in the analysis of individual purpose—a consideration distinguishable from the demands of mere physical existence

The most significant attribute of Social Group considered as an analytic category is *Communication*, the concrete manifestation of social commonalty. Clearly, we cannot in this connection mean communication simply as verbal intercourse. What is implied by *Communication* as the defining concept of Social Group is the mutual participation or reciprocity experienced by all the individual members of a particular group. This maintenance of communion among members is not only descriptive of the nature of Social Group, but it likewise indicates the distinction between an individual as physical and an individual as social. It is not to our purpose here to classify social groups, their general nature as instruments of communication is sufficiently manifest to make obvious the importance

of this social category in the analysis of individual purpose as it is involved in action

It is probable that the degree of influence exerted upon the individual by any Social Group will be proportionate to that individual's participation within the group. The most closely integrated groups, and hence those which are most likely to exert the greatest influence on individual members, are those in which the most effective or satisfactory communication is maintained. Each of us is a member of many social groups family, church, school, class, club, city, state, and the degree of communication which I share in any one of these groups is the measure of its significance in my purpose and action. The family, for example, is ordinarily one of the most effective social groups simply because kinship, domesticity, and mutuality of almost all interests increase the possibility of communication until it commonly includes the sharing not only of thoughts and actions, but also of feelings and emotions, of hopes and sorrows. The students of a class, on the other hand, have fewer interests in common, participate in a group more loosely and temporarily organized, and as a consequence are likely to find communication more limited. It is to be expected, therefore, that the family group will exert more influence upon individual purpose than will the class. Even my little dog, Duke, is a member of several social groups, and his activity within these groups depends finally upon the establishment of some kind of communication. Because his vocabulary is limited and because he must communicate in an awkward and indirect manner, his social groups are restricted, but that they con-

tribute to his rudimentary "social nature" and influence his action is a matter of observation. As a philosopher, my association with Aristotle in a common group is indirect, dependent upon my communication with his thought through his written works. If I take the trouble to learn Greek, I can assuredly communicate better with his thought, but the intimacy of interest here is limited by the conditions of time and space. The social groups within which an individual maintains some degree of communication constitute this second factor of importance from the Individual point-of-view.

Clarity in the analysis of this second aspect of purpose is attained only by recognizing the nature of individual participation and communication within social groups. Analysis of the category of Social Group is possible in terms of communication, the effect or pressure of the social factor upon our thought and activity will, then, be proportionate to the degree of communication which exists between us and the social group under consideration. The individual who walks only on Easy Street will not be much concerned in his analysis or action with the interests of the group in Hard Times Alley. If the interests of any group are to be included in an analysis, it is necessary to establish and maintain communication with that group. The kind of charity-dispenser, for instance, who sits in her drawing-room considering a list of possible recipients of Christmas baskets and other charities, is employing only the most rudimentary and partial analysis of a problem. The adequate analysis of such problems of social welfare, as well as any rational action toward their solution, will

more likely come from the social service worker who makes it his or her business to establish communication with the group in question by understanding and sharing its interests, thoughts, and feelings.

The establishment of communication within small social groups is a problem which may well be comprehended within the analysis of an individual thinker, but when the group is extended to the proportions of a modern community, the analysis becomes much more complex. It is not uncommon for an individual to experience difficulty in adjusting his purpose and action to the interests of the several social groups of which he is a member, for the interests and compelling influence of various groups may be and often are opposed to one another. Yet, within those groups which have the most direct and immediate effect upon our action, the status of the individual, the nature of the group, and the degree of communication are all fairly clear and not too complex for the individual to analyze. That is to say, the individual who is thinking about action in terms of comparatively small social groups knows rather definitely what is the common interest shared by each of these groups, knows too what his membership in these groups involves in terms of his own action and purpose. Of even greater importance to the individual, the ease and facility of communication within small groups make it possible for the individual to clarify these issues at any time. Within the family group, problems can be aired and shared with intimate directness. As social groups increase in size and extent, the facility of communication tends to decrease, and in large heterogeneous groups, the

problem of analyzing individual action and purpose in relation to the group becomes increasingly difficult.

It is a matter of vital importance to any individual that he understand clearly his status within the social groups to which he belongs, this fact becomes increasingly significant with the realization that the area of individual action tends to decrease as the social group increases in size and complexity. The effectiveness of individual opinion within the family circle presents no precedent upon which to anticipate a similar effectiveness in the expression of opinion on affairs of state. Yet, the realization of almost any individual purpose will involve action within social groups, an isolated existence upon an island is not inconceivable, but it would imply a limitation to the first level of Physical Man. Individuals normally act in and through social groups, and most of the areas of effective expression and action which are available to the individual are dependent upon his association within social groups. For example, the average industrial worker today knows that his opinions and purposes can be given effective expression only through some organized social group, such as a labor union.

The problem of achieving communication in complex social groups is one of the most important problems suggested by the analysis of action. We may consider the various theories which have recognized this problem under the somewhat vague designation of Representationalism. Some fundamental premise of individual representation has characterized all democratic thought—naturally so, since democracy has, more than any other political theory,

admitted concern for the Individual point-of-view.² Such analysis has done much to clarify the status of individuals in society, and democratic social organization has thus far been highly successful in facilitating the expression of individual purposes in large and complex social groups. The changing complexion of society, together with the extension of the areas within which the individual operates, has, however, produced distinctly new problems of representation. One of the most pressing problems of current politics, for example, is that of determining the status of the various pressure groups which are, to say the least, making themselves heard. The question here is that of judging the representational validity of the group, that is, does it represent a real commonalty of interest within its purported membership, and if so, is that interest being adequately communicated and represented? In a sense, the representation of individual purposes by means of social groups is what constitutes public opinion. How express public opinion, and how judge the validity of the expression it gets? How facilitate communication in all social groups involved, so that public opinion will be both more representative and more effective? It is the function of a political representative to represent, and any politician who must periodically place himself in jeopardy before the power of individual ballots will be eager to repre-

² It is interesting to note that Mill's refinement of Bentham's Hedonism, the extension of the concept of pleasure-pain to include characteristics deriving from the communication of individuals in social groups, led also to an emphasis on the fundamental importance of representation (Cf J S Mill, *Representative Government*). Representation is the refinement necessary to relieve of its anarchical flavor Bentham's dictum that every man is his own best judge (See pp 283ff, *infra*).

sent public opinion if he only knows what it is. In this respect, analysis might ponder the question whether public opinion can be adequately expressed in any more specific manner than by the method of periodic voting. Can—or should—public opinion express itself more frequently and continuously than at two- or four-year intervals? That is, would it be possible or fruitful to provide a method whereby individual opinion might be expressed on specific measures, rather than by voting on the comparatively long-run policy of a representative who votes on specific legislation? It would not be a difficult task, under present conditions, to conduct a vote by mail on any important issue; the results could, in most cases, be tabulated with at least as much speed as is evidenced by Congress on important bills. From the Individual point-of-view, this would appear highly desirable in that it would facilitate the direct expression of individual purposes and opinions, but that there are other considerations which might make such a procedure inadvisable will become evident as we examine the other two points-of-view.

This indicates briefly the kind of problems likely to arise in analysis of the Social Group category. From the Individual point-of-view, the important consideration is that individuals, as members of social groups, have a pattern of action which would be inconceivable if they were living as isolated physical men. The analysis of our action and thought is thus made more complex by this association in groups, for now we have to take into consideration not only the physical factor, but also the factors arising out of social relations. The category of Physical Man repre-

sents, in a fashion, what might be called the "private" aspect of the individual, whereas Social Group refers to the "public" aspect. Not much observation is needed to demonstrate that these areas of private and public are not always in harmony, there are moments in any individual's experience when the two aspects conflict violently. The private and the public represent distinguishable elements of individual activity, and there is no particular reason why they should harmonize unless an adjustment is accomplished by analysis. It is the function of analysis from the Individual point-of-view to maintain some degree of balance and co-ordination between these areas of private and public, for only thus can the individual remain sane. I cannot concentrate upon the satisfaction of my physical desires without any regard for the interests of the social groups to which I belong, nor will it be satisfactory for me to subjugate all of my private wants to the interests of groups. What this means is that, while an individual belongs to several social groups, he at no time ceases to be also a Physical Man, both factors demand recognition and integration in his activity.

PERSON AND THE PRINCIPLE OF LIBERTY

The individual is, then, both a Physical Man and a Social Man, and he cannot ignore either area of his existence. It is precisely the adjustment of these two factors into a harmonious unity that describes what is meant by personality, and the final category of the Individual aspect may be called *Person*. The degree of personality achieved by the individual will be directly proportionate to the degree of

co-ordination he can maintain between private and public factors. It is not likely that any individual will manage a complete and perfect integration, but analysis and action must manage some kind of balance. Psychiatric analysis suggests that if we overemphasize the private, we become introverted, and that if the public aspect exerts a disproportionate influence over action, we grow extroverted. To indulge either extreme in analysis or action is to court insanity, and if I bounce back and forth between the extremes, I may develop an analytic condition similar to psychological manic-depressive psychosis. Integration cannot be achieved by eliminating either factor, nor can it be maintained by overemphasizing first one and then the other. The Person cannot cease to be a Physical Man, nor can he escape his connection with Social Groups, the necessity of integrating the two is forced upon him by his very nature as an individual.

This necessity of maintaining integration through the endurance of opposition rather than by ignoring or liquidating one of the opposing factors is consistent with our general analytic point-of-view. Conflict is rarely, if ever, solved by the elimination of one factor in the conflict. The problem of analysis is not made easier by an attempt to eliminate any category or any point-of-view, nor can personality be integrated by a reduction of private to public, or public to private. Reduction by elimination is not integration, but its very opposite. Perhaps it sounds paradoxical to say that integration is achieved only through the *maintenance of conflict*; but this is the view to which

analysis forces us, and the absence of an adequate philosophy of conflict or integration does not change the demands of action.

It follows from the above description that the problems peculiar to the category of Person are essentially different from those of either of the two preceding categories. At this level, the Individual point-of-view is not focused primarily on physical wants, nor upon the problems of communication, the analytic problem now becomes that of determining the best possible method for the integration of private and public in the action of the individual. Every day, problems arise in which I face a conflict between the desires of private satisfaction and public interest, and unless I have some method for adjusting the conflict, my activity will not be rational. I may be convinced, for example, that a vigorous kick, properly administered to a certain individual, would give me an intense degree of private pleasure and satisfaction, but public interest advises that such procedure is not conducive to the development of the greatest possibilities of rational communication in society. True, among boys of ten or twelve, kicking is an accepted form of communication, but only because their social group is as yet of a somewhat primitive nature.

Because Person must comprehend also the categories of Physical Man and Social Group, it is the category which most completely expresses the Individual point-of-view in analysis. When we use the term Person, we are implying and including these two more limited aspects of the indi-

vidual, but if we use Person casually without realizing that private and public are involved as distinguishable aspects, our analysis is likely to ignore many important facts and considerations. In social or political terms, we might substitute the term *Citizen* for Person, and this makes even more clear the function of this category as a co-ordination of public and private. Clearly implied in such a definition is the demand that every individual be allowed an area of privacy which should not be invaded or abridged by any public demands, but at the same time it is recognized that there is hardly any action of an individual which does not have public implications of more or less significance.

If any consistency is to be maintained in the integration of public and private factors in the individual, some method or principle of integration is necessary. Here we face one of the most confusing difficulties of analysis. The defining concepts of Physical Man and of Social Group, while they do in a sense represent criteria for these levels, nevertheless are from the standpoint of analysis mainly descriptive concepts. But the defining concept of Person must be more than descriptive, it must be a methodological principle. The minimum content we can ascribe to Person is that it must comprehend both Physical Man and Social Group, and because these two are certainly distinguishable and not necessarily harmonious elements of Person, they must be deliberately integrated. The principle or method by which this integration is to be accomplished will, then, be the one which appears most suitable to the

maintenance of the essential characteristics of both Physical Man and Social Group

The difficulty involved in this procedure is that of establishing or maintaining the analytic status of such a criterion or principle. The principle which we select as most likely to achieve integration in the Person will thereby become a value principle rather than an analytic concept. It is difficult to contend that "this is the nature of Person from an analytic point-of-view", rather, the proposal of a principle of integration is the suggestion that "this is what the Person *ought* to be." This confusion of *ought* and *is* has been the source of more happy-thought philosophy than perhaps any other assumption. It decidedly does not make our problem any easier, nor does it contribute to the clarity of analysis, to admit that the defining concept of our final category for any point-of-view cannot be stated analytically. But we shall be still less clear if we fail to admit this limitation of analysis and if we proceed on the assumption that the principle of integration we accept is an "analytic fact."

It must be admitted, then, that the only justification possible for an integrating principle of any point-of-view is that it appears to be the most efficient or adequate means of integrating that point-of-view. We must likewise admit that the principle of integration is a value criterion, not an analytic concept. This value principle is not descriptive of fact from any specialized point-of-view of analysis, and, therefore, while Person is an analytic category, it cannot be defined analytically. The paradox derives from

the fact that there are several possible alternative concepts which might be used to define Person. That known facts, as contributed by specialized research, provide the ground for the selection of one from among these alternative principles of integration is a tempting rationalization. But as desirable as it would be to affirm this extension of analysis, there appears to be no ground for doing so. In fact, the only cogent opinion seems to be that whoever can establish the analytic derivation of integrative value principles will thereby have contributed something which is of final importance in the history of man's thinking. To be sure, value principles are chosen for analytic reasons, in fact, it is analysis which indicates the necessity for such integrative principles if action is to be controlled by knowledge. Only in the final category of a point-of-view can knowledge be fruitfully implemented in action, yet the principle of this category cannot be substantiated analytically. It is quite possible that the Individual point-of-view might be analyzed by several people and that they might agree upon the nature of the first two categories and yet disagree upon what principle is to be used to integrate the Person. It is upon the choice of alternatives in this regard that major differences in ethical and political theory arise. There are no fixed principles to which we can refer as the Right or the Good methods of integration. From the standpoint of analysis, that principle is justified which most efficiently integrates the point-of-view, and upon this question opinion, as well as data, may not always agree.

With this warning that the final principle is not analytic,

but is presented as the most adequate method of integrating the Individual point-of-view, I suggest that *Liberty* is the concept most appropriate to Person. As a value principle Liberty means, briefly, the guarantee to individuals of as much freedom of thought and action as is consistent with the exercise of an equal freedom by other men. Private demands become social privileges through the admission of like demands on the part of other individuals, but privacy must not be so abridged as to become completely public

The implication is that the maintenance of Physical Man as part of Person demands that an area of privacy be reserved to the individual, an area into which the social or public must not intrude itself. The larger this area, the more satisfactory will be the private aspect of the self, as long as the extension is not made at the cost of a diminishing public area. Thus, in our society, it has been traditionally assumed that freedom to think and to feel and to suffer is not a sufficient area of private freedom. It has been considered possible to enlarge the area of private discrimination to include an almost unabridged freedom of speech, worship, assembly, and home, without abridging any essential demands of the public aspect of Person

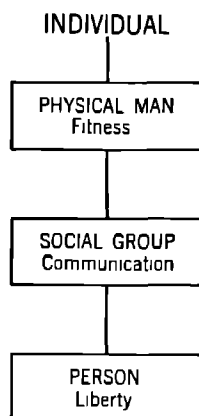
An overemphasis upon liberty in the private area would result in anarchy, there is a difference between liberty and license. Liberty has been described as a principle of integration, and this means that both private and public aspects contribute to the maintenance of Liberty in each area. That is, freedom in the private area, such as free-

dom of speech, would have little meaning unless it were guaranteed, and only the public privilege of Social Groups, both large and small, can give that guarantee. There is no right without an accompanying obligation, it is naive to claim that the individual is possessed of "natural" rights. A right derives existence only from the public support of a private demand. Those of my private demands which receive public guarantee, I may call rights, in a democratic society, the manner of getting that guarantee is through an implicit agreement whereby each individual admits the same rights for other individuals, as a member of the public, I therefore assume the obligation of maintaining rights

The Individual point-of-view has been presented as one of the essential perspectives from which to view experience and action. That the point-of-view necessitates some principle of integration follows from the analysis, but analysis cannot provide the means of integration. We have, in democratic society, almost unanimously accepted the principle of Liberty as the method of integrating experience from the Individual point-of-view. Our justification, then, of Liberty as a principle, or as a value, is that it is the most adequate methodological principle which we have found for recognizing and unifying the individual elements which are observable in the pattern of action. The test which must be applied to any principle which may be suggested as a substitute for Liberty is whether it can more effectively preserve and harmonize Physical Man and Social Group. We cannot, of course, allow the substitution for Liberty of a principle which has no concern for the private and public aspects of the individual, for

this would mean the elimination of the Individual point-of-view.

Summarily, the analytic pattern for the first point-of-view is.



CHAPTER V

The Material Point-of-View

THE pattern of the Material point-of-view will exhibit three major categories analogous to those of the Individual point-of-view, but it must be remembered that this is a deliberate division of the Material aspect. The number of categories stated in any pattern of analysis is largely arbitrary, as we have already seen, each category could be divided into many less comprehensive concepts, inasmuch as categories represent simply what appear significant classifications of the subject matter seen from a particular point-of-view. It seems advisable, however, in order to satisfy a minimum demand of consistency, that some analogy be maintained between procedure and structure while analyzing from different points-of-view. Let it be repeated that neither the points-of-view in analysis

nor the subdivisions of categories are meant to represent pieces of actual fact as that fact appears in action. An analytic pattern is a thought pattern, not a pattern of existence or reality. We cannot go out and bring into the laboratory a mere Physical Man, for every individual is at one and the same time a Physical Man, a member of Social Groups, and a Person. In the same manner, action may be observed from the three points-of-view of Individual, Material, and Formal. Categories of analysis serve only as techniques in handling and adjusting the great variety of content in experience and action.

NATURE AND THE CONCEPT OF CONCRETENESS

The Material aspect is just what the term implies: the material in which we accomplish purposes. The development of purpose into action can mean only an objective realization of purpose—objective in the sense that changes are effected in terms of things or objects. The first characteristic observable from this point-of-view is that of *Concreteness*, and we may accept this as the defining concept for the first category of the Material.¹ The wood of which I build a table has substantiality in this material sense, I can cut it, burn it, shape it, and bruise my hand upon it. It is by incorporating my individual purpose in this material that I hope to objectify or make actual that

¹ The defining concept for this category will necessarily be somewhat ambiguous, owing partly to the indefinite usage of such terms as "matter" in the history of science. For a clear analysis of the defining concepts of the Material point-of-view, see Benjamin, A. C., *An Introduction to the Philosophy of Science*, New York, 1937, Chap. XV.

purpose, in the absence of such objectification, the construction of the table remains ideal, a fantasy the only object of which is a dream-table

The category which seems most appropriately to express the concrete, substantial character of the Material point-of-view is that of *Nature*. In the same sense in which the minimum observation from an Individual point-of-view is Physical Man, Material analysis must, at the very least, take account of natural objects. The importance to action of the analytic category of Nature is apparent. What analysis will suggest as possible in the form of action will depend largely upon the nature and availability of the objects in which that action is to issue. Especially in the analysis of the more complex problems of action is it true that purposes and action must be adjusted to the nature of the objects which our action hopes to shape. Analysis from the Material point-of-view, thus, looks at experience as providing materials for the objectification or realization of purpose. The problem of action is the utilization of materials for the fulfillment of purposes, and the function of analysis from the Material point-of-view is to clarify knowledge about those materials.

Observation from the Material point-of-view is essential to the construction of an adequate pattern of analysis. Thought dies a-borning if it is concerned only with purposes without regard for their possible implementation. The artist who cannot get beyond the stage of contemplating the desirability of a material which would combine the permanence of marble with the plasticity of clay—is no artist, for he will never create anything, unless it be ad-

mitted that he created a desire for the impossible. There is no need to argue further the necessity of things and objects in the realization of purpose, but it does not appear to be so readily admitted that purposes must be adjusted to materials by analysis. The more usual procedure seems to be that of deciding upon the purpose and then going at the active task of realizing that purpose without any regard for material possibilities. Such purposes may occasionally be realized—if proper materials chance to be available, more often the practical result is disillusionment when it is discovered that purposes, however sincere or desirable, give no promise of realization unless Material analysis has contributed to their definition.

One of the most common errors in the analysis of Nature is the failure to define this category from the Material point-of-view. It is not unusual to find the category of Nature being used in a sense which could result only from definition and interpretation peculiar to the Individual point-of-view. How frequently we hear "Well, that's only natural", how many manities of thought and action have been excused by reference to "human nature"! There is nothing natural which cannot and should not be classified under the category of Nature, that is, when we say "natural" we mean "as observed from the Material point-of-view." There is, to be sure, in the term "nature" an ambiguity which must be carefully avoided. To speak of the nature of a thing is not to classify it under the category of Nature, we can refer to the nature of an individual, or to the nature of anything else, for that matter. But to pass from "the nature of" to "natural" is to make the un-

warranted assumption that merely to describe, to consider the "nature of" a thing, is to make thereby an observation from the point-of-view of Material analysis.² Nature is not a consideration from the Individual point-of-view, and the term "human nature" is a misnomer. Certainly the individual has a nature, but the expression "human nature" is ordinarily used to indicate some characteristic of persons which is non-purposive and non-individual—a characteristic, that is, which could be described only under the category of Nature. This use of a Material category for the analysis of an individual implies that persons may, to some extent, be described as objective stuff or things.

It is thus an easy step from the use of "human nature" in the description of persons, implying thereby some natural or objective characteristic, to the acceptance of persons as materials. From this simple analytic confusion of points-of-view and categories can develop the most vicious perversion of purpose and action. If the individual can be classified under Nature, and hence considered as a material, then the path is clear for a complete denial of the ethical postulate demanded by Kant, that individuals be always considered, in terms of action, from the point-of-view of purpose, and not considered as materials. It is, for example, an easy salving of one's conscience to justify sending men to war by asserting that it is "natural" for men to fight. When spokesmen of Fascism proclaim their "state as the true reality of the individual" (Mussolini), or assure us that the nation is "the ethical substance of the

² It is interesting to observe the historical development of the concept of Natural Law in terms of this analytic distinction

individual" (Gentile), we shall look with the greatest suspicion on this corruption of analysis. And we are prudent in our suspicion, for we know that it will be but a moment before these eliminators of the individual will be calling for "immolation," "martyrdom," and "holy violence." The analysis of persons from the Material point-of-view is a refusal to admit the Individual point-of-view, a denial of individuality, personality, and purpose.

Something like this perversion of analytic categories is the essential presupposition of propaganda as we have defined it, although all propaganda is, fortunately, not so extreme and vicious as that of Fascism. How shall we define the technique of the propagandist if not as an attempt to use persons as the materials by means of which to effect certain desired changes or reactions? To accomplish this, whatever purpose the individual has must be subjugated to the desire of the propagandist, and the result is that the individual no longer has a purposive aspect and thus ceases to be analyzed as a person. He becomes for the propagandist an object with which to do things, of the same stature as any object classified under the Material category of Nature. It is not surprising that propaganda, a technique for using the individual as a material, is the method relied upon by usurpers of power, who can perpetuate themselves only so long as they can subjugate and utilize persons as materials to their own ends. Persons cannot rationally be analyzed as materials, every person must be recognized as an instance of the purposive character of action, and treated analytically as such.

It is from the world of Nature that we derive finally

all the materials with which to accomplish our individual purposes, the more inclusive our observation and investigation of that material world, the more available and the better will be the materials with which to work. Here again, however, we find an example of undue emphasis upon what should be but one analytic category. The theory which has so concentrated upon the category of Nature as to forget that there are other important factors in analysis is Materialism. This method of analysis tries to reduce all factors to the single category of Nature, tries to observe all points-of-view with a method suitable only to the observation of Nature. But it is an unwarranted procedure to assume that because purposes are realized and implemented only by using materials of the natural world, therefore purposes may be interpreted as purely material in character. Action has a material aspect, but it has other aspects as well. *There is no single determining factor or aspect of analysis or action.* The determination or control of thought and action comes as a result of many factors, while it is true that factors vary in importance and effect, there is no situation in which all aspects do not exert appreciable influence. Any competent analysis must, therefore, include all factors in its consideration, and the analysis which relies upon a method suitable only to one category, or even to a single point-of-view, is too partial and restricted to comprehend the problems of action.

PROPERTY AND THE CONCEPT OF USE

Natural objects are potential materials for the realization of purpose, but when they are actually used as instru-

ments, they assume a different character. A rock might exist forever as an object in the world of Nature, yet never serve as the material of purposive activity. As Phillips Brooks reminds us. "The hills are full of marble before the world blooms with statues." Of particular importance to analysis is the fact that the activity of using an object as material contributes something to the object over and above its natural characteristics. As a material for activity, it is an object for use, and when an object is used for the realization of purpose, it becomes, in the clearest sense of the term, a property object. Property may thus be said to consist of objects useful to the realization and embodiment of ends or purposes, a natural object is not in itself a property object. Hence, *Property* must be admitted as the second analytic category of the Material point-of-view, Property defined in terms of *Use*.

The general notions of Property current in our thought do not fit into any kind of analytic pattern. The integration of any point-of-view depends upon the recognition, definition, and adjustment of all the aspects included in that point-of-view. Inadequacy in the observation or definition of any category will then necessarily result in a distortion of the entire point-of-view. If, for example, an individual is suffering from a maladjustment of the sexual factor of his physical existence, it is not likely that he will be able to achieve any satisfactory integration at the level of Person, his personality will suffer from the inadequate analysis of sex. Thus, one aspect of one category can exert a negative influence upon the entire point-of-view, and ultimately upon the pattern of analysis and

the action of the individual. Once again, this possibility of confusion but emphasizes the need for an integrated analytic pattern sufficient to comprehend all aspects. If the category of Property is not adequately analyzed and adjusted in the analytic pattern, it will tend to distort the analysis of the entire Material aspect, and if the Material point-of-view is out of focus, it will be difficult to achieve an integration of all points-of-view in the control of action

The definitions of Property which are common to most of our thinking are inadequate to the point of absurdity.³ It would not be difficult to find entire treatises on Property in which the concept of Use is never mentioned. Our prevailing descriptions of Property are not analytic, or at any rate only partially so, this partiality is the result of an attempt to analyze Property by means of concepts which

³ Note the analytic contradictions implied in the following descriptions of Property in the sourcebook of Anglo-American law, Blackstone's *Commentaries*

"The earth, therefore, and all things therein, are the general property of all mankind, exclusive of other beings, from the immediate gift of the Creator

"bodily labour, bestowed upon any subject which before lay in common to all men, is universally allowed to give the fairest and most reasonable title to an exclusive property therein

"There is no foundation in nature or natural law, why a set of words upon parchment should convey the dominion of land, why the son shall have the right to exclude his fellow creatures from a determinate spot of ground, because his father had done so before him or why the occupier of a particular field or of a jewel, when lying on his death-bed, and no longer able to maintain possession, should be entitled to tell the rest of the world which of them should enjoy it after him

"So great moreover is the regard of the law for private property, that it will not authorize the least violation of it, no, not even for the general good of the whole community"

It is little wonder that D J Boorstin has remarked, "Some of the most obscure—one might say mystical—passages in the *Commentaries* are the descriptions of the right of property" (*The Mysterious Science of the Law*, Cambridge, 1941)

are not appropriate to the Material point-of-view. We are inclined to think of Property in terms of possession, or as the source of rights and privileges which are purchased by individuals when they acquire property.⁴ Such individualistic descriptions of Property are artificial and analytically invalid. To interpret a Material category in terms derived from analysis of the Individual point-of-view is, in fact, to eliminate the Material as a point-of-view. The proper analytic definition of Property will include a description of characteristics evidenced by useful and usable objects, a consideration of the use itself, as well as of the availability of Property objects, and perhaps a secondary concern for the manner in which such objects may be discovered, created, or manufactured.

It is not surprising that the maladjustment of Property has resulted in instances of overemphasis upon the analysis of this category. Just as some proponents of Individual analysis get so excited about the frequency of sexual maladjustment that they try to interpret the Individual point-of-view solely in terms of sex, so the kind of Material analysis which we may call Economic Determinism is so stimulated by the general inadequacy of Property analysis that it tries to interpret the entire Material point-of-view—in fact, all of action—in terms of Property. Now, it is one of the premises of analysis that *any* point-of-view can be

⁴ It is unfortunate that in the United States we are just now beginning to understand the wisdom and foresight of Jefferson. He recognized that Property could not be defined in Individual terms, hence, he changed the popular expression "Life, Liberty, and Property" to "Life, Liberty, and the pursuit of Happiness." Too, when Jefferson was asked to read and criticize the French *Declaration of the Rights of Man*, he made the dramatic gesture of drawing a line through the word "property."

taken in regard to *any* experience or action, and it is probably likewise the case that every activity can be observed in terms of each specific category. It is difficult to think of an experience which could not be viewed and analyzed in terms of Property. But experience has at the same time a natural, a physical, a social, a purposive, and a formal aspect, so far as analytic importance is concerned, no one of these aspects can claim priority over any other. Certainly, there may appear to be more data concerning some aspects than others, more likely, the action of the individual demonstrates that his analysis has not taken account of or has not managed to integrate all analytic aspects. When activity is observed in terms of a comprehensive analytic pattern, the frantic search of Marxian analysts for a property motive, which might then be pointed out as the fundamental motivation of the action, becomes somewhat tiresome. Men do act from, and are subject to, other pressures than the economic. Every situation of activity represents a confluence of social, physical, natural, and other aspects, analytically, one is as important as any other. In other words, there is no analytic distinction among points-of-view or categories in regard to the determination or influence which they exert in the control of activity. Nine out of ten marriages are instances in which the Property or economic aspect is by no means a determining motivation.

Either inadequacy or overemphasis of the category of Property makes it difficult to achieve any satisfactory analysis at the final level of the Material point-of-view. The category which summarizes Material analysis must include

the categories of Nature and Property, as Person included Physical Man and Social Group, yet the status of Property analysis precludes the necessary integration. To some extent, then, the suggestions to follow must be tentative, awaiting more adequate analytic description of Property. On the other hand, some features of the Material point-of-view are clear enough to enable us to say certain things about the nature of this final category for the integration of the Material.

STATE AND THE PRINCIPLE OF SECURITY

If we, as individuals, were under the necessity of converting natural objects to our purposes every time we acted, the possibilities of activity would be considerably abridged. Action at the level of Nature does not admit a very extensive range of purposes on the part of individuals, for their time will necessarily be largely occupied in the conversion of natural objects into materials which will satisfy simple physical necessities. The realization of larger and more satisfactory purposes thus necessitates some kind of systematic conversion of natural objects, a system which will provide materials for individual purposes more efficiently than they could be provided by individuals themselves. As soon as men advanced beyond the satisfaction of mere physical necessities, they began to contemplate the possibilities of such an organized system of production. At the outset, it was obvious that a division of labor would facilitate such efficiency in production. The effort of a single individual would be more productive if he concentrated on the raising of sheep, for example,

than if he tried to raise sheep, tend a garden, make shoes, write law, and so on.

Such a system of production made necessary a systematic form of distribution, and some method of exchange had to be devised whereby all men might have access to the converted products of all other men. Systems of production and distribution have developed from simple origins into highly complicated mechanisms, but, whether simple or complex, this organized provision of material for individual use represents the fundamental institutional structure which characterizes experience from the Material point-of-view. Institutions represent the form taken by society in the organization of its resources for the satisfaction of purposes. It is important to note that the nature of the system is not determined by the kind of materials produced, production takes this institutional form whether the product be shoes or education. Neither is the medium of exchange of other than incidental importance to the institutional system, it matters not whether the producer be "paid" in food, shoes, money, prestige, or power. If economics is the science of production and distribution, this point-of-view extends the area of economic interest considerably beyond the narrow confines of monetary exchange, to which it has so generally restricted its attention.

No stress need be laid on the benefits which accrue to individuals from this institutional system of production and exchange. Institutions are, indeed, the guarantee to the individual of the "fuller life", the materials of modern life are almost wholly products of institutional production. So much is this the case that the productive effort of in-

dividuals today is largely confined to the institutional channels of production. The complexity of highly developed institutions, including the highly specialized divisions of production and the complications of distribution, makes the problem of institutional organization a matter of vital concern in any society which is even slightly more than primitive. The means whereby men exchange the products of their labor are no longer limited to a simple division of such unitary functions as raising sheep, growing grain, and making shoes. Consider how many highly specialized productive functions are now involved in the production of any one of such materials as cloth, bread, and shoes. The growth of institutions of production and distribution therefore necessitates the organization of some super-institution which can maintain proper relations among the institutions directly concerned with the provision of materials.

Such an institution for the adjustment and control of all other institutions is what we generally mean by the state, and we shall say, therefore, that *State* is the final category of the Material point-of-view, representing the most comprehensive form of that institutional structure which is necessary to the integration of the Material. The complexity of the modern State derives from the complications of the various institutions which it comprehends. Increasing complexity in organization always creates special problems in terms of administration, the structure becomes so heterogeneous that the tendency to expend all effort in the management of the mere internal movement of the mechanism becomes a real danger—the danger that

the function for which the organization was originally designed may be forgotten. The complex institution may, indeed, become a Frankenstein monster with the purposes which created that institution subjugated to the mere self-perpetuation of the institutional mechanism. The tendency of administration to become highly formalized, even in small and relatively simple institutional organizations, is an indication that purposive and analytic control must be maintained over these channels of action at all times.

The function which alone justifies the existence and organization of a State, whether primitive or modern, is the adjustment and control of institutions. In other words, the function of the State is to facilitate the production and distribution of materials—materials which then become usable for the realization of individual purposes. Any State which fails to recognize this function as its end, and does not fulfill that function as ably as possible, is an artificial mechanism, for the existence of which there is no analytic justification. As society becomes more complex, man is increasingly dependent upon the State for the guarantee of an adequate return for his productive labor. In small social communities, the problem of distribution was comparatively simple, consisting largely of a process of barter and trade. The farmer came to town, gave the miller a part of his wheat for the labor of converting it into flour, traded a part of the flour to the cobbler for shoes, and so on. Today, few products are produced by the effort of a single individual, and our complicated system of exchange is difficult to adjust with complete fairness.

to every individual involved. Probably no system of production and distribution has ever satisfied everyone concerned, and it would be more than optimistic to anticipate that any State will ever provide such a delicate and perfectly adjusted mechanism. The judgment of any State, from an analytic point-of-view at least, will, then, be in terms of the degree of efficiency manifested by that State in the co-ordination of institutions, and the success of the State in the adjustment of distribution to production.

Even a cursory glance at the contemporary scene of institutional activity is sufficient to indicate the necessity of systematic and organized adjustment, and the State appears to be the only institution of sufficient scope and comprehension to include all other institutions of production and distribution. It is somewhat surprising to find frequent and usually vociferous expressions to the effect that such ordering and control of institutions are unnecessary—this despite the fact that if events themselves have given evidence of anything at all, it is that such institutional order and control are a prerequisite of social organization. This denial of the function of the State is a hang-over from the old *laissez faire* theory—a theory which is itself one of the clearest examples of partial and distorted analysis—and the objection is usually put in the negative form of referring to the adjustment of institutions as “state interference.” The manner in which such arguments are stated is an attempt to suggest that the control of institutions by the State is an interference with individual liberty and rights. On the basis of our previous analysis, it is clear that no such interference is involved in the control of institutions.

The principal difficulty which appears in the attempt to think clearly about the function of the State is occasioned by the kind of analysis which has already been mentioned as characteristic of the Property level of analysis. The problem of control and adjustment of institutions becomes mainly the problem of differentiating ownership and control. J. A. Hobson considers this severance of ownership and effective control a major difficulty which impairs both these functions.⁵ If the Material point-of-view is accepted as essential to comprehensive analysis, then ownership can be defined only in terms of Use, the individual who converts a natural object for use in the realization of a purpose is the real and rightful owner of the object.⁶ The accepted notion of ownership, however, represents a confused mixture of Individual and Material, certainly, possession in our society does not necessarily derive from the labor of conversion or from intelligent, purposive Use. In many cases, the most influential factor in determining possession is sheer chance. Possession by accumulation is more dependent upon time and circumstance than upon purpose or Use, possession by inheritance is entirely a matter of accidental time and place arrangement. The complaint of Beaumarchais' Figaro is well spoken

Nobility, riches, appointments, make people so proud! What have you done to deserve all these

⁵ *Economics and Ethics*, New York, 1929, Pt. III, Chap. I. See also Hobhouse, L. T., *Property Its Duties and Rights*, New York, 1929.

⁶ "As much as anyone can make use of to any advantage of life until it spoils, so much he may by his labour fix, and property in whatever is beyond this is more than his share and belongs to others." Locke, *Civil Government*.

things² You have given yourself the trouble of being born, and nothing more! Apart from that, quite an ordinary sort of man!

Four hundred years ago, Thomas More castigated the then prevailing conception of property rights, a conception which has unfortunately changed but little in the long interim

Therefore when I consider and weigh in my mind all their commonwealths, which nowadays anywhere do flourish, so God help me, I can perceive nothing but a certain conspiracy of rich men procuring their own commodities under the name and title of the commonwealth

Upon this accusation, George Catlin remarks that the passage of the centuries has made More's comment "very far from some mere philosopher's folly "

Despite these obvious considerations in regard to possession, we continue to identify possession, ownership, and control This identification implies, of course, that no necessary connection exists between control and Use, an implication which is manifestly absurd Thus, the man who happens to possess materials—however he may have come into their possession—may deprive the rightful owners and users of the use of these materials, such a possessor may, as a matter of fact, even call upon the State itself to help him withhold these materials from their normal and legitimate Use. The concept of Use as the criterion of Property does not, however, imply a simple equalitarian distribution Equality is not the principle of distribution any more than private profit is the analytic principle of production.

Once admit, as the idea of property, that nature should be progressively adapted to the service of man by a process in which each, while working freely or for himself, *i e*, as determined by a conception of his own good, at the same time contributes to the social good, and it will follow that property must be unequal.⁷

Let us be honest, however, and admit the obvious namely, that the average individual in the United States today has available for use more materials than were ever before placed at the disposal of purposive action. As a consequence, man today can visualize and achieve purposes which yesterday were inconceivable. What would Aristotle not have given for the little microscope which I can buy from a mail-order house for the price of a pair of shoes? Cleopatra in all her glory would have swooned with delight before the array of perfumes which any "dime store" presents to clerks and housewives. When were the materials of education so available, the artistry of music to be had for the price of a radio? If this production of almost a superfluity of materials is not enriching man's purposes and action, then he is not taking advantage of the increasing possibilities afforded by an enlarged Material analysis.

Technological improvements in production, however are almost the sole cause of this increased production of usable materials. The recent past has witnessed such rapid progress in the sciences concerned with the investigation and exploitation of the objects of Nature that

⁷ Green, T H, *Lectures on the Principles of Political Obligation*

the materials or Property objects issuing therefrom have literally overflowed the boundaries of restraint set by an individualistic definition of Property. Too often the materials which have been made available are trivial and inconsequential, while the Property useful to larger purposes has been withheld under the prerogative of possession. Be that as it may, the temporary stimulus given to Material analysis by expanding production will not of itself accomplish the integration of Nature and Property, that remains the function of institutions, of which the most comprehensive is the State

We have, then, to suggest a principle by which to accomplish the integration of Property and Nature in the institutional structure of the State. As with the principle of Liberty suggested for the Individual point-of-view, so here it must be admitted that we out-talk analytic information in the statement of such a value concept. Once again, from the standpoint of analysis, the only validation of such integrating principles is by reference to the efficiency they manifest in uniting analytic categories which would otherwise remain disparate. With these qualifications in mind, the principle which seems most nearly sufficient to achieve the integration of Nature and Property in the State is that of *Security*. By this we do not mean, of course, individual or physical security, such a concept would not be appropriate to the Material point-of-view. By "Security" is meant the guarantee that material possibilities will be made available in the State

In order that purposes may be realized, there must be some such guarantee that the materials necessary to the

realization of purposes will themselves be available when they are needed. The fulfillment of purposes in this sense is the only return which an individual has for his work and labor. The State, as representative of this guarantee of material possibilities, is thus a symbol of Security. The most essential feature of Security, so defined, is that it contributes the necessary element of autonomy to action. The table which I built would not be a satisfactory realization of my purpose were there not some guarantee that the material of which it was constructed would remain substantially the same from day to day, as well as a guarantee that the reward of my labor would be secure for my use. Too, the object which embodies my purpose will in this case be much the same and satisfy the same uses whether it be in Chicago or London, whether it be January or July. It is some such autonomy of materials that is often referred to as the "real" or "factual" aspect of activity, but the kind of analysis we are here undertaking precludes the attachment of reality or actuality exclusively to one category or one point-of-view. In analytic terms, the autonomy of the Material is a satisfaction of the category of Concreteness, and autonomy contributes to the final category of Security.

The autonomy which characterizes the integration of institutional structure has also another feature in addition to its basis of concrete substantiality. The category of Use must be included in the analysis of institution if the latter is to satisfy Material analysis. An institution which does not satisfy a Use is not properly an institution at all. Further, it is likely that whenever the Material aspect of

activity demands some satisfaction of a particular Use, an institutional form for the satisfaction of that Use will develop. This does not, of course, refer to individual or personal uses, but to Use as the function of Property objects. If, as we have seen, individual purposes are adjusted to available materials, then clearly the creation of useful objects will affect the purposes of individuals. It is not likely that materials will be produced and set aside, rather, they will be integrated with purpose, and hence assume the status of Use or Property. The necessity of integrating purpose and material thus contributes a certain autonomy to the production of materials, and such production is basically institutional.

The Security or autonomy evidenced by the Material point-of-view in analysis is an essential ingredient of action. It is the factor which gives experience a high degree of continuity from one act to another, and from one individual or group to other individuals and groups. There is something ponderous and mechanical about an institution. Men certainly do make changes in institutions, sorry would be our lot if we could never change the form of the State. There is observable, however, in every institution a fundamental character of unchangeableness, a quality of persistence which, while it admits of minor changes, resists all efforts to eliminate or dissolve the institution itself. Although the members of the Roman Senate have long been dead, the Forum in ruins, and Rome's laws no longer imperative, yet Roman law still exists as an institution. The explanation lies in the fact that the demands of Use which grounded the institution of Roman law still exist.

to some degree, hence, we can still make use of Roman law. One of the most impressive observations of history is the relative insignificance of the changes made in institutions by the most violent of wars and revolutions. Of course, histories bearing the *imprimatur* of nationalistic patriotism make great ado about the changes wrought by war and revolution, but the persistence and resistance of institutions are the startling proof of the ineffectiveness of violence and the inadvisability of attempting other than gradual changes in institutional structure. If this substantiality and autonomy which characterize the institution can be imparted to objects of use by the integration of institutions in the State, then—and only then—will action manifest a degree of Security. The expectation of objects suitable to implement purposes is a prerequisite of rational choice.

The theoretical analysis which stresses the aspect of Security afforded by the State takes several different forms. In its peculiarly modern dress, it is called Totalitarianism or Statism. The proper theory to represent the Material point-of-view, however, is Corporatism, a respectable and significant current in the history of thought. True, totalitarians try hard to establish themselves in this intellectual tradition and proudly glorify their theory as “corporate.” The term “Corporatism” is applicable to totalitarian thought only as the term “Christian” would be applied to a man who rifled the church treasury.* Totalitarian thought is a perversion of analysis which, by overemphasiz-

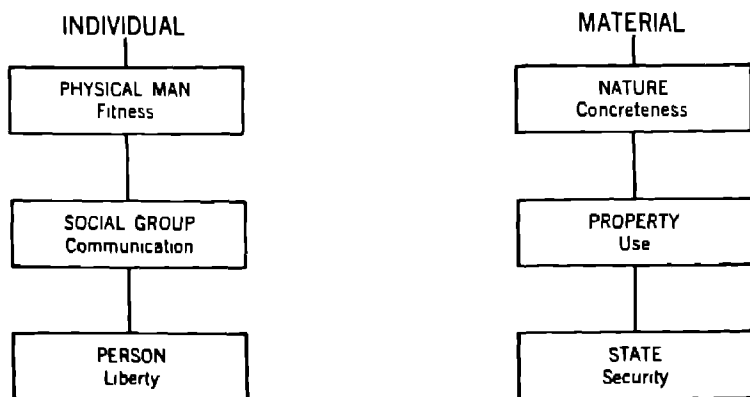
* A criticism of what is perhaps the best contemporary statement of the problems of analysis from the Material point-of-view is given in Appendix II

ing the function of the State, places it foremost among the aspects of thought and action, demanding that all other aspects and factors be interpreted in terms of this single analytic category. In totalitarian theory we find a striking example of the self-defeating mechanism of partial analysis, for the totalitarian state, which emphasizes security even if it involves ignoring individual purposes, appears to provide its citizens with the least possible degree of security in actual practice. The operation of these states is such that we are impelled to ask, "Security of what and for whom?" In analysis it must be remembered that rational action results only from the co-ordination of the three aspects of meaning, and that the principles of Liberty and Security will be possible of attainment only if they are integrated and co-ordinated one with the other. Security is meager, if not impossible, in the absence of Liberty, and the security proclaimed by totalitarian states cannot be justified analytically—nor can any principle which does not provide for the recognition and integration of all other principles.

Totalitarian theory, therefore, is in reality a perversion of the Material aspect of analysis. But it has exerted a tremendous influence in current affairs, and this has been true largely because democracy has so emphasized the Individual point-of-view as to forget the necessity of maintaining adjustment and control in the institutional area of action. When a society of individuals becomes so enamored of individual purposes and interests as to forget that actual realization of purposes depends upon the guarantee, to individuals by the State, of the usable materials made available by institutions, then Security is apt to be

dissipated and purpose to become impossible of fulfillment. If this emphasis upon the individual is carried too far, to a point at which purpose begins to appear impossible of fulfillment because of the absence of useful objects, then individuals will be tempted to exchange large purposes for small realizations. The philosophy of "a bird in the hand" may become a real, practical alternative to no birds at all. Democracy must take care not so to emphasize the individual as to forget to provide him with adequate materials for democratic purposes. If the objects for the realization of democratic purposes are not available, it is likely that men will forego democratic ends in favor of less satisfactory purposes which can be achieved. Democracy cannot, in a loud voice, preach independence and individual initiative to men who cannot in their society get enough objects to satisfy the ends of an individual with independence and initiative.

Awaiting the statement of the Formal point-of-view, the analytic pattern thus far is



CHAPTER VI

The Formal Point-of-View

THE third analytic point-of-view which has been suggested is perhaps the most difficult of the three. While it is true that in describing a pattern for the Individual and the Material aspects, we have not been dividing experience, but rather have been naming and defining certain characteristics or factors which can be observed in action, yet the names which we have used do appear to have some reference to things. There *are* physical men and social groups, the world of nature and objects called "property" are familiar designations. On the other hand, the purposes of analysis are defeated if it is once assumed that analytic categories are meant to indicate anything more than systematic elements in the thinking process—categories which may or may not refer directly to objects or things. But it is hard to refrain from associating our

analytic categories with actual objects, as a matter of fact, we undoubtedly tend to select names for categories which already convey to us some sense of the analytic factor we are trying to designate

However objective we try to be in formulating a pattern of analysis, there will inevitably arise this association of our analytic categories with real or actual things. Furthermore, there is most certainly a limit to the degree of objectivity that can be maintained in analysis. Either our thinking and analysis are about things—in which case we simply assume that there is some relation between analytic categories and so-called reality—or we ride a metaphysical merry-go-round and get off exactly where we got on. Analytic categories have a more or less direct connection with reality, or we are not thinking about reality. Of course, the words or terms we use to designate these factors of activity and experience may vary almost without limit, but it matters little whether we call a category “Physical Man” or “Individual—Level I”, both terms refer to the same essential factor of analysis. An adequate analysis must manifest such direct connection with the stuff of experience, it must include all possible objects, but not assume any objects which are not actually observable factors in a meaning-situation. This assumption that categories do have a real and objective reference is, however, as far as analysis can go in establishing the reality of those categories. The cathartic of rationality in analysis is the insistence that any pattern of analysis is *only* a pattern of thought and action, although categories may be representative of factual observations, the sys-

tematic pattern for integrating these categories is a product of thought and is not to be interpreted as observed in or derived from reality

Thus far, little difficulty has appeared on this score. The six analytic categories we have named do relate directly to observable factors of experience. It has not been our concern so much to justify the existence of the categories as to determine what it is they comprehend, in order to discover what characteristics must be taken into account in a complete analysis. With regard to the Formal aspect, however, this reference to experience is not quite so obvious. We have spoken repeatedly of the *pattern* of analysis, and yet have defined the Formal point-of-view as concerned with the *planning* aspect of analysis. The similarity of *plan* and *pattern* is undoubtedly confusing, and the establishment of the Formal as a necessary point-of-view in analysis will depend upon the description to follow. It might help to avoid the difficulty of conceiving the Formal as a plan-of-a-pattern, if Formal analysis could be thought of as the *ordering* of thought and action—order in the sense of continuity and consistency.

The drawing of plans for a building is itself a specific aspect of the whole problem of construction. The planning is distinguishable from the other equally important considerations of the purpose for building and the material to be used. The planning must be co-ordinated with these factors, of course, but the skill and technique required for drafting the plans are not ordinarily evidenced by the person who wants the building nor by those who provide materials for it, otherwise, there would be no need

for architects. Without such plan and design, the erection of the building would be difficult and haphazard, the use of materials probably not to the best advantage, and the final realization of purpose doubtful. The same situation exists with regard to the operation of thought. In the absence of a plan for the co-ordination of materials and purpose in action, the process of thought will inevitably be haphazard and unreliable. The planning is itself a separate aspect of analysis, though its final end is integration with the purposive and material points-of-view.

The aim of a plan is, then, to lay down certain requirements of structure which will make possible the most efficient utilization of materials as well as the most complete realization of purpose. A plan is, thus, a system of order or organization, and the Formal is the systematic aspect of analysis. While it is true that the pattern of analysis is itself a kind of system, there are more specific areas in which the nature of system itself is the primary concern. The distinction here is between system as a means or technique of analysis, and system as a subject of analysis. There are in thought three major areas in which system is studied as subject matter, where emphasis is placed upon the possibility and manner of organizing rather than upon what is subjected to organization. These three areas of systematization are Mathematics and Logic, Language, and Law, it seems appropriate to take these three as the categories of the Formal point-of-view. From an examination of Formal categories, it is to be expected that some suggestions will follow as to the essential characteristics of this point-of-view in analysis.

MATHEMATICS AND LOGIC AND THE CONCEPT
OF CONSISTENCY

Mathematics and *Logic* are selected as constituting the first category of the Formal because they represent the minimum requirement of order or organization. The defining concept for Mathematics and Logic is Consistency, in the absence of which order is inconceivable. Consistency may be said to be the ultimate criterion of mathematical and logical systems, whether or not we can say that Mathematics and Logic are the most systematized forms of knowledge, it can certainly be affirmed that they are the most consistent. The maintenance of this maximum degree of consistency is, as a matter of fact, the essential function of Mathematics and Logic. An understanding of how it is that Mathematics and Logic achieve a satisfactory degree of Consistency is of importance in the description of the Formal point-of-view.

The absolute Consistency demanded by mathematical system—a consistency in which $2 + 2$ is invariably and eternally 4—is possible only because Mathematics is willing to fulfill two procedural requirements which impose limitations upon the area of mathematical analysis. The first of these requirements is that the terms or symbols used by Mathematics evidence as little objective or factual reference as it is possible to maintain. We have already noted the inevitable factual reference of any terms or categories which we might choose, but it is the function of mathematical analysis to reduce this external reference to a minimum. Experience does not evidence any two objects

so identical that the formula $2 + 2 = 4$ would apply in an exact mathematical sense. It does not clarify the nature of Mathematics to call this process *abstraction*, this suggests once again the artificiality of distinguishing analysis and synthesis as separable thought processes. It is extremely questionable whether thought manifests separable functions of "abstraction" and "generalization", it is certainly difficult to define either of these functions without involving the other, much less to practice one to the exclusion of the other. It makes little difference whether we say that mathematical symbols represent the highest stage of abstraction or the highest degree of generalization. Nothing concrete meets the mathematical demands of $2 + 2 = 4$, yet, in another sense, everything concrete is comprehended by the general formula of $2 + 2 = 4$.

Mathematics thus makes the sacrifice of direct or immediate reference to objects in order to attain a Consistency that would be impossible if that reference were maintained. In this way, Mathematics may say that all the angles of a triangle are equal to two right angles, while under the category of Physical Man it could never be claimed that all individuals have ten fingers, ten toes, and thirty-two teeth. The precision of description in regard to subject matter which Mathematics is able to achieve by this indirection of reference is the prerequisite of the kind of absolute Consistency demanded by the formal systematization of mathematical analysis.

The same indirectness of reference also characterizes the structure of formal Logic, although the symbols used are usually somewhat different from those of Mathematics.

If we are using the so-called Aristotelian system of logic, for example, we can say that if M is S and P is M , then P is S . Exploring further the purely systematic implications of logical structure, we can define the converse, obverse, and contrapositive of a given proposition in terms of the symbols S and P . As in Mathematics, the purpose of logical structure is to maintain Consistency, and this depends, to some extent, upon the degree of abstractness or generality of the symbols used in the system.

The second requirement which Mathematics and Logic must satisfy is that of maintaining continuity in operational procedure. The operators with which Mathematics relates and manipulates its symbols must be as precisely and rigidly defined as are the symbols themselves, else Consistency would be dissipated in the discontinuity of mathematical operation. Whatever may be the process of defining mathematical symbols, it is evident that no systematic structure is possible in the absence of precise procedural rules for the relating of those symbols. The dual definition of symbols and operators constitutes the subject matter of Mathematics and Logic.

The question of whether or not mathematical definition is arbitrary is of some importance in the description of Formal analysis. What appears to be the most common view of Mathematics is that which contends that the definitions of Mathematics are wholly arbitrary. According to this view, internal consistency is the only criterion of mathematical analysis, any set of symbols and operators whatever may be chosen and defined. The evaluation of any particular mathematical system is then

solely in terms of the consistency it maintains in the manipulation of its symbols. Any mathematical—or logical—system is, then, as good and as valid as any other. This view, however, does not seem to do justice to Mathematics as an area of analysis.

In the first place, there is an obvious ambiguity in the term “arbitrary.” It is hard to conceive of a system of any kind which is literally arbitrary. What seems to be meant is rather that mathematical symbols and operators need not be intentionally or deliberately defined with regard to their objective reference. But this is exactly how we have already defined the so-called abstraction of Mathematics, which we saw was inseparable in function from generalization. If by “arbitrary” is meant a high degree of abstraction-generalization, then we may well agree that Mathematics is arbitrary, but this does not alter the essential nature of the process of abstraction-generalization. The intensity of abstraction-generalization, to whatever degree it may be carried in a particular mathematical or logical system, is not a measure nor an indication of arbitrariness.

This misunderstanding of the nature of Mathematics seems to arise from a failure to distinguish between analysis and what might well be called *play*. Illustrations of the arbitrariness of mathematical definitions usually refer to the possibility, within a given mathematical system, of playing with the content of that system in an almost wholly arbitrary manner. Thus, the definitions of Euclidean geometry may all be reversed, and a consistent system constructed on the basis of those contradictory postulates.

Certainly, the mathematician may amuse himself by thus playing with mathematical systems, but it is not essentially different from the play with language which we call nonsense. True also, while I am playing with language, I may perhaps chance upon a happy conjunction of syllables which I think would make a useful word in sensible language, just as the mathematician at play may not only increase his skill, but even add to his knowledge of mathematical functions

A great stimulus to the argument for the arbitrariness of mathematical definitions was derived from Einstein's use of Riemannian geometry. Here, apparently, was a demonstration of the function of Mathematics as quite arbitrary and completely "abstract," for Riemannian geometry was developed as a system without any reference whatever except the reference of internal consistency. But, in the first place, it must be remembered that the definitions of Riemannian geometry are all *consistent* alterations of the definitions of Euclidean geometry. Secondly, and of more importance, the case in point is not a proof, but simply an instance of bad reasoning by analogy. An expert at chess who has become an army officer may sometimes see in the formation of his troops a pattern analogous to that of a position in chess. He may even proceed to manipulate his troops as he would chessmen—drawing analogies between infantry and pawns, tanks and knights, aircraft and bishops. Personally, I would rather not serve under an officer whose only knowledge of military maneuvers came from the analogies he could imagine between troop movements and the games he had at some

time played. Nor does it appear fruitful that the systematic organization of scientific data should have to depend on mathematical systems which have been constructed in the arbitrary method peculiar to play. The contention that a mathematical or logical system is arbitrary, in the sense that the only limitation on its structure and content is that of internal consistency, places science and thought in the predicament of having to choose, among available mathematical and logical systems, that one which appears most suitable to the immediate demands of scientific data. To indulge in a bad analogy ourselves, it is the difference between ordering the phonograph record one wants or being satisfied with what the local dealer has in stock. But tastes are somewhat more adaptable than data, and science cannot be adapted to a ready-made system without changing the nature of the data—and this denies the very function of scientific experimentation. If science is forced to use whatever mathematical system comes closest to fitting particular scientific data, then scientific data must be accommodated to the mathematical system, and science will in the long run be subservient to the ingenuity of mathematical play.

This is by no means to discount the importance, as well as the fun, of play. The uninhibited curiosity of play and puzzling is undoubtedly the source of some of the most significant stimulations, hints, hypotheses, and chance discoveries in every field of activity. However productive play may be, it is nevertheless distinguishable from analysis, it is as important to maintain the distinction between mathematical play and analysis as it is to distinguish

between the normal function of physical play and the analysis of fitness in Physical Man. In defining Mathematics and Logic as a category of the Formal point-of-view, we are interested in Mathematics and Logic as essential elements in the pattern of analysis for thought and action, not in Mathematics and Logic as creative games. We cannot here admit to Mathematics or Logic any greater degree of abstraction, independence, arbitrariness, or subjectivity than is characteristic of other analytic categories. To repeat, there is an inescapable assumption of objective reference which characterizes each specific category, including Mathematics and Logic, but this objectivity of reference cannot be interpreted as applying to the system or pattern of analysis which relates the separate categories. There "are" physical men, persons, natural objects, and mathematical continuity, but points-of-view and their relation are the product of deliberative thought.

The Consistency epitomized in Mathematics and Logic is clearly an essential element in the analysis of experience. The continuity of individual action depends upon the recognition of a high degree of Consistency in the nature of material things, individuals, and social groups—in short, continuity and consistency are as much the product of observation as are the categories of the Individual and Material points-of-view. My assurance that the sun will rise tomorrow morning, that my house will be on the same corner when I come home, that a book will be in its place, that my dog will recognize me, that my friend will call as expected—all these result from the same process of abstraction-generalization which, together with observation, is

productive of all analytic categories. The neglect of Consistency in analysis would involve an almost complete discontinuity of thought and action, as a matter of fact, it is so difficult to conceive thought and action as disparate and disconnected that the Formal categories are clearly necessary to the pattern of analysis. Analysis, however, must define the Consistency which it embodies, not merely assume a continuity of fact, else the limitations of formal systems will not be clear and the contribution of Formal analysis to action not understood. The order which is the ultimate concern of the Formal point-of-view is not the product of mere assumption, ordering is an analytic function.

If Formal order is to be analytically verifiable, rather than assumed or postulated, then that order must be grounded in measurement. Inference of continuity and maintenance of consistency in thought and action are possible only in terms of a formal system, the symbols of which are sufficiently precise to justify inferences of identity, difference, cause, and other such relations. We have seen that mathematical and logical symbols maintain such precision only through the indirectness of their external reference. So, while $2 + 2$ is in Mathematics always 4, the "four" which would result from the addition of two men and two men would by no means be the exact, precise 4 of the mathematical system. The Consistency of Mathematics and Logic is not, however, entirely dissipated when the mathematical or logical system is applied—that is, when direct rather than indirect relations are established between mathematical or logical symbols and objects

Two apples and two apples are still four apples, even though the first two may differ from the second two in color, weight, and taste. The law of falling bodies operates with some degree of consistency, even though it is unlikely that any body will ever be found which operates with the degree of precision embodied in the mathematical formula which states the law. Likewise, grave difficulties are encountered when the symbols of formal logic are translated into meaningful terms which refer directly to objects. Suppose I substitute *Democratic Party* for *M*, *Senate Bill No 432* for *S*, and *John Smith* for *P*. The syllogism will then read

The Democratic Party is in favor of Senate Bill No 432,
John Smith is a member of the Democratic Party,
Therefore John Smith is in favor of Senate Bill No 432

John Smith might well object to this easy disposal of the possibility of being a member of the party and yet opposing a party measure. Considerable adjustment is necessary in order to arrive at a valid conclusion when referential terms are used. The middle term *Democratic Party* must be used in the same sense in both premises, and while in the logical system it can be assumed that all *M*'s are *S*'s, it certainly cannot be assumed that all Democrats will favor a particular bill. In short, the application of the formal system to experience represents an approximation of the degree of Consistency maintained in Mathematics and Logic, and the function of Formal analysis must be that of achieving the highest possible degree of approximation to formal Consistency.

This recognition of the function of formal systems in

analysis is the only relief from Hume's otherwise devastating criticism namely, that the relation of cause and effect can never be proved to be more than our tendency to assume such connections between things associated by succession or contiguity. Hume did not deny that such assumptions of continuity are necessary to the very existence of thought and action, as a matter of fact, he admitted the psychological necessity of Consistency. But if the Consistency of experience is only the result of association and habit, then Consistency and continuity are not analytic factors of thought. Now, it is unquestionably the case that much of what we assume to be the ground of continuity in experience is little more than habit and association. My dog has, for example, an established association between his leash and taking a walk. So firmly fixed has this become that if I happen casually to move his leash, the resulting jingle arouses his expectations of a walk. Even in his rudimentary pattern of action, however, the process of association is not simple, for he does not respond vigorously to a movement of the leash unless he sees that I have on a hat and coat. However complex his pattern, it is still doubtful that the Consistency upon which he bases his expectations has any ground other than that of repetition and habit. On the other hand, a rational man has reasons other than habit and repetition for expecting that the sun will rise in the east tomorrow morning, that the ball he throws up will come down, that the medicine prescribed will relieve his pain.

The Consistency grounded in Mathematics and Logic contributes to thought and action the analytic qualities of

reliable and verifiable measurement and expectation. Habit is verifiable only by repetition, and this is not systematic but haphazard continuity. The ordering of thought with which the Formal point-of-view is concerned is possible only through the recognition and definition of the characteristics and limitations of mathematical consistency, and through the determination of the degree to which that consistency can be approximated in the application of the mathematical system to problems of action.

LANGUAGE AND THE CONCEPT OF AGREEMENT

The realization of order necessitates something more than Consistency. We have already noted the symbolic nature of formal systems, and it appeared that in Mathematics and Logic these symbols have only an indirect reference to the objects of experience. Thus, there is almost unlimited leeway in the selection of those symbols, as long as they maintain a consistent relation to one another. There is a symbol for "two" and a symbol for "plus," but the particular style of the symbol is almost wholly arbitrary. A sign like "8" could just as well have stood for "two", we simply agree that within a particular mathematical system the symbol "2" will always represent a designated concept. Of course, even the mathematician finds it expedient to adopt symbols which will facilitate manipulation.

The indirect reference to objects which characterizes Mathematics and Logic makes it possible for the mathematical and the logical systems to maintain somewhat more independence than is evidenced by any other cate-

gory. This independence is possible, however, only for the mathematical or logical *system* itself, that is, the independence is an internal one. When attention is turned to the nature and function of Mathematics and Logic in terms of ordering experience and action, Mathematics and Logic must contribute something more than mere internal consistency. Mathematics enables us to measure with some degree of precision the objects of experience, but action involves more than mere measurement. When a formal system, such as Mathematics, is applied to objects, the application itself must be consistent. This consistency in application is something more than formal internal consistency. Some understanding of the nature of the objects to which mathematical consistency applies is necessary, or the precision contributed by Mathematics cannot be carried over to the observation of objects. For example, if any exact solar observations are to be made, it is absolutely necessary to assume that the sun which rises today is the same sun which rose yesterday, and while at first glance this may appear too trivial to remark, it is by no means a casual identification which is made. It implies that the symbol "sun" is accepted as referring to one object only, some other symbols may be accepted as referring to a variety of objects. It is upon the acceptance of some such continuity in the experience of objects that the use of Mathematics in reference to those objects is possible. But it is important to note that the consistency which we assume to be characteristic of the objects of our experience is by no means the same sort of consistency as that evidenced by a mathematical system. The epistemological problems

which are involved in our assumption of consistency in the objects of experience are too far afield to invite attention here, it is sufficient for our purposes to understand that the application of a mathematical system to the objects of experience necessitates an assumption or agreement as to the nature and continuity of those objects

What this implies is that when there is agreement to refer or apply a formal system to the objects of experience, the system becomes a *Language*. This second category of the Formal point-of-view raises the problem of what is involved in the kind of *Agreement* which characterizes Language. Certainly we are not speaking here of the conscious, deliberate agreement involved in a contract between two or more persons. Action and experience necessitate the intercourse made possible by Language, and it is hardly correct to say that I "agree" to use the language common to the group or society within which I act. Rather, I am in this respect at all times subject to the pressure of conformity, effective action is possible only if this concession to an accepted Language is made. As a matter of fact, I could not even think or act in the most private manner unless I accepted some uniform system of symbols, and no matter how private or unique those symbols might be, they would indicate an agreement upon a system of Language. Agreement is, then, a Formal demand of thought and action, not an Individual or Material factor. The process of Agreement which results in a systematic set of symbols referring directly to objects is the subject of observation at the second level of the Formal point-of-view

Language is, thus, not simply a method of communication between persons, it is an essential category of analysis and thought. If we can imagine a primitive man without contact with other men, we must assume that he has some method of maintaining Agreement in his thought and action, and he does this by a process of symbolic or linguistic identification, however rudimentary it may be. Language makes possible some degree of Consistency in the ordering of experience, but, of course, Language can never achieve the precise Consistency of Mathematics, because the linguistic system must maintain direct reference to the objects it symbolizes. This is evidenced in the nature of the symbols employed by language. Primitive language was pictorial in nature, the symbol was merely a crude drawing of the object that it was intended to identify. When language is extended to cover many objects and relations, such picturization becomes too complicated and unwieldy, and men begin to conventionalize their symbols. Through this long process of conventionalization have developed the various alphabets. It is probable that even vocal symbols were originally onomatopoeic, the sound representing in tonal quality an imitation of the object to which it referred. It is amusing to see how much meaning can be conveyed by tone and modulation of the voice without actually speaking a word. In such words as *screech*, *rustle*, *bark*, *hurl*, *buzz*, and *jitter*, the original imitation is largely preserved. The language by means of which we talk to animals is almost wholly made up of elementary gesture picturizations and tonal suggestions. One of my young friends delights in talking to my dog in soothing,

caressing tones, actually saying all the while that he is a pest, a nuisance, and a general canine disgrace—and to these pleasant-sounding words which are outside his limited vocabulary, the dog wags an appreciative tail. Demagogues and propagandists have found men often inclined to such casual and primitive acceptance of the sound and fury of their words as denoting force and sincerity.

However interesting the problems of linguistic origins, the importance for analysis lies not in the particular form taken by linguistic symbols, but in the fact that they do represent something, and that their form is accepted by agreement within a certain area. I choose English symbols to communicate with a certain audience, but the language symbols of German and French are quite as adequate representations and refer to the same objects. Apart from the requirement that they represent objects and relations adequately, the only other demand is that language symbols be possible of as easy manipulation as is consistent with that adequate representation. This much seems clear that thinking in an analytic sense implies the use of symbols which constitute a Language, a formal system the use of which depends upon Agreement. Whatever kind of immediate or feeling experience may be considered possible, the continuity and order essential to analysis can be maintained only within a Formal system.

The difficulty in maintaining clarity in language symbols is a continual problem for Formal analysis. Language must represent objects as directly as possible, and yet the process of conventionalizing symbols soon becomes so complex that most of our linguistic symbols have little

representative character left to remind us of the original objects to which they referred. Whereas the first symbol for *house* was undoubtedly a crude picturization of an actual house, our symbol "house" certainly gives no indication from its appearance of the nature of the object which it represents. The danger is, of course, that we may forget the nature of the objects and simply manipulate symbols. Not entirely facetious is the remark that it is possible to talk almost endlessly, using the symbols of a language, and yet never "say" anything.

So much the worse does the problem appear when we consider that symbols represent not only actual but conceivable objects, and especially the relations between objects. The resulting ambiguity and complexity of language provide some of the most fertile soil for the cultivation of propaganda. Because our system of symbols is so complex and not directly associated with the objects which it is meant to represent, we have a tendency to think *within* rather than *with* the system of symbols which constitutes our Language. That is, we allow ourselves to be limited in our thinking by the system of language or symbols, instead of understanding language as a means or technique which enables us to state and relate purpose and material. When we thus accept the language symbol as itself an object, rather than simply the symbol of an object, the relations and meaning which we derive from the use of that language are largely restricted to the language system itself. Thus, certain associations and relations become fixed, mainly because we have become acquainted with two symbols at the same time or

because they have often appeared together in the symbolic system. Even such an innocuous symbol as "red" may become so related within our language system that when a propagandist calls a man a "Red," we may react immediately and viciously before knowing anything at all about the real object—namely, the man symbolized as "Red."

This ignorance of the function of Language and its symbols is a veritable playground for the propagandist. If he can only discover what symbols we like and what symbols we don't like, it is simple to refer henceforth to the things he wants us to like by attaching to those objects the symbols we like. Then, sheeplike, we give our affections to the propagandist's objects without looking at or investigating the actual nature of the object he is symbolizing for us. Many a man has been publicly condemned simply because his opponent managed to establish an association between his name and some symbol which carried derogatory associations for most people. An indulgence in this linguistic trick beyond the limits of playfulness is a characteristic feature of one of the major United States news weeklies. Casual survey of one recent issue discloses the following unnecessary, but by no means innocuous, linguistic editorials. "snub-faced Dr. —," "saloon-frequenting boss —," "crusty, crusading Columnist —," "bumbling Mr. —," "waspish little —," "ubiquitous Dr. —," "ruddy and rambunctious —," "hard-bitten —," "full-lipped —," "suave, cool —," "short, kewpie-faced —," as well as such descriptive verbs as "crowed," "sour-graped," and "chimed."

Clarification of the reference of the words which constitute Language is possible only by the method of Agreement, but it must be repeated that Formal Agreement is not simply a "meeting of minds," not an individual function. The Agreement necessary to the constitution of a Language is formal in the sense that it is systematic, Language can be nothing less than a system. Here arise all the problems of logic and epistemology as to what constitutes valid method in the manipulation of symbols, how to establish and verify the reference of symbols, and the definition of such concepts as truth, proof, experiment, and classification. Such an analysis of Language will be a description of the Agreement necessary to maintain the Consistency of a Formal system when applied directly to objects. In its simplest form, the consistency of Language is maintained by using symbols only in the sense agreed upon within a certain language, no formal consistency is possible if, for example, "democrat" and "Democrat" are used as identical symbols, or if the reference of such terms as "reign," "ram," and "rein" is not made clear in their usage. Certainly one of the most common experiences of conversation and argument is the discovery that there is so much disparity in the understanding and use of terms employed by the two opposing views that the speakers have literally not been talking about the same objects at all. Carelessness in the use of language is productive of more heat than light in discussion.

The integration of analysis is impossible unless a degree of the Consistency maintained by Mathematics is carried over into Language, and the transition from Mathematics

to Language is through Agreement. The basis of this Agreement, which is the very essence of Language, is largely the product of custom and convention. Systems of grammar, as well as the objective references of words, are for most of us almost wholly a matter of accepted usage—an acceptance which we adopt along with other conventions of our particular society. There is nothing strange in the fact that most rules of grammar have appended to their statement a long list of “exceptions.” The grammarian cannot be mathematical in his procedure, for the final criterion of a linguistic structure is not Consistency, but Agreement—that is, an agreement of usage in regard to the form and reference of the word. Whenever a slang or colloquial expression comes to be generally accepted and used, it is *ipso facto* linguistically correct, yesterday’s slang is tomorrow’s good usage. It is the task of the grammarian to make this difficult decision as to whether or not questionable words and structures have achieved enough Agreement in usage to be accepted within the structure of a particular language. The compilation of a dictionary, for instance, involves a search of the sources of written and spoken language in order to determine the accepted definitions of words. No individual decides arbitrarily what shall be the accepted definition, meaning, or use, nor is it only a matter of the number of people who know and use the words. Conversely, words which drop out of usage through some tacit, non-individual agreement, become first rare and then obsolete. Language is, by comparison with Mathematics, a veritable Topsy which just “grewed.” There is, in short, a very real difference be-

tween the deliberative Individual process of compromise and the Formal process of Agreement

The growth of Language is not, however, as haphazard and accidental as this important aspect of its nature would seem to imply. We have already noted that even a solitary individual needs a *system* to maintain continuity in his own thought, he has to agree with himself on the nature of objects and relations from one instant to the next. The Formal or systematic aspect of analysis is not yet complete, however. As with the two points-of-view previously described, another category is necessary to establish and maintain the relation of Mathematics and Logic to Language. This final integrating factor of the Formal point-of-view is clarified when we understand what the Formal aspect contributes to the pattern of analysis

LAW AND THE PRINCIPLE OF EQUALITY

It has already been suggested that the concern of Formal analysis is the ordering of thought and action, and order is the concept which best conveys the function of co-ordinating Consistency and Agreement. As Person represents the most complete relation of man and society, and as State is the most comprehensive category of the Material aspect, so does Law as the final category of the Formal suggest the integration and co-ordination of Mathematics and Logic with Language. By "Law" is meant, of course, the analytic category or concept of order, not a specific statute or legislated act, although instances of statutory law should evidence the pattern described by the Formal point-of-view. It is not to be expected that final Agreement and

perfect Consistency will be achieved in Law, but this does not in the least affect the status of the category of Law as a necessary factor in analysis. The Person is never completely integrated, nor does the State ever provide all possible materials for use, but the categories represent for analysis the essential nature of the factors involved

In the history of legal thought, three major interpretations of the category of Law have developed, it is significant that they can be described in terms of the three levels or categories of the Formal point-of-view as it has been stated.¹ One of these schools of jurisprudence is known as the Analytical, or Austinian, after John Austin (1790-1859). Austin was interested in emphasizing the necessity for Consistency and precision in Law, and the Analytical school describes law in terms of codification. That is, law must be stated in precise, self-consistent codes, the task of the judge is then simply that of interpreting the code and applying it to the particular case which comes before the bar. Certainly, we have recognized that order must include Consistency, and it is true that Law in the sense of statutory enactment must be reduced to codified form. But the difficulty with the Analytical view is that it makes no provision for satisfying the second category of Agreement. However consistent the legal code may be, there is still a problem as to why men should accept and obey the law. On this question of the source of the imperative in law, Austin can suggest nothing better than that the sovereign is the source of the law, that the legisla-

¹ For a more detailed statement of the formalism of legal theory, see Appendix III

tor is, in reality, the agent of the sovereign, and therefore that the judge accepts and interprets the will of the sovereign. Of course, this does not satisfy the demand for Agreement, especially since Austin is not successful in defining what he means by "sovereign." It is clear that the definition of law will depend largely upon whether the sovereign is conceived as the whole people, as a representative body, or as a monarch. At one point Austin does, in fact, say that the whole body of the people cannot possibly be conceived as the sovereign, so it is difficult to imagine how Analytical jurisprudence could insure Agreement.

Satisfaction of the first category of Formal analysis would, indeed, contribute Consistency to the law, but, as we saw in the case of Mathematics and Logic, it would be Consistency at the expense of reference to experience and action. No doubt such a precise and consistent legal code could be formulated, but such a mathematical code could not be applied in action. The legal code, like the mathematical system, would have to compromise its Consistency in application. Even if legal codes and mathematical systems were admitted to be possible of construction by fiat, the Agreement necessary to formal systems in action could not be thus produced by dicta, no legal, judicial, or dictatorial dictum can achieve Agreement.

The so-called Historical school of jurists points out the significance of another aspect of law which does satisfy the category of Language and Agreement. From the legal or civil standpoint, Agreement takes the form of custom. It is, indeed, true that custom is stronger than statutory law,

and that when there is a conflict between the two, the code must eventually give way. Custom represents the highest degree of agreement reached by men, it represents a procedure in activity so generally accepted that it is most difficult for any of us to resist. As a matter of fact, it may be argued that the final effectiveness of law is realized only when it achieves the self-enforcing status of custom.

Not all the representatives of the Historical school are content to rest their argument on a sociological description of the nature of custom. The effort of Georges Gurvitch (*L'Idée du Droit Social*, Paris, 1932) to establish the source of ultimate agreement, and thus the imperative of law, in a "normative fact" is a profound analysis of this second category of the Formal point-of-view. Unfortunately, Gurvitch does not succeed in defining his *fait normatif* with any great clarity. At times it seems that he is identifying it with some institutional aspect of analysis, but if this is the case, then he betrays the analytic fallacy which confuses categories by trying to reduce one analytic factor to the terms of another. Law cannot be described in terms of the State, nor in terms of lesser institutions, nor yet in terms of the Person. Law is the integrating category of the Formal point-of-view and cannot be defined by methods appropriate to Individual or Material analysis.

The third theory of jurisprudence which attempts to describe Law calls itself the Philosophical or, more correctly, the Sociological school of jurisprudence. This statement of the Formal point-of-view analyzes Law with the method and terms of Individual analysis, as the term "sociological" implies. The Sociological school places

emphasis upon the interpretation of law to suit the particular or *individual* case, fails to recognize the nature of essential Consistency, and interprets Agreement in terms of expediency or Social Group Communication. The result of such an analysis of law is that it makes the judge not an interpreter of the law (for there is really no Law under such an analysis), but rather an officious arbiter whose decisions depend upon his notion of what appears most suitable to the occasion. He is thus not a judge of Law, but a judge of individuals. The fiction that cases are determined by precedent does not affect this procedure, for any lawyer knows that contradictory precedents can be found to validate or invalidate almost any kind of decision. The demand for Consistency is not appeased by so obvious a fiction. The manner in which such a legal system operates is observable in the judicial procedure of the United States. It is literally true that in our courts the result of a case depends more upon the judge's character, opinion, and temperament, and upon social pressure than upon any factors of Consistency or Agreement in the law itself. When law is what the judges say it is, the Formal aspect is being denied its analytic importance, and there is no Law.

How, then, can Consistency and Agreement be combined to contribute order and plan to our integration of purpose and material? It was evident that the final categories of the other two analytic points-of-view demanded some principle of co-ordination, and the same may be assumed to be the case with regard to Formal analysis. The categories of Mathematics-Logic and Language indicate that Consistency and Agreement are necessary factors of

Formal order, but how to integrate the two in the systematic category of Law is a problem which seems to baffle even legal theory, for there is no adequate statement of a theory of law which recognizes the essential nature of all three categories

In practice, it seems that the principle by means of which we attain order through Law is that of *Equality*. As with Liberty and Security, Equality is a principle, it is not an analytic observation or inference, but a principle for the integration of analysis. It is a concept by means of which we hope to realize most effectively the possibilities indicated by the Formal point-of-view. From our foregoing description, it seems clear that any principle which will serve to integrate Law from an analytic point-of-view will have to include the notion of Equality. Unless Law guarantees an equality of order and plan to the Individual and Material aspects of experience, it is not an adequate representation of Formal analysis. There may be dictates of dictators, and statutes of states, and legislations of legislatures, but only a system which maintains Consistency through Agreement—which achieves Equality—is Law

The end or principle of Law, as the effective system of order in society, is Equality—that is, equity or justice. It is only as meaning the legal distribution of justice that the concept of equality makes sense, much confusion has been engendered by the attempt to interpret equality as the principle of Individual integration. It is significant in this connection to note the three forms which legal procedure assumes in its attempt to perform this continual and diffi-

cult task of integrating formal order in social organization. One large segment of the law consists of a body of rules reduced as nearly as is possible to mathematical Consistency. This part of the law comprises the codes and statutes which are framed in such wide terms of abstraction-generalization that they fit individual cases only through application by the court in particular cases. The law, however, strives to maintain Consistency even in cases which have not been reduced to codified form, this is done through application of the rule of precedent, *stare decisis*. It is true that the attempt to establish precedents sometimes involves the law in absurdities, but the regard for continuity is, nevertheless, in principle a praiseworthy effort to maintain Consistency in Law.

The procedure of law also makes full allowance for the recognition of Agreement as an essential element in the Formal point-of-view. Thus, custom is admitted as one of the major sources of law, and that which is proved to be customary may override both precedent and code. Further, in cases in which there appears no precedent or code which can be applied, the court is likely to decide the issue on the basis of what a "reasonable" or "prudent" man would have done under the same circumstances. This hypothetical "reasonable man" is the court's definition of what society would agree upon in regard to this particular act, in much the same manner that the lexicographer's definition of a word is his judgment of agreement on usage.

Aristotle remarked ² upon the necessity of some pro-

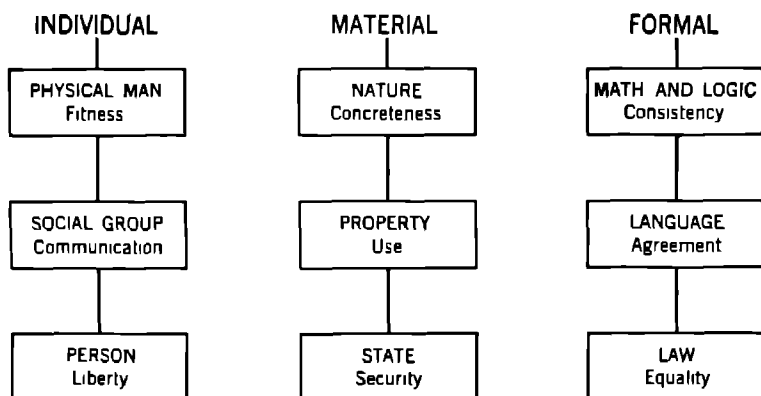
² *Nicomachean Ethics*, Bk. V

cedure in law which would correct the defects arising from the universal statement which law normally assumes. That is, the law must be applied, and application is seldom an easy translation of universal to particular. Nor is it always possible to determine a given case on the ground of what is agreed upon, for the action may be outside the range of what is customary and accepted. In such a case, then, the court must make its decision in terms of some principle of Law, and in English and American jurisprudence this principle has been called "equity." This, as Aristotle points out, is not a decision as to what is reasonable or customary, but rather a judgment as to what a legislator would have put into a law in regard to this particular case, or how he would interpret the law if called upon to do so in this particular instance. In short, equity represents the interpretation of the meaning of law when there is an absence of sufficient Consistency and Agreement to give ground to the decision, but it is an interpretation which, at the same time, intends to include and integrate both these necessary elements within the final structure of Law.

Consistency and Agreement are not likely to be adjusted in any final integration of the Formal point-of-view unless they are brought together by some principle of co-ordination, a value principle which is itself not analytic in derivation. The justice or Equality which is the aim of Law is not an analytic fact, nor a description of fact, it is an ideal, an end which has as its purpose the integration of two recognizable elements or categories of the Formal point-of-view in analysis. Once more, it must be repeated

that the analytic justification of the principle will depend upon the degree to which it achieves that integration. The justification of a value, which is distinct from analysis, will depend upon the extent to which a principle makes possible the realization and implementation of the ends and purposes of individuals in society. The principle of Equality is the value selected by democracy as the means of achieving order under Law in social organization.

The completed pattern of analysis may now be assembled as a background before going on to a further discussion of the function of the pattern in co-ordinating specialized fields of knowledge



PART II

Analysis and the Sciences

CHAPTER VII

The Relation of Material and Formal

WE HAVE now completed the description and documentation of a possible pattern for analysis. Now what shall we, or more pertinently, what can we do with it? Let us hope that it is not like Aunt Prissy's parlor, too clean and neat for everyday use, nor yet like the Old Soak's "little dee-vice," which never got beyond the stage of wishful thinking. It is easy to adopt Omar Khayyam's defeatism, to lament with him

Ah Love! could you and I with Him conspire
To grasp this sorry Scheme of Things entire,
Would not we shatter it to bits—and then
Re-mould it nearer to the Heart's desire!

The heart is, indeed, a most interesting and valuable portion of man's anatomy, but its relation to analysis is indirect

and its value as a guide for action dubious. While not discounting the important and inevitable function of feeling and emotion, we are not concerned here to investigate their operation, there is an unbridgeable gap between poetry and activity, the gap between man's reach and his grasp. Even Plato, himself a poet, had to admit that the "mund" gave evidence of three essential parts, which were not always in harmony. He described it allegorically as a chariot drawn by two winged horses, one representing the dashing pull of *desire*, the other the steadier drawing of *spirit*. Both steeds must be controlled by the driver of the chariot, symbol of the rational element in man. It is with the rational or analytic capacity that we are almost wholly concerned, to describe analysis as a method of control. The maintenance of such control is our only assurance that others will not whip our desire and spirit into headlong rushes which might upset both chariot and driver.

Even to the point of tedium, it must be repeated that our pattern is analytic, it is not metaphysical, "realistic," pictorial, or absolute. The moment it is forgotten that analysis is a pattern, a method of observing and integrating, confusion will inevitably arise. There is a distinction between *what* we know and *how* we know; we cannot afford to forget the distinction, for it is the very ground of sanity in analysis. What the relation may be between the *what* and the *how* is a more specialized problem in which the field of epistemology is primarily interested. As far as analysis is concerned, the categories we have de-

scribed are symbols defined and adjusted by thought. We are, thus, concentrating upon the *how* of thought

THE CLASSIFICATION OF THE SCIENCES

The categories included in our pattern of analysis have been identified and defined—briefly, it is true, but sufficiently to indicate the factors of analysis which they suggest. This limited number of categories necessitates the use of very broad and general terms, for to propose a large number of more specific categories would make more difficult the comprehension of their nature and relation. The nine categories which represent the three analytic points-of-view have been considered as expressive of the factors of rational analysis. The specific facts, data, and observations of experience should, then, be possible of classification within this system of categories, and no information which is not classified in some systematic fashion will be available for use in action. Any pattern of analysis, or any system of categories for the classification of knowledge, is simply a suggestion for the arrangement of the data of experience. The pattern of analysis must not be imposed upon the nature of things, the scheme of analysis is not a scheme of objects, but a pattern of thought or classification. As we were forced to admit that the integration of analytic points-of-view is possible only through the deliberate adoption of a value principle which is not analytically derivable, so it is discreet to emphasize the limitation of analysis in regard to the nature of the so-called “external world.” The structure of the world of objects,

or of reality, is a profound, even baffling, problem, we do not here ignore the problem, but simply take it for the occasion as distinguishable from the description of analysis with which we are concerned

Only by gathering together the isolated items of knowledge under some such general categories as those presented in an analytic pattern can we approach an understanding of the significance and relations of the data of experience. This is the process of systematic classification used by the sciences in the investigation of particular areas of knowledge. Specialized sciences become possible only after facts have been brought together under categories and sub-categories. More and more categories become necessary to classify adequately the growing body of knowledge, and science must extend its observation to consider the specific content of increasingly complex categories. It is literally the function of science to learn more and more about less and less. The more comprehensive categories soon become so complex that smaller divisions of subject matter are necessary in order to specialize, and sciences within sciences develop. The history of science is the history of man's statement of smaller and more precise categories of analysis, until at the present time a scholar no longer thinks of specializing in geology or medicine or engineering—he becomes a specialist in paleontology, pediatrics, or air conditioning.

Yet, however many divisions and subdivisions may be made to facilitate further specialization, the broad categories still represent a valid and necessary division for analysis. The more general sciences of geology, medicine,

and engineering do indicate particular fields which are as distinguishable as they ever were, regardless of how many concentrated areas of investigation have been developed within these larger fields. We referred, for the documentation of our categories, to experience itself, not to the specialized analyses of that experience which are presented by the various sciences. Yet, our observation and thinking will naturally tend to fall into or parallel the divisions of fact with which we have become familiar in contemporary science. It is not simply an assumption, therefore, that the specific fields of scientific analysis should fit into our general framework or pattern of experience as a whole. The task of co-ordinating the sciences is particularly important because it is from the various sciences that we derive whatever factual data are available for filling in the framework of analysis. The final function of our analytic pattern is to relate, to integrate, and thereby to make useful for action the specialized information of all the sciences.

Every science is itself an analysis, and to call sciences specialized analyses is to say that they are intensive observations of limited areas within general analysis. The sciences might possibly be divided into nine broad classifications, one for each of our general categories, the distribution according to categories suggesting the specialized interests of the sciences. This easy allocation does not appear consistent with the nature of scientific investigation, it would result either in a simple classification of the sciences, which is not an analytic pattern for action, or it would mean the distortion and restriction of sciences to our ready-made pattern. Because we are trying to correlate

an analytic pattern, constructed for the purposes of action, with scientific analyses designed only to observe and classify fact, it must be admitted that the correlation will be suggestive rather than exact. The division of sciences according to our analytic pattern will then indicate what appears to be the major emphasis or interest of the particular sciences, and the distribution is in no sense to be taken as a restriction of any science to a prescribed area of fact. It must be remembered that any fact or object is an equally valid subject of investigation for any possible science.

What this means, apparently, is that there is a distinction between meaning-analysis and scientific-analysis. We have been constructing a pattern for meaning-analysis, a pattern which must include all factors of every possible object. This is a manifest impossibility for any particular science, for specialized research is possible only by concentration upon an aspect of the total meaning of an object or group of objects. Meaning-analysis, then, becomes possible only in terms of the specialized and particular information contributed by the sciences, the addition of all that every science can tell us about an object gives us the total meaning we now have about that object. However difficult it may appear to get all that knowledge together into a pattern of meaning, the extent to which it *can* be accomplished is the measure of effectiveness which science will have in action. The more complete that pattern of knowledge is, the more difficult it will be to accept or establish false associations leading to irrational activity.

THE PHYSICAL SCIENCES

Scientific-analysis will, then, fall within the pattern of meaning-analysis, and it seems that the best method of describing the specialization of scientific research is to consider the sciences as concentrating upon the relations existing between categories, rather than as describing particular categories. Thus, the *Physical Sciences* attempt to define relations between the category of Nature and that of Mathematics and Logic. It is the purpose of the Physical Sciences to interpret natural objects in terms of mathematical Consistency, the process of definition in the Physical Sciences is by reduction to so-called natural law, which is a statement of the structure and operation of objects within the world of nature in terms of a mathematical formula. The Physical Sciences concentrate at the level of Nature, they are thus concerned with objects of substantial concreteness. At the same time, the category of Mathematics contributes a certain degree of abstraction to these sciences. Natural laws refer to concrete objects, yet the natural law does not mirror an existent situation, because it is the reduction of natural phenomena to mathematical abstraction. The law of falling bodies represents the behavior of natural objects, but the mathematical formulation of the law is never precisely realized in the movement of an object because the conditions imposed by mathematical abstraction can be only approximated, in the case of falling bodies, the vacuum demanded by mathematical law can be approximated, not fully realized.

In this connection, it is interesting to note the role of experiment in the Physical Sciences. Here is observable the adjustment of mathematical system to scientific data, which was commented upon in the chapter on Formal analysis. The Physical Sciences do not adjust and adapt their data to available mathematical systems, rather is it the case that systems of mathematical consistency are constructed to meet the demand of classifying new data. This process can be seen clearly in the fact that the measurement of data by the Physical Sciences is not on the basis of a system of absolute or concrete concepts of measure. Rather, the units of measurement, as well as the consistent mathematical systems in which measurement is formalized, are relative to experimental data. Thus it is that one of the measurements of astronomical data is in terms of "light years," a unit which would have little or no meaning in connection with some other data. Formal and consistent mathematical systems, which alone make precise measurement possible, are constructed to meet the particular needs of systematizing particular experimental data.

This task of relating categories expressive of both concreteness and abstraction is the difficult function of the Physical Sciences. The function of these sciences in bringing together two otherwise conflicting aspects of meaning is clearly of fundamental importance to analysis. Without the degree of precision regarding the Material aspect of meaning which is contributed by the Physical Sciences, the use of such materials in action would be haphazard and severely limited.

THE VOCATIONAL SCIENCES

The Physical Sciences are not, however, concerned with the *use* of objects. The category of Property is not a factor which the sciences called physical are primarily interested in analyzing. Property and Use suggest the analysis of another specialized field of investigation which we may call the *Vocational Sciences*. This area of scientific analysis co-ordinates Property and Language, and the function of the Vocational Sciences is to maintain relations of Agreement among objects of use. The Physical Sciences represent objects of nature in a consistent pattern, but the mathematical precision with which natural objects are represented does not of itself contribute order to objects when they become objects of use. Chemistry, physics, and the other Physical Sciences can inform us about the properties and relations of natural materials, but these sciences are inadequate for analyzing the manifold problems which arise in the conversion of natural objects into Property—problems of division of labor, of skill, of management, and so on.

The Vocational Sciences, thus, include all specialized investigations which are concerned with the attainment of order and Agreement in relation to the Property objects which men use. Thus interpreted, vocations become something more than mere means of making a living or of accumulating money. To be sure, Physical Man must live, and most of us have to work to live. But it is indeed unfortunate if the Vocational Sciences assume such a predominance in activity that other possible areas of investiga-

tion are neglected or ignored. For many men it is undoubtedly true that vocational activity almost monopolizes interest, but this is certainly not an ideal situation. Actually, it is only when vocational endeavor is recognized and performed as a science that any value other than that of merely "making a living" can attach to existence. For the man whose "job" holds no interest other than the paycheck which it brings each week, life is a sorry business. What an extremely small area of total meaning is covered by vocational experience is clear from the position of these sciences in the analytic pattern. This is not to discount the importance of vocations, as sciences, they are as important and as essential and as interesting as the physical or any other branch of scientific investigation—but no more so.

In order, therefore, to operate effectively in this area which relates the Material and Formal aspects of meaning, every man must be something of a physical scientist and must also take some account of vocational activity. This does not mean that he must be a specialist in either. There are many activities in which people can make a living which are not Vocational Sciences, but every man's activity should include this area. This applies in answer to the oft-repeated question concerning the value of general education, certainly its end is not to enable one to concentrate upon a vocation, but rather to enable one to understand the nature of the Vocational Sciences and their relations to the physical and all other specialized activities. Wherever we choose to specialize, the extent of meaning which our experience and activity have will depend upon recog-

nition of and acquaintance with the categories of analysis and the relations which are possible between and among them. To specialize is not to hibernate, and sorry is the lot of the student for whom isolation is the price of specialized attention to one area of investigation.

The progressive, and to some extent accumulative, continuity which characterizes the categories of each point-of-view seems also to hold for the relations of sciences within a particular area. The Vocational Sciences certainly make direct use of the Physical Sciences, they derive more immediately from the physical than from any other specific area of investigation, although this, of course, does not mean that the vocations are not also related to all other sciences. Agriculture, as an example, builds directly upon the established results of zoology, botany, chemistry, geology, and the other Physical Sciences. The Vocational Sciences are, thus, more comprehensive than the Physical Sciences, but not so exact or specific as Social Group includes Physical Man, so the Vocational Sciences include the Physical Sciences.

Vocational activity, however, implies something in addition to the function of Physical Science, the Vocational Sciences have in their own right capacities which make up, so to speak, for the loss of some of the precision and consistency which are characteristic of the Physical Sciences. We have already, I think, stressed sufficiently the importance of material objects of use—Property—in man's experience. It follows that the ordering of action and experience is partly dependent upon the maintenance of order in regard to Property. These material objects

which man uses for the implementation of his purposes are, as a matter of fact, the very ground of order in society. Plato, when discussing division of labor, suggests that justice arises from the mutual needs or services of citizens—mutual services in the sense of interrelated vocational activities. While manifestly the useful material objects which constitute Property cannot be related and ordered with the Consistency of a mathematical system, Property can nevertheless achieve a high degree of order through Agreement. In this sense, vocational skill is more than mere physical dexterity, skills are the symbols which make it possible to maintain Agreement in the use of Property objects, and thus it may be said that vocational techniques are literally the language of vocational activity. Upon such Agreement concerning the use of material resources rests the possibility of achieving order in the Material aspect of experience, and the techniques of the Vocational Sciences are the functions which co-ordinate the Agreement of Language with the Use of Property.

ADMINISTRATION

The most comprehensive category of each point-of-view in analysis is an integrating concept of the factors of that aspect, a category which serves to indicate the analytical and functional characteristics of the Individual, the Material, or the Formal. In ordinary experience—that is, in activity which is not concentrated upon specialized analysis—we are usually concerned with these more general and comprehensive categories. The categories of Person, State, and Law are the terms in which our

analysis of the problems of experience tends to become formulated. It is apparent that the most comprehensive concept of relation between the Material and Formal points-of-view will include both the Physical and the Vocational Sciences. The representation of natural objects in precise classifications and the maintenance of Agreement in regard to objects of use—the co-ordination of these two functions is what we ordinarily mean by *control*. Control is, in general, the area in which an emphasis is made upon the attainment of order or Law in the State, when State is the organization of institutions. Another term, which is more specific, is *Administration*, and I think we may say that the final function in relating the Material and Formal is the science of Administration. In the sense in which we originally defined “science,” this terminology would be quite correct, Administration is certainly an activity which demands correct analysis.

Administration is, then, the area of activity which emphasizes the maintenance of control, a problem which arises mainly in terms of relating the Formal and Material points-of-view in experience. The administrator is one who maintains the relation between Law and the State. In specific terms, this would describe the duties of executive and judiciary within our system of government. But this is only the more restricted, or perhaps more formal, sense of Administration. It is apparent that the most important element of Administration is the adjustment of vocational and industrial functions, of distribution and consumption, which are the instruments of whatever order may be given to the Material aspect of experience. These

are the activities and functions which the executive and the judge must reduce to order

From this view, it appears inept that decisions in matters of Administration should be made by reference to judicial *dicta* asserted in a period when modern science and vocations were completely different. As a single example, the persistent perpetration by the Supreme Court of the United States of judicial decisions based on the old tenet that "every man has a right to contract as an individual for his employment" is to make a farce of Administration and Law. How could an individual "contract as an individual" with a corporation which employs thousands of individuals in all parts of the United States? Imagine a nut-tightener in a Ford factory contracting individually with Henry Ford!

When the Physical Sciences found that their assumption of the flatness of the earth was inconsistent with developing experimental data, they were content to bury the assumption with due ceremony but no regret, they turned from the interment to exploit with vigor the possibilities of the new and apparently more correct assumption that the earth was round. When the farmer is convinced that rotation of crops is experimentally advisable, he grasps this new opportunity to extend and enrich his vocational analysis—or he is not a vocational scientist. Unfortunately, many administrators, for one reason or another, do not suffer the pressure felt by analysts in the fields of Physical and Vocational Sciences, and it is not uncommon to find a judge or an executive employing an assumption which

has long been proved inadequate and, hence, incorrect. It cannot be expected that Vocational Sciences will use with immediate dispatch all the results of Physical Science. There are matters of adjustment, application, trial, and publicization which take time, but the lag must not be allowed to become too great, or the Vocational Sciences will stagnate. Thus, we do not expect the administrator to act with the remarkable precision of the physical scientist, nor yet to maintain the Agreement of the vocational scientist, but we must demand that his activity be directed toward the maintenance of order in relation to material institutions. This order will take the form of Law. The administrator who tells citizens that they exist only for the glory of the state, or the administrator who says that law and the state exist only as the tools and servants of each individual—neither of these is an administrator: the first is a dictator, the second a demagogue.

This reasoning, of course, suggests that the customary distinctions among administrative, executive, and adjudicative functions are distinctions of degree rather than of kind. Here we have considered them together under the general science of Administration. More specifically, the executive function might be described in terms of the direction and co-ordination of Administration. The function of the executive branch of government is literally the maintenance of order in the State, and order is made possible by the various administrative agencies which alone can control the material processes of experience. From this viewpoint, there is no *analytic* reason why the execu-

tive function of our federal government could not be included in the extension of expert administration which we call civil service. This is, for example, the essential nature of the so-called "City Manager" plan of municipal government. However impracticable the "Federal Manager" plan may be—for other than analytic reasons—nevertheless, it is clearly a mistake to refer to the executive branch of government as performing a policy-making function. Administration is adjustment and control according to a policy, and there must obviously be another analytic function, which is the science of policy determination. This, I think, is what we shall discover Politics to mean.

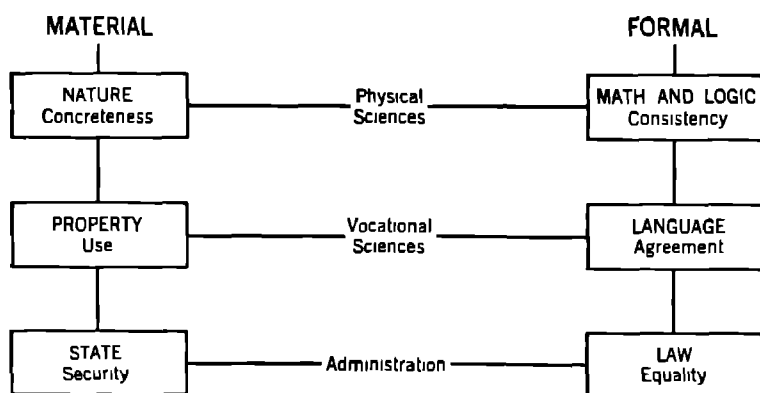
The judiciary is not, strictly speaking, an administrative agency, although it is clearly a part of the general process of Administration. If the judiciary be divested of the pontifical grandeur in which it has cloaked itself, the function which it performs appears not too difficult of description, and by no means so mystical in nature as it is sometimes made to appear. The courts serve as a clearinghouse for cases in which Administration has failed to achieve order. In such cases, the court must decide whether the failure to arrive at Agreement is a mistake of administrative management or an instance of individual refusal to accept Agreement as the principle of adjustment. There are, in addition, occasional instances of legislative error arising from inadequate drafting of the statute or perhaps from an unintentional conflict of statutes. These instances are not nearly so prevalent as the courts would

have us believe, the veto power of the executive, in conjunction with the expert opinion of the attorney-general, operates as a check on the formal aspect of legislation

The judiciary is not, therefore, either the source or the guardian of policy. The function of the courts is to review cases in which the administration of policy has not been successful. True, the principle of Equality or equity, upon which basis the Law is finally determined, is itself the court of last appeal. Yet it is not the judges who determine that policy or select the value principle by means of which Law achieves its integration. The effort of Law must be directed toward the maintenance of order in social organization through the integration of Consistency and Agreement in terms of the principle of Equality. It is, therefore, highly questionable whether there is in any case or event the least justification for the exercise of the prerogative which courts have assumed, that of declaring a law invalid before it has even been tried in the area of administration. The question in this connection is whether the court, in declaring an act of legislation illegal before it is administered, is not thereby setting up the judiciary as an arbiter, if not a dictator, of policy. If the courts are to continue to exercise such a veto power in matters of policy, then it would facilitate the operation of government if the court sat with the legislative body as a referee and the actual process of adjudication were turned over to administrative agencies.

More will be said about the nature of the policy-

making function in the discussion of Politics. For the moment, let us summarize the relation of the Material and Formal points-of-view



CHAPTER VIII

The Relation of Material and Individual

WITHIN a complex of meaning, all factors must achieve a relation of mutual integration with all other factors if coherence is to be maintained. If three points-of-view are comprehended, as here described, then each of the three must be related to the other two. The Material must establish and maintain integration, not only with the Formal, but also and at the same time with the Individual point-of-view. In our problems of analysis, each of us must endeavor to maintain this correlation, the degree to which we manage to integrate all factors and points-of-view in analysis will be the immediate measure of meaning and effectiveness which we achieve in thought and action. The sciences, or specialized researches, serve the function of providing us with detailed information concerning particular categories and their relations

Thus, while we must in research concentrate our specialized attention upon a restricted area, it is necessary to draw upon all other sciences when we approach problems of activity or experience. It is possible that a trained scientist—a specialist, expert within a restricted area of investigation—may yet prove quite naive when faced with such problems as voting intelligently or rearing a child.

The inadequacy of specialists in wider areas of experience is a fertile source of jokes and caricatures, but in reality it is a matter of more serious concern. Is it not tragic to hear a man, esteemed in the field of physics as an outstanding research specialist, indulge in the most puerile sentimentalism when trying to analyze the religious aspect of experience? No man would condemn himself knowingly to such a partial and incoherent existence—not unless adequacy at the level of experience appeared impossible and such concentration at the expense of rationality was the only outlet for intellectual endeavor. But if the integration of experience is finally impossible, if the task appears beyond the capacities of man's analysis, then the investigations of the sciences are fruitless in an equally final degree. The only final end which can be presumed or conceived for specialized research is that of assisting the integration and coherence of activity. Intellectual endeavor is self-defeating if the result of increasing intelligence and education is that we shall all become specialized scientists at the expense of incapacitating ourselves for the analysis of problems in experience and activity.

The notion of specialized research as the final form of analysis is defeatism, not only for the individual but for

society as well. The man who specializes to the extent of neglecting all but his restricted analysis is submitting to an existence in which meaning has been reduced to its least denominator. Any society composed of specialists who confine their analytic efforts to one restricted area of meaning will sooner or later find itself in the predicament of knowing so much about so little that it tends to dissolve through the absence of cohesive relations to hold these isolated points of analysis together. A state is composed of citizens, and while we cannot emphasize too strongly the contributions to knowledge and activity made by specialized research, yet it remains true that the specialist who is *only* a specialist is not an adequate citizen. His contribution to the state is in the form of abstract, detailed information about certain factors of activity, he is not himself an adequate citizen of that society. Until all specialists are citizens—that is, until they realize the final importance of action which comprehends all factors of activity—and until all citizens are to some extent specialists, or at least have the capacity to understand the work of the specialist—until this period of integration, however much like the millenium it may appear, there is no hope of satisfactory social organization and activity.

THE BIOLOGICAL SCIENCES

As every aspect of meaning is of real importance and significance, so the sciences which strive to maintain relations among these aspects contribute essential factual data for the analysis of experience. The category of Nature is related to Physical Man as well as to Mathematics, and

it is with this relation that the *Biological Sciences* are primarily concerned. That there is a distinction between the Biological and the Physical Sciences appears from the fact that the Biological Sciences do not concentrate upon those aspects of natural phenomena which can be reduced to mathematical formulation. The prefix *bio-* defines this science as the study of *life*, and it is upon the *living* aspect of natural objects that biology focuses its attention. The Physical and the Biological Sciences are not always precisely separated, there is a wide area of investigation which is not yet clearly one or the other. Chemistry and biology, for example, may appear at times to be taking the same point-of-view in regard to certain natural objects, as in the research of biochemistry, but this simply means that, from the standpoint of the respective sciences, the subject matter has not yet been adequately observed and classified, or that these particular systems of scientific classification are as yet not complete—or that two distinguishable methods are being employed jointly. The end of the sciences is not to combine and fuse their observations and classifications, rather, they are trying to distinguish clearly the aspect of the object which is the peculiar interest of their method of analysis.

The general pattern of classification used by the Biological Sciences is the evolution or development of species. The assumption made by the method of biology is that of a continuity of growth in the evolution of living forms. To be sure, there are at the present time many gaps in biological classification, but this indicates, not that the evolution was haphazard or irregular, but merely that biological

classification is not complete—and probably never will be as long as the process of life and growth continues. The concern with growth processes in nature is itself an indication of the method whereby biology relates objects of Nature and Physical Man, man is for biology the highest and most integrated form of life which has evolved in the process of growth. Biology points out to man his position in the world of life, emphasizes his status as a product of growth in the world of nature. Physical anthropology would, for example, be an important part of such a description of man in relation to Nature. Inasmuch as we are taking the perspective of general rather than biological analysis, perhaps we should say that this is what biology appears to be from the standpoint of the pattern of analysis. As a specialized science, biology tries to maintain the objectivity of treating all living forms as individuals, or as organisms. Let us say rather, then, that the high importance attributed to man in the evolutionary scheme is the contribution of our concern with man's thought and action—and allow to biology the objectivity of a research science.

The Biological Sciences are, thus, not concerned with man as moral, nor primarily even with man as a thinking being. The distinction of the Biological from the Physical Sciences can perhaps best be seen in the difficulty of any attempt to reduce the growth-process of life to mathematical formulation. Life processes do not operate so mechanically as apparently do such phenomena of Nature as gravitation. The mechanistic hypothesis in biology has generally fallen into disrepute, mainly because of its failure

to entertain or explain the essentially evolutionary character of life in the process of growth. This does not imply a bifurcation of the world of Nature into biological objects on the one hand and objects possible of mathematical classification on the other. The Biological and the Physical Sciences observe different aspects of the world of Nature, and each has a method suitable to the kind of specialized analysis upon which it concentrates.

The analysis which biology makes of Physical Man is in terms of man as an organism—his structure, growth, life process, and decay. The practical or applied Biological Sciences—medicine, anatomy, hygiene—contribute directly to the description and maintenance of the essential quality of Fitness. The purpose of medicine is the maintenance of natural existence for Physical Man, and the achievement of health and Fitness in men. The contribution of the specialized science of biology to the analysis of activity is, thus, obvious: this research extends and enriches our experience by presenting detailed and comprehensive information concerning the nature of man as an organism. The more we understand of man's relation to the world of nature, the better able we shall be to maintain fitness of adaptation and adjustment within that world.

THE SOCIAL SCIENCES

Derived directly from the Biological Sciences, and utilizing in their very origin the information contributed by biology, are those specialized investigations which we call the *Social Sciences*. Mainly because the Social Sciences as such have only of late been granted proper recognition,

they are as yet sometimes misunderstood as not properly sciences at all. It is necessary to remember the caution we exercised in the very beginning about the use of the term "science." It was contended then that there is no peculiar kind of thinking or analysis which can be called "scientific," other than in the ambiguous sense of identifying "scientific" with "correct." The Physical Sciences, for example, happen to be concentrated upon an aspect of objects which can more easily be measured, tested, and reduced to systematic classification than can the factors dealt with by the Vocational Sciences. The instruments of the Physical Sciences are adapted to the aspect they wish to observe, because of the nature of that point-of-view, the Physical Sciences are able to measure with more precision than is possible in the vocations. But the Vocational Sciences are trying to reduce their observations to consistent order and form, and the degree to which they can do this depends to some extent upon the categories with which they are primarily concerned, as well as upon the analysis employed. In the same manner, the Social Sciences, which include observation concentrating upon an investigation of the relation of Property and the Social Group, are dealing with a facet of meaning probably not so easily reduced to classificatory form as is the material of biology. But to limit scientific investigation to particular points-of-view is to restrict the term "science" to a small portion of the field of analysis.

As a simple example, medicine can tell us in a certain instance that a man is not properly housed or adequately fed. This is clear to the biological level of investigation,

and from medicine or dietetics we may obtain information as to what kind of food is necessary to maintain man at a proper level of fitness. But neither medicine nor biology can actually provide the food, nor do they tell us how to make the necessary adjustments so that such nourishment can be provided. Medicine can diagnose the sick man's case, and the dietitian can prescribe a diet, but if the man is too poor to buy food or shelter or drugs, the advice of biology will be of little help to him. The problem of how he is to get this assistance is not within the province of the Biological Sciences, and it would be improper for biologists to concern themselves directly, as scientists, with the problem, for to do so would jeopardize the attention which they must devote to the specialized area of their interest.

Such problems arise because the objects necessary for the maintenance of Fitness are not simply objects of nature available to the biologist or doctor. What the biologist does is to point out certain qualities of natural objects which are necessary to the maintenance of Fitness, but, as we have already seen in discussing the Material point-of-view, the organization of social life tends inevitably to transform all useful natural objects into objects of Property. The realization that almost all necessities are Property focuses attention now upon an area in which biology is not analytically competent. Too, when the question of providing these necessities arises, we are no longer dealing merely with a physical organism, but with implications which directly involve the Social Group. The most general implication is, of course, that of Com-

munication—briefly, how can a sick man, for example, be attended? Even in the simplest of societies, this problem must be adjusted. Incapacitation of the Physical Man means that he cannot exchange his labor for the Property-objects he needs, probably he cannot administer those necessities even if they are available. So he must draw upon the established method of Communication in society, perhaps by paying for such service from his accumulated earnings, perhaps by relying upon friendship or charity for help. In short, he must establish and maintain a high degree of Communication within a Social Group in order to have access to the Property-objects he so sorely needs.

While the case of a sick man is an extreme example of dependence upon a satisfactory relation of useful Property and social Communication, the nature of the adjustment is essentially the same for all men, sick or well. We are all members of social groups, and we all need useful objects. Short of retiring from society to an existence in which there are only natural objects available, we face continually the problem of getting sufficient access to useful and necessary objects. That this is an entirely different problem from the kind of concern for Property evidenced by the Vocational Sciences is manifest in the obvious lack of correlation which exists between the production and distribution of Property, even of objects necessary to adequate existence. What more striking or distressing illustration of partial and inadequate analysis could be found than in the common experience of driving past orchards of rotting fruit or untilled land into a community where the citizens are literally undernourished?

It should be particularly noted that this problem of maintaining social Communication by means of Property-objects is *not* a value problem. Values are involved only at the third or integrating level of analysis. This is the answer to charitable distribution of objects, as well as the answer to all social theories which demand equitable distribution on the ground of some supposed value of sympathy or brotherly love. The demand for efficient Communication in terms of Property is an analytic demand, as descriptive in its own province as the law of gravitation is from another point of view. Men can and do ignore the law of gravitation, although it may under some circumstances involve their own destruction. Social groups can and do ignore the necessity of adequate access to useful objects—and the social science of history bears witness to the self-destruction of those social groups.

The Social Sciences of economics, history, sociology, political science, and such have, then, the function of describing, both historically and speculatively, the possibilities, methods, and techniques of efficient social Communication through access to useful objects of Property. While measurement may be more difficult here than in the Physical and Vocational Sciences, yet there is no reason why the Social Sciences cannot state generalizations of descriptive observation which will be as valid and as useful as, for example, the rules of fatigue, of skill, and of organization which are being worked out in problems of industrial management. It would certainly be surprising if some degree of correlation could not be shown between

the access to Property-objects, and the efficiency and stability of a given Social Group

It is important that we should be clear about the descriptive nature of these areas of analysis which do not directly involve value categories. The distinction between evaluative and descriptive judgments can undoubtedly be carried too far, but there is a sense in which it can be said that the primary and major function of first- and second-level sciences is description. Considerable caution has already been suggested regarding the confusion of analytic and value concepts, rationality seemed to demand the admission that descriptive analysis could not provide the principles by means of which analytic categories and points-of-view might be integrated. We found that analysis necessitates, but does not of itself supply, value concepts. On the basis of analysis, to which we have here restricted our attention, such value concepts can be justified only by a description of their efficiency in integrating analytic facts and points-of-view. Any other possible ground for the justification of principles of value lies outside the limits of the present discussion.

The corollary of this assertion that value principles are not descriptively analytic is the equally important recognition that the descriptive function of such analyses as those of the Social Sciences is confused and distorted when the analysis is made to rest on premises justifiable only as value principles. Any work in economics, for example, which describes economic activity in such a manner as to justify or document already accepted values—such

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as private property, competition, monopoly, and the like—is not Social Science analysis, but value discrimination. Speculation about values is a most useful and necessary function, but the analysis of the Social Sciences is a description of what has been or can or might be done, not what ought to be done. Such a descriptive analysis serves the purpose of defining limits of practicality and attainability—limits which value selection must take into account if values are to be rational and realizable. It seems not unreasonable to suppose that if the effort and resources of the Social Sciences were concentrated more upon such descriptive analysis, and less upon flights into value speculation, the factual analysis of Social Science might well forestall or delimit much of the extreme, impractical, even ridiculous contention about values—contention which confuses rather than clarifies the task of social adjustment. Arguments about what values ought to be achieved in the relation of Material and Individual in society should start from an acceptance of the results of factual analysis and description in the Biological and Social Sciences.

POLITICS

The science which attempts to establish a final integration between the Individual and the Material points-of-view is *Politics*. By the science of Politics we do not mean what is ordinarily termed “political science”, as a Social Science, political science is descriptive rather than functional. We found that Administration, while we can call it a science, is also characterized by a necessary functional activity. As the final categories of the three points-of-

view serve both to include and to integrate preceding categories, and at the same time to describe a specific factor, so these third-level sciences of Administration and Politics not only comprehend and make use of the sciences from which they derive, but also indicate a specialized area of interest as real as those comprised by the other sciences. While the functions of Administration and Politics cannot undertake a description of values, they must nevertheless be concerned with value principles. Inasmuch as the integration of each point-of-view necessitates a value concept, the functions which undertake to relate integrated points-of-view must deal with values. This requirement marks the distinction between what may be called descriptive sciences and functional sciences.

One of the less admirable by-products of democracy seems to be a general tendency to refuse politics the status of a science—even to refuse it the charitable definition of a legitimate function. This prejudice appears so strongly in the United States that the very term “politics” is often used to indicate an act that is contemptible and vicious. Who has not heard men who claim competence in analysis assert that only when we get rid of “politicians” will we be able to achieve values in society? Why this should be such a common attitude it is hard to say, unless it is the result of a determination on the part of democratic citizens to admit no inequalities, even to the point of refusing dogmatically to admit that any other person can be competent to perform such an important function as politics. So, in any situation in which I feel I should be tempted or should prove incompetent (even though I might not ad-

mit it), I believe *ipso facto* that the politician must also be tempted and incompetent—and he may even succumb to temptation, as I, of course, never should!

As a matter of fact, the politician in a democratic society is burdened with the most difficult and well-nigh impossible task that could be imagined. It is his job to satisfy everybody, to keep things running with a degree of efficiency, and in general to keep everything except chickens from “going to pot.” Fortunate is the society which can produce enough thick-skinned individuals of sufficient stamina and fortitude to withstand the rigors of the function of politics. There is no intention here of gilding the lily, of ignoring the fact that stupidity, avarity, and cupidity often flourish so luxuriantly in the political arena as to overshadow the events taking place therein. But it is contended, and observation will document the contention, that less stupidity and more competence, less avarity and cupidity and more sacrifice and compromise of interests, are to be found in politics than almost any person unacquainted with political activity is inclined to believe.

A high degree of formal precision is possible in the Physical Sciences, and considerable objectivity can be had in the function of Administration, but consider the nature of the problem involved in trying to establish and maintain a final integration of the Individual with the Material aspect of existence, and some conception of the difficulty of Politics may be realized. It is due mainly to ignorance of what the politician is trying to do, that most people are so unsympathetic with his efforts, so uncompromising in criticism of his mistakes. In its most general terms, we

could on the basis of our analysis define the science of Politics as the maintenance of relations between the principles of Security and Liberty. That is, Politics must see to it that these two accepted principles of integration are each maintained, and that they function together in society. What kinds of problems arise in bringing together these two aspects, we know from the nature of legislation. To what extent shall we allow a man liberty in the conduct of his business, how determine at what point he shall be forced to admit the principle of Security and recognize the importance of the State? What kind of criterion shall we use to avoid interference within the rightful area of Liberty? Does the Security afforded by various forms of government aid to individuals have sufficient tendency to abridge the principle of Liberty that the resultant loss would outweigh the benefit? At what point, and by what means, shall the citizen be deprived of his Liberty upon the decision of the State that its Security is so threatened as to necessitate war? How, in general, shall the Material benefits of useful objects be apportioned, guaranteed, and made available to Individuals? Does any man have the Liberty to withhold Security from any other Individual or from the State?

These are generalized statements of the kind of problems which face the politician, and the most significant and the most exhausting part of his activity derives from the fact that these problems demand some kind of immediate solution. It is not enough that Politics speculate in general terms, even if it had time, as it usually does not, for these problems become politically crucial when the

practical situation demands direct action. The politician seldom has sufficient time to do much thinking, it is his lot to be forced continually to "stick his neck out." It is perhaps the case that most politicians are dissatisfied with most of the votes they cast, but situations which spell the disruption of relations in action call for quick solution, and the politician does *something*. The function of Politics has been described as that of passing a bill, sitting back to wait for "somebody to holler," and then amending it, sitting back to wait for "somebody else to holler," and so on—for one of the certainties of the democratic process is that someone will always "holler."

While it might be just a little too optimistic to expect that analysis, or even a pattern of analysis, or even *our* pattern of analysis, will serve to straighten out all the problems of action, such an approach does, I think, serve to clarify the nature of some of these problems. At least one circumstance of importance is indicated in regard to Politics: the necessity of a closer correlation with the Biological Sciences, and especially with the Social Sciences. It has already been suggested that one of the major difficulties of the science of Politics is that the nature of the function is such as to place a premium on the time and energy necessary to an adequate appraisal and judgment of problems. Another equally vitiating circumstance is that even if the politician had time to think, he seldom has anything to think with—and I intend no insult to his analytic or thinking ability. We think with or about facts, and the politician is lamentably short on facts. It is not that he doesn't want facts, nor that he doesn't try to get the

facts, nor yet that he hasn't access to the facts. The limitation is again primarily one of time.

I often wonder whether the average citizen has any notion of the number and complexity of bills which are presented for the consideration of a legislative body during a single session. Literally hundreds of long and detailed bills accumulate on the legislator's desk. How is it humanly possible for him even to read such a mass of material in the time left after the sitting of the sessions? Further, how can any one man be expected to acquire expertness in specialized fields concerning finance, armament, engineering, employment, industry, food, cosmetics, electric power, agriculture, music, and old man Jones of Five Forks, South Dakota—sufficient specialized knowledge to vote intelligently on legislation for banking, national defense, conservation, relief, labor, food and drugs, TVA, AAA, WPA, and old-age pensions? The answer is obvious: no man knows as much as any politician would have to know to be able to analyze every bill upon which he is required to vote. Legislative bodies have developed a variety of techniques for meeting this difficulty. Politicians acquire a degree of specialized expertness in restricted areas, and are placed on committees whose function it is to analyze bills and make recommendations to the legislative body. How expert these politicians do become is attested by the frequent embarrassment of witnesses before the questioning of legislative committees. Of course, the confused "expert" usually defends himself by an attack on "politicians." I once heard a dean of men from a state university characterize the legislature in

his state as "hollow-heads who would do anything for a laugh", I wondered at the time if this might explain why he was invited to appear before the committee

Log-rolling is, and will probably remain, a dirty streak on the picture of democratic legislation. It is a matter of observation, however, that facts and analysis can have a direct, even surprising, effect upon the action of legislators and the process of legislation. The difficulty is that a majority of the factual material available to the politician is propaganda, that is, it comes from a pressure group bent upon achieving its interests at the expense of some other group. As propaganda, all such pressure to which the politician is continually subjected may or may not represent analytic data. There is usually an element of factual content contained in the propaganda of pressure groups, in fact, such pressure is generally more factual than propaganda for average consumption, because the lobbyist is wary of being caught by the politicians—and he knows that an opposing group is probably also exerting pressure. Sometimes the form of propaganda is the simple pressure of force, an attempt to influence the politician by threatening his seat. Naturally, most men who have elected to engage in politics will be sincerely concerned to retain their offices, and the politician would be more than human if this kind of argument failed to be impressive. Further, being a democratic representative, he may seriously believe that any opinion which represents a sizable group of his constituents merits consideration. Yet, the pressure of

force is as much propaganda as the "diplomacy" of a dictator—which lightly veils a threat of invasion. When the pressure group is actually representative, the degree of propaganda may be said to be less than when an artificial group exerts pressure, as, for example, by sending telegrams signed with names taken from city directories or gravestones.

Faced with this legislative dilemma, the politician may welcome valid analytic information as providing a defensive armament against the impact of pressure. Despite common assumption to the contrary, fact does sometimes outbalance fiction, even in politics. Now, it is obvious that on all matters of concern to the politician there is available a great deal of analytic information resulting from the research of specialized sciences, but the results of specialized investigation are ordinarily presented in a form which leaves the information the private property of the research scientist. This difficulty has been overcome to some extent by the establishment of such agencies as state geological, historical, and conservation surveys, whose purpose it is to apply the research of a specialized science to the particular problems of the state and to make available the results in non-specialized form. Yet, the legislator must often be vexed by the specialist who, upon invitation to contribute information, expects a committee of men untrained in his field to understand a highly specialized and technical terminology.

This dependence of the legislator upon intermediate

agencies for his factual information indicates the justification for considering the science of Politics as deriving, not directly from the Physical or the Vocational Sciences, but rather as most intimately associated with the Social Sciences. Certainly, the Social Sciences utilize information from all other fields of research, mainly that of biology, but, because the Social Sciences concentrate upon the relation of Social Group and Property, the terminology and structure of social science research are more appropriate to the science of Politics than are those of any other field. There seems to be no doubt that the establishment of nonacademic institutes for social science research will bring to the political process much information that has not been available to this important area of activity, just as the establishment of physical science laboratories has immeasurably improved industrial and engineering processes. Of particular importance in this connection are such comparatively recent inaugurations as the Legislative Councils in the states of Illinois and Kansas and elsewhere. These organizations are staffed by men trained in research, whose task it is to present information pertinent to measures being considered by the legislature. Mainly, these data must be presented in a form which will be understandable and so condensed as to be available to all legislators who are interested in profiting from such un-pressured analysis. Although many bills press for immediate solution, it is also true that such problems as taxation and conservation continue from ses-

sion to session, it is the purpose of the Legislative Council to gather, during the periods when the legislature is not in session, information on such subjects as appear likely to be of interest during the coming session. The continuance of such an organized and competent system of analysis cannot but exert an unprecedented influence upon the course of legislation in those states which have had the intelligence and vigor thus to improve the legislative process.

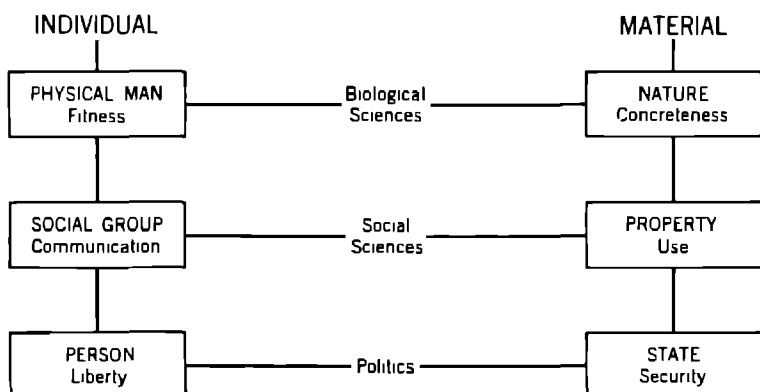
That I lean over backwards in this description of the science of Politics, I stand ready to admit—and to justify, but I dislike intensely the attitude which might be parodied

I never saw a politician,
I never want to see one,
But I'll confess to this admission—
I'd rather see than be one

At any rate, it must at least be admitted that thus far the science of Politics in democracy has not been without estimable results. However numerous and obvious may be the inadequacies of our politicians, the history of their activity stands as a monument to the only known alternative to dictatorship and tyranny—those most partial of analyses. The smirk of self-satisfaction need not obscure our observation of injustice and of work to be done in democracy, but a reasonable recognition of the difficulties involved in the political task of integrating Individual and Material makes the more commendable the efforts of those

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who have preserved that integration, avoiding thereby the easy transition into dictatorship on the one hand or anarchy on the other



CHAPTER IX

The Relation of Individual and Formal

THE observation of one more general area of scientific concentration will complete the description of specialized research as concerned primarily with the relations among categories expressive of points-of-view in analysis. On the basis of the structure which appeared in the two areas already discussed, we may anticipate that the sciences relating Individual and Formal will co-ordinate in a major form or function analogous to those of Administration and Politics. It is unfortunate that the intimate relation and co-ordination of the various fields of scientific research have so often been paid only secondary or casual attention. The practical result of inattention to the pattern of knowledge has been that the comprehensive functions of Administration and Politics have alike suffered for lack of contact with their most vital sources of information, the

specialized sciences. This ambiguous status has also made exceedingly difficult any final integration among the three major functions and points-of-view. Administration is rather more often in conflict with Politics than integrated with that activity. While it would be absurdly optimistic to anticipate that the functions which realize values in experience will be able to make immediate use of all that is discovered in the specialized sciences, it is certainly a major concern of society to prevent its descriptive and functional sciences from becoming dissociated. It is often said that "man's reach exceeds his grasp", but in regard to the application in experience of the knowledge contributed by research, it seems at present rather more appropriate to say that man's grasp greatly exceeds his reach.

THE PSYCHOLOGICAL SCIENCES

The area of specialized concentration which is concerned primarily with the categories of Physical Man and Mathematics and Logic is the province of the *Psychological Sciences*. Here we encounter difficulties in regard to the term "psychology". The modern science of Psychology is a comparatively new and unexplored field of investigation, and it is probably an unavoidable characteristic of new and rapidly expanding fields of analysis that investigators therein tend to expend a disproportionate amount of effort in the support of premature theories rather than in observation. Psychology as a science is beset by theoretical schisms which are unlike the normal divisions of more developed sciences. Conflicting theories of interpretation arise in all fields of specialized observation,

but usually there exists at the same time a residue of generally recognized and accepted material. Differences naturally develop in the interpretation of new and more highly specialized information. In psychology, however, the disagreements run to the very bottom of the classifications used by the psychologist, so that interpretation of the most fundamental and elementary information is dependent upon the theory which is being defended.

Part of the difficulty is clearly the inevitable problem of terminology and classification. The history of psychological science displays the vicious circularity of the method which thought is forced to employ in analysis. The minimal definition of science, of whatever kind, is that it is a consistent classification of some portion of the body of knowledge, and the method of research is to the end of extending and enlarging this classification. But it is no easy task to start from scratch and construct such a classificatory scheme while at the same time attempting to develop methods adequate to deal with the material being observed. Psychology has, of course, spent a good part of its time in distinguishing the method of psychological observation from the methods of older sciences, many of which have not received the claims of this new science with sympathy.

It is, indeed, necessary for Psychology to establish the relative independence of its methodology, and it is upon the assumption that this can and will be done that we here grant to the Psychological Sciences their own area of specialized research. Yet, many psychologists continue to confuse their method with that of other sciences, most

commonly with that of the Biological Sciences. The observation of muscular tensions, organic disturbances, and cellular structure is the prerogative of biological research, and if psychology limits its method to such research, in the observation of either animals or men, such observation seems a part of the Biological Sciences rather than a distinguishable area of scientific research. Whether such procedure constitutes an addition to the Biological Sciences is a question for the biologist to answer

We must assume no ability here to set limits upon scientific research, nor to impose restrictions *within* any field of observation, but the disagreement among psychologists upon fundamental and elementary matters of method and terminology is an indication that the Psychological Sciences have yet to establish their method and subject matter as essentially distinct from those of biology and physiology. Perhaps it is unwise to classify psychological research as distinct from biology while there is yet no methodological agreement among psychologists, but the progress of the past few years and the interest in the development of a specialized method give promise of rapid and fruitful developments in the clarification of what is and what is not the proper concern of the Psychological Sciences. An increasing majority of psychologists are now concerned to formulate a consistent system of psychological information, from this interest it appears likely that some unity of method will be developed in the near future. This trend in psychology has been expressed succinctly by Joseph Jastrow in the statement that "as inevitably as there is one physics, there is one psychology." However, the

fact that this unitary system of accepted data and methods has not yet been made available deprives us of an authoritative source of expert information upon which to rely for a statement of the relation of Physical Man and Mathematics and Logic. It would be an error fatal to analysis if we were to take the point-of-view of classical psychological theory, or of Gestalt theory, or of Behavioristic theory as representing the "science" of psychology. Nor can we presume to say what is and is not valid in these theories, no more can we trespass upon this area of scientific research in the attempt to adjust and harmonize conflicting theories. Research must remain the prerogative of the specialized science operating within the particular field.

What little we can say about the Psychological Sciences must, therefore, be extremely tentative and cautious, in this area we cannot document our assertions by reference to data accepted by the science itself. There are, however, some general considerations which seem to follow from the nature of analysis and the analytic pattern as we have been describing it. Two fields of scientific analysis are necessary to clarify the category of Physical Man: the Biological Sciences establish the relations of man to the world of nature, the Psychological Sciences should, then, have as their purpose the clarification of the relations between Physical Man and the category of Mathematics and Logic. This would imply that psychology is interested in describing man and his behavior in terms of Consistency.

The attempt to describe such Consistency of behavior in terms of conditioned biological responses seems to be

a confusion of analysis. The unsatisfactoriness of the mechanistic hypothesis in biology has already been remarked upon, the concept of mathematical or logical Consistency is not adequate to interpret the data of biology. The relation of Mathematics and Logic to Physical Man will differ as much from the Biological Sciences as the latter are different from the Physical Sciences. Let us recall our earlier distinction between action and movement, which is significant in the implication that while movement is characteristic of the world of Nature, action is a distinguishing feature of man. Man is not just another object in the natural world, his relation to Nature is a subject for observation and analysis, and the Biological Sciences are necessary to establish that relation of man to Nature. Man is not, therefore, simply a specimen of naturalistic phenomena, he is something more—even if that something more has no other ground than the importance of the Individual point-of-view in analysis.

The relation of the Physical Sciences and the Biological Sciences through the category of Mathematics throws some light on the problem of psychological method. The method and classification of the Physical Sciences, as we have seen, necessitate an assumption of strict uniformity in Nature, only on this assumption can mathematical and logical Consistency be maintained in the observation of these sciences. For a long time, the Biological Sciences accepted the same principle of uniformity, but modern biological research has, to say the least, abridged the assumption of uniformity in Nature as observed from the biological point-of-view. To be sure, biological classifi-

cation necessitates an assumption of some degree of continuity in its subject matter, in the absence of which no classificatory system whatever would be possible. One might recall the incident in a western court when an Indian asked for a divorce from his squaw. Surprised at this rather unusual request, the court asked for his reasons, and received this laconic reply "Indian plant corn, get corn, good! Indian plant wheat, get wheat, good! Indian plant Indian, get Chinaman, no good!" The demand for uniformity here suggested is, however, quite different from the strict mathematical identity assumed by the laws of Physical Science.

This assumption of uniformity in Nature, as made by the Physical Sciences, is justified in terms of the method used by those sciences, the Biological Sciences do not make the same assumption. Whatever assumptions psychology may find necessary in explaining the nature of Physical Man, these premises of psychological observation must be justified in terms of psychological method. The uniformity of Nature and the growth process of life characterize, respectively, the Physical and Biological Sciences, these methodological assumptions cannot be taken over by the Psychological Sciences. The fact that psychology operates with the category of Mathematics and Logic does not imply an identity of method between the Psychological and the Physical Sciences.

Nothing remarkable is involved in the proposition that man occupies a distinct position in regard to analysis and action, to deny man this status is to deny the very process of analysis itself. It may be true that dogs and cats and

birds and bees also have patterns of analysis, if they do, we can depend upon it that in dog-analysis dogs occupy a unique and distinct position. In other words, the very fact that man is doing the analyzing, that the pattern of analysis is for his own use, that his action will be effected by this thinking and analysis—these are considerations which bespeak for man a preeminent status in the analytic pattern. As a matter of fact, one of the problems which any pattern of analysis must face is that of providing a method whereby man can recognize other objects and aspects as distinct from himself.

Normally, we should expect the method of psychology to follow some such general pattern as that evidenced by the Physical Sciences and the Biological Sciences, with such adaptations as follow from the nature of the particular categories dealt with by the Psychological Sciences. Psychology should state the characteristics of Physical Man, not in terms of repetitive statistical instances, but as formalized rules or classifications of behavior. It must be remembered that the attainment of Consistency involves a high degree of generalization-abstraction. Moreover, psychology must treat Physical Man as a legitimate category, with the degree of analytic independence accorded any category of any point-of-view.

Physical Man, like any other category, has several characteristics, but it is not with these that psychology is directly concerned. Description of the capacities, the needs, and the desires of Physical Man is an essential but elementary part of psychological observation. As the Biological Sciences do not stop with a bare description of

Physical Man as an individual, but seek to observe and clarify man's relation to Nature, so the greater task of psychology is the clarification of man's relation to the formal category of Mathematics and Logic. This relation appears to be what we mean by "thinking," the process whereby man maintains some degree of logical Consistency in his experience and action. However elementary the thought process may be, it does give to the individual a degree of Consistency and continuity, in the absence of which Physical Man could be described only as a succession of states of want, hunger, and biological response. The Psychological Sciences, then, have as their purpose the observation of thinking as a process relating Fitness and logical Consistency, from these sciences, whatever they turn out to be, we should derive information concerning the nature of the thought process and the degree and kind of Consistency possible, as well as suggestions for the maintenance of Fitness in the individual, supplementing the contribution made by the Biological Sciences. Fitness in Physical Man is both biological and psychological.

THE MORAL SCIENCES

The progressive continuity of sciences holds true in the relation of Individual and Formal points-of-view, for the next area of specialized investigation supplements the Psychological Sciences in relating Individual and Formal. The relation of Social Group and Language clearly seems to be the subject matter of what may be called the *Moral Sciences*, if at first glance this appears a distortion of moral-

ity, it may possibly be the result of the ambiguity which has existed in the investigations which purport to be analyses of morality. One of the most annoying assumptions fostered by careless analysis in this area is that which defines morality as a function of Physical Man. That morality could exist only in intimate connection with Social Group appears clear from an observation of the history of morals as well as from the nature of the Moral Sciences. The term "moral" would have no meaning if applied to a man living in isolation. This hypothetical man-on-an-island probably would develop some system of morality, but not until he had made himself a member of some sort of Social Group, even if it consisted only of himself and animals, or of himself and God.

Morality derives its meaning from the form or order which it gives to the Communication of a Social Group. This means that the Moral Sciences are, or should be, a statement of the manner in which interests are adjusted and communicated in social groups through some process of Agreement. Morality has no direct connection with physical wants and desires, except in so far as members of Social Groups are at the same time Physical Men. The theft of a loaf of bread, for example, is a moral problem only as it affects the order of the Social Group, it is largely a biological problem if the hunger is considered, and an economic problem if the bread is claimed as Property.

This definition of the Moral Sciences may raise the objection that the values which serve as the principles of integration for each point-of-view cannot, with any analytic justification, be derived from one particular area of

specialized investigation. This is quite correct, values in the sense of final integrating principles are not defined by the Moral Sciences. The definition or selection of values, as we have repeatedly pointed out, is not possible through the use of a scientific or analytic method. This means that we shall have to admit a distinction between the Moral Sciences and the selection of values. Such a severance of two traditionally identified functions may appear quite strange and irregular, but there seems to be no alternative to this disturbing admission. That there is an effectual analytic science of morals is a matter of observation, but as admitted in the original definition of analysis, it is yet to be established that there is any factual or analytic justification for the selection of values. We must, then, admit the difference of method between the Moral Sciences and value selection, however anomalous the distinction appears to be.

Morals serve the purpose of maintaining Agreement in the action of Social Groups. To be sure, this deprives morality of much of the glory, and some of the power, which it has traditionally gathered unto itself. The Moral Sciences have no more dictatorial status in analysis than any other area of scientific investigation. They perform a specific function, that of describing the manner in which the intercourse necessary to the existence of a society is maintained by Agreement. Morals are, thus, the Language of social intercourse. Morality is not directly concerned with the category of Person, on the basis of this description, it is not correct to say that moral action is the final end of the individual, or that moral sense is the most

valuable characteristic of personality, and, most certainly, it is inadequate to claim that individual morality is the criterion of experience. In the achievement of social adjustment, morality is as necessary to the final integration of experience as is the adjustment of biological, economic, and psychological factors, but morality is not the key to this adjustment—it is neither more nor less important than any other area of scientific description.

Morals consist, therefore, of the customs and conventions which operate effectively to preserve Communication and Agreement in social action. One need not look very closely at the history of morals to see how the criterion of social usage operates as effective morality. Consider, for example, the changes which have taken place in the United States since 1900 in reference to such matters as divorce, birth control, the status of women, and the relation of the sexes. Some principles of action which were almost universally condemned as immoral but forty years ago are now generally acceptable, and in some cases actually held as morally obligatory. Today, many persons would contend that in the case of physical or mental incompatibility, divorce is a moral obligation. Arguments are numerous to the effect that, when health or economic sufficiency is endangered, birth control is socially desirable. Women are rapidly reaching unanimity in considering secondary status and dual standards of conduct to be morally degrading.

This is, indeed, a matter-of-fact analysis of the Moral Sciences, not a sermon with a moral derived from a particular set of social practices, but if rational analysis and

activity are our aim, we cannot allow any science to conceal its legitimate function or to appropriate functions which it has no method of analyzing. Moral Science has so often been identified with analysis itself, with rationality, with activity, and with intelligence that one wonders what morals are at all. An action may be judged as to its morality, but it is also physical, biological, social, political, psychological, vocational, and administrative in character. There is discoverable in analysis no reason why morality should become the sole determining factor in action any more than should any of these other equally essential aspects. This is not to minimize the importance of morality, it is simply to deny the self-constituted authority assumed by nonanalytic moralists.

The analytic description of the Moral Sciences must, of course, refuse to admit that any super-category, or any super-experiential area of observation, provides ready-made a set of moral principles which can be superimposed upon the analytic process or upon action. The moralist must be informed that he is not God. The adequate analysis of the Moral Sciences will be greatly stimulated when moralists stop chasing the elusive capital-G-Good and capital-R-Right, and begin to observe the needs and possibilities of the Social Group, investigating absences of Agreement and classifying techniques of Communication. The Moral Sciences should be concerned primarily with an appraisal of the effectiveness of customs and conventions in maintaining necessary social relations. Upon this background of observation, the moralist should speculate on the possibilities of a more adequate integration in the

Social Group, and on the techniques whereby custom and convention can be evaluated, reformulated, and implemented in action

One of the major functions of the Moral Sciences is, then, that of recognizing when current morals have outlived their usefulness, and this will, of course, be when they cease to perform a function of social cohesion or Communication. When a system of morals has thus outworn its usefulness, the Moral Sciences must exert their effort toward breaking the pattern of action in which such customs and conventions become established. As a science, morality will approach this problem of moral progression by the method of substitution. No science discards an old law until a more correct law has been stated. If the science is doing an adequate job of its analysis, the new law will be already in the process of formulation when the inadequacy of the old law begins to become evident. If the Moral Sciences are functioning, they will accomplish the discard of outworn moral relations through the teaching of newer and more adequate procedures. The acceptance of these new principles of relation will be dependent upon the demonstration by Moral Science that they are more efficient and more comprehensive, and that they are suited to the changed needs of the Social Group

It is, therefore, in his character as a member of a Social Group that an individual is moral, the concept of "private virtues" is a misnomer, unless virtues are taken as the mere satisfaction of physical wants. Neither is morality a matter of "self-realization," for, as we have seen, the most comprehensive integration of the individual is at the level

of Person. While Person includes both private and public aspects of the individual, morality is not the principle by means of which the Person achieves integration. On the other hand, Moral Science, as here defined, will certainly take into consideration Kant's categorical imperative—that every individual should act according to a principle of action which he would be willing for all other individuals to follow. This is almost a premise of social intercourse through Agreement, the only alternative being social organization by dictate or fiat. The corollary of Kant's basic premise of social agreement was his demand that every individual be treated as a purposive individual, and not as a material means to an end. T. V. Smith, in *Beyond Conscience*, reduces two opposite methods of moral investigation—Solipsism and Dialectical Behaviorism—to a mutual reliance upon basic premises similar to the two stated above. While Smith calls this premise of opposing theories "equalitarianism," it is not, as he explains, that these theories accept a principle of Equality. Significance attaches to the admission by both methods of the possibility and necessity of social agreement, in the absence of which morality would resolve into the anarchy of private satisfaction. Morality is public Agreement.

ART AND RELIGION

The final areas of scientific research have proved, in the cases of Administration and Politics, to be co-ordinated functions including the descriptive sciences of the particular area. The functional sciences which comprehend and integrate the Psychological and the Moral Sciences are

those of *Art and Religion*. Simply to call this area the "Arts" would be sufficient were it not for the fact that Religion has so often been identified with Moral Science. The position of Religion is, as a matter of fact, somewhat arbitrary, depending upon the manner in which it is described. It can, indeed, be defined either as a Moral Science or as an Art, but the definition must be such as to indicate clearly the position and status of Religion within the pattern of analysis. Religion cannot be both an Art and a Moral Science, except in so far as the Arts do comprehend the Moral Sciences. For this reason, it appears that the generally accepted notion of Religion is in terms of a comprehensive Art, the moral content of which is, therefore, *derived*. There is no reason, on this ground, why Kagawa's description of religion as "the highest art" cannot be accepted.

In the Arts are to be found what are undoubtedly the strangest and most tenuous combination and adjustment of principles in the analytic pattern—the co-ordination of Liberty and Equality. The relation of Individual and Formal is free from any restriction imposed by Material categories of Nature, Property, and State. The art-object is not a picture of things as they are, but as man wants them to be. The Arts are, indeed, the true guardians of the *ought-to-be*. The æsthetic object is the property of him who can enjoy and participate in the experience of beauty which it makes possible.

For the Person, this is the life of imagination, the only area in which an individual achieves a final degree of Liberty. Unfettered by adjustment to the Formal point-of-

view, imagination may be nothing more than unbridled fantasy, but such excess of Liberty in imagination can hardly be called æsthetic experience, because it neither creates nor appreciates objects of art. One can imagine almost anything—and perhaps derive great personal satisfaction therefrom—but such uninhibited exercise of imagination is neither æsthetic nor religious. The adjustment to Equality, the final principle of the Formal point-of-view, imposes upon the life of imagination certain restrictions which affect any realization of beauty in this relation.

Equality is the principle whereby an ordered integration of Consistency and Agreement is maintained, and these are essential qualities of the æsthetic experience. Neither the creator nor the appreciator of the art-object can give free rein to his imagination, if the object is to be appreciated—that is, if it is art—it must meet certain requirements of Consistency and Agreement. Every art, that is to say, has certain rules of form and design, a systematic structure of formal relations which serves as the framework for artistic creativity. Recall the query of a previous chapter as to which activity implies the greater background of formal order and technical skill—the experimentation of a “scientist” or the creation of an artist. These formal rules of procedure must, however, become a Language for the artist, and we have seen that the use of formal symbols as a Language necessitates Agreement. If, therefore, the Arts do not meet these requirements of the Formal point-of-view so that the technique of the artist becomes a Language, then it can only be said that the activity cannot

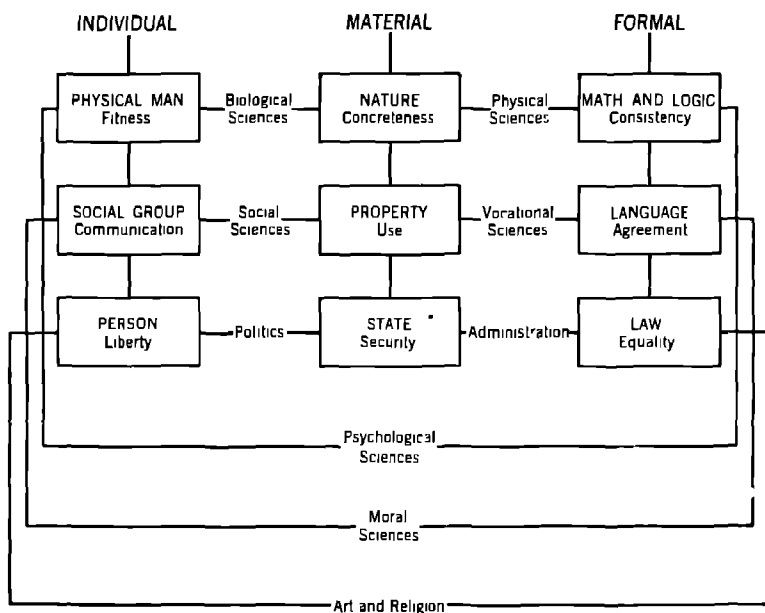
effort As Santayana has suggested, perhaps these "immoral" artists have in reality been the most moral members of a society whose conventions are decadent

With this description of the Arts as one of the three major functional sciences, the present pattern of analysis is completed. Much more could be said in regard to the definition of specific categories and concepts, perhaps to the end of a more detailed classification—in fact, the more that could be said is discouragingly obvious As a minimum achievement, perhaps it can be claimed that some of the problems involved in organizing knowledge for use in experience have been clarified by restatement. The adequate statement of problems is the preliminary task of any rational attempt at their solution.

Before going on to a consideration of some of the fallacies common to analysis and the organization of knowledge, a word of caution merits brief repetition. Pattern and terminology are arbitrary in any system of analysis The grounds upon which the present pattern was developed were admitted to be simplicity, flexibility, and internal consistency Hence, no super-analytic validity can be claimed for the pattern, justification can derive only from adequacy of description and organization of what appear to be essential factors in knowledge and experience. No matter what points-of-view or categories may be suggested, care must be continually exercised to maintain clarity and distinctness in the classification as it develops. The ultimate effectiveness of analysis is dependent, of course, on the extent to which all points-of-view are integrated in the control of experience and the direction of

action. The primary assumption of analysis is that facility in thought and action can be immeasurably increased through the use of a pattern or method for the inclusion, adjustment, and integration of the complexity of factors which we call our body of knowledge.

The final summary of points-of-view, categories, and sciences can now be made.



PART III

Fallacies in Analysis

CHAPTER X

The Application of Analysis

THE statement and discussion of a pattern of analysis constitute a positive, constructive approach to the problem of utilizing knowledge in action. There is definite value, however, in the negative observation of reasoning—that is, in the designation and classification of errors in analysis. Our thinking uses both negative and positive methods at the same time, awareness of possible mistakes helps us to avoid them. Knowledge of mistakes, however, must be supplemented by a positive method of thinking without committing the known error. We could as well have started by examining common fallacies in thought, and have proceeded to the construction of a pattern which would avoid these mistakes.

Mistakes in thought may be either intentional or unintentional, but let us make no mistake—it is far more difficult

to deal with the error occasioned by ignorance than with the deliberate fallacy perpetrated by propaganda. The man who knows he is committing a fallacy has no recourse but to admit the error when it is pointed out. Not so with the fallacies of ignorance, in order to recognize an error in thinking, one must know enough of the method of thinking to realize how the mistake occurred. To the man who knows *how* he is thinking, fallacies in *what* he thinks will be more readily apparent. But the man who knows not that he knows not, who has no notion of why or how he knows what he knows—while he may stand convicted of error, will in all probability not change his belief because of rational argument or persuasion. Schiller, in *The Maid of Orleans*, expresses the helplessness of rationality before the hopelessness of ignorance

Mit der Dummheit kämpfen
Götter selbst vergebens.

(Against stupidity the very Gods
themselves contend in vain)

Of fallacies committed intentionally, the greatest number occur in arguments used for the purpose of exerting pressure on the action of other persons. This, as we saw earlier, is the essence of propaganda. The other form of deliberate fallacy is that of humor, in which thought or analysis is deliberately confused to produce ridiculous or nonsensical situations of meaning.

There are, then, in this sense, three major classifications of fallacies—those arising from ignorance, those used with propagandistic intent, and those meant to be humorous.

Such a casual classification, however, is not a very useful division to follow in the observation of fallacies as they occur in speech and print. In an earlier chapter it was stated that the specialized sciences are not characterized by different kinds of thinking processes. Neither does such a distinction hold in regard to the intent and purpose of the thinking. The process of thought has essentially the same structure whether it issues in wit or wisdom, accuracy or fallacy, analysis or propaganda. Fallacies arise through some violation of the structure of the thought process. The classification of fallacies according to the intent of the thinker would serve no purpose in designating common types of error, even if it did, it would be an extremely arbitrary and difficult task to attempt such an evaluation of motives. As far as we are concerned here, in trying to state a few general classifications of typical fallacies in analysis, it makes no difference at all what the motive of the person committing the fallacy may be. Humor might serve as well as propaganda for the purpose of illustration, and there certainly will be many cases in which no determination can be made as to whether the source of the error was intentional propaganda or simple ignorance. There may even be examples in which it will be difficult to judge whether the intent was serious or playful.

On the other hand, the reason for which we undertake this negative approach to thought is not so indeterminate. The purpose of classifying fallacies is to increase the clarity and facility with which arguments and information can be evaluated. This elementary technique is required if

we are to minimize the quantity and effect of propaganda in our judgment and action. It is not enough to "smell something fishy" in an argument, we must recognize what the error is and how it is being made. Otherwise, the fallacious statement cannot be evaluated, answered, or avoided in our own thinking. Fallacies arising from ignorance do, indeed, present a formidable problem, but at least we need not allow ourselves to be influenced or convinced by such arguments. Observation of the results of ignorance in thinking encourages the belief that sometimes the statement "I don't know" indicates clarity in thinking and analysis.

Perhaps the study of fallacies may facilitate the understanding and creation of humor, but let this be an incidental purpose, however much we may desire more conscious, and less unconscious, humor. The most interesting result of acquiring some understanding and facility in the detection of fallacies will be to provide a counter-irritant to propaganda. The increasing use of propaganda in the modern world has already been mentioned, and also the necessity of recognizing propaganda for what it is if rationality in analysis and action is to be possible. We have observed how the action process is perverted by the propagandist, and an experimental method of analysis has been briefly described. Now let us observe the form taken by propaganda in action.

It would be a mistake to correlate a classification of fallacies with the pattern of analysis which has been developed. No fallacy is peculiar to any particular category, nor to any area of scientific research. To state fal-

lacies typical of specific areas of the analytic pattern would be to assume that the process of thought was different in each area, a theory which has already been denied. In constructing the pattern, we observed certain errors common to all areas, such as that of extending a specialized analysis beyond its limits. It is with such errors, which are common to analysis in general, that we shall be concerned. This means ignoring the traditional classification of fallacies, and well we may, for the historic division of errors in thinking is rather shopworn and antedated. The basis of classification to be presented here is derived by the "case-method", that is, the classification is based upon the kind of fallacies which are observed to occur repeatedly in efforts to think about problems of activity. Such a classification seems necessary because most of the fallacies we encounter are propagandistic rather than formal in nature. It is, then, with the manner in which analysis is denied or distorted that we are concerned, rather than with the possibilities of error. The types of fallacies to be discussed are to some extent localized, perhaps some of the fallacies described would not be likely to occur in ancient Athens or in an African village.

No effort will be made, of course, to give an exhaustive statement of fallacies in analysis, such a list would be tiresome, impractical—and just as we finished, someone would invent and perpetrate a new fallacy! The fallacies to be described will be typical and common errors, the references are almost wholly in terms of material which can be documented in current newspapers, journals, books, lectures, radio, and such sources of public information and

misinformation It appears more suitable to the continuation of our purpose here to treat fallacies in regard to their typical form and structure It would be a departure from the problem with which we have been concerned to discuss sources of propaganda or to attempt the description of specific propaganda techniques Such an investigation might well prove interesting and perhaps useful, but as far as we are concerned in studying analysis, propaganda is propaganda, whether its purpose be trivial or cosmic in significance. Therefore, to the end of observing the structure of fallacies, the examples used will perhaps incline more toward the trivial than to the cosmic. The absence of profound or controversial subject matter will enable us to concentrate on the nature of the fallacy itself, but our discussion of fallacies is meant only as a preliminary to skill in evaluating more important arguments.

The incidental return in fun of "fallacy-detecting" is itself well worth the effort A notebook of representative specimens will become increasingly valuable as a laboratory of thought and analysis, and by no means unimportant is the overtone of personal satisfaction which can be experienced in a survey of this intellectual bone-yard by the individual who pronounced them "boners" The maintenance of independent judgment, the refusal to be hoodwinked—this is the ultimate prerogative of an intelligent man

This individual acumen and exercise of analytic judgment are, indeed, the final and the only available bulwark against the encroaching displacement of intelligence by propaganda Propaganda was earlier defined as an attempt

to influence the action of others by nonrational methods, but in a very real sense the distinction between analysis and propaganda lies in the receiving instrument rather than in the broadcasting apparatus. In the first place, determination of the motives which actuate such material is practically impossible, and especially is this the case with regard to the mass of informative material to which the average man is every day exposed. The same sort of situation exists in regard to the products we use, no individual has the time or the specialized capacity to analyze the merits of all the various things he must buy. Nor are research agencies of any very great assistance in this respect, for the individual buyer must then contemplate the possibility of changes in quality and price. This does not mean that standards of practice should not be rigidly enforced in regard to labels, advertising, and the like, and perhaps some similar regulation might be admitted in respect to public information without constituting an invasion of private rights or a restriction of freedom of speech. If it is reasonable to prevent a manufacturer from packing tainted food and reasonable to insist that a chemist state the contents of medicine, then it does not appear unreasonable to suggest that some public penalty should be inflicted upon newspapers or other organs which propagate misinformation. The use of faked photographs is a case in point ¹

¹ It is interesting to recall Jefferson's comment on the problem of public information in his own day "Were I the publisher of a newspaper, instead of the usual division into Foreign, Domestic, etc., I think I should distribute every thing under the following heads 1 True 2 Probable 3 Wanting Confirmation 4 Lies At present it is disreputable to state a fact on newspaper authority, and the newspapers of our country by their abandoned spirit of falsehood, have more effectually destroyed the utility of the press than all the shackles devised by Bonaparte"

Such exercise of control over the flagrant and obvious violation of public responsibility can never, however, relieve the individual of the necessity of making analytic judgments. Anything approaching a complete control of public information would constitute censorship, itself the worst kind of propaganda. Except in the cases of food and drug supervision, of libel, and of obvious faking, the responsibility rests upon the individual to analyze the material as information. Of what real import is the source or motive of the information? Why should the individual, after all, be concerned about the motives of the speaker or writer? From the standpoint of making an analytic judgment, such concern is so much waste motion. It is up to the individual to develop a capacity for analyzing information in order to be able to separate fact from fancy, to distinguish perception from deception.

The individual who has thus cultivated a capacity for analyzing written and spoken material for the purpose of evaluating it as information is not so likely to fear propaganda as to welcome it for what fact it may contain. The refusal to listen to anything that might possibly stem from a propagandistic source is but the admission of inability to distinguish, inability to think and analyze. Most of us might well take a cue from the legislator, who has learned to appreciate propagandizing lobbyists as sources of some of the most vital information he gets concerning legislative proposals. When those at whom propaganda is directed are known to be capably intent upon analytic clarification, it seems reasonable to suppose that the process of propaganda and counter-propaganda will take the course pre-

viously described that of restating arguments with ever-increasing additions of factual data. The only defense which propaganda has against analysis is fact—or the pressure of undisguised force, which is not rightly called propaganda at all. The stronghold of intelligence is the individual, and there is no escape from the responsibility of protecting intelligence by using it

CHAPTER XI

Fallacies of Observation

IT APPEARS more fruitful to approach the subject of fallacies in terms of the process of thinking as it might be defined from a very general perspective rather than to follow the pattern of analytic points-of-view. This broader and more casual description of thought would seem to start with the activity of observation, at least, the act of observing provides a convenient focal point from which to examine a group of fallacies which are common to all areas and points-of-view in analysis.

Observation is a primary function of all sciences and methods, and the mere fact that men are in every case doing the observing is a sufficient reason for the common occurrence of certain errors which are not peculiar to any particular method. That observation is an essential element in thinking and analysis it is hardly necessary to con-

tend, and its elementary position in the process of thought gives additional significance to fallacies which occur in the discovery and description of data. An error at this stage will distort the entire process of inference and prediction which uses that observation as data. Analytic data are not the product of casual or haphazard observation, as anyone knows who has learned the method of a specialized science. There are, in addition to particular methodological techniques, certain general analytic requirements which must be met before observation can be accepted as providing valid data.

BORROWED METHOD

Foremost among the general errors of observation is the procedure which can be designated as the fallacy of *Borrowed Method*. This nomenclature is almost self-explanatory, but let us recall briefly some comments previously made on the nature of analysis. One basic assertion was to the effect that any fact is adequate subject matter for any possible science, and emphasis was placed upon the corollary—that the description of fact would be subject to determination by the scientific method employed in the description. The implication is, of course, that the manner in which fact is described is itself the proof of *what* science is being used and *what* point-of-view is being taken in observing that fact. Despite this apparently obvious nature of descriptive analysis, one of the errors most commonly encountered is that of using one particular method while professing quite another science or point-of-view. That is, the description of fact by a

method appropriate only to one science or point-of-view is offered as substantiation of a completely different science or point-of-view. Consider, for example, an argument which attempts to justify the acceptance of principles of theological dogma on the ground that one cannot even play a good game of golf without following the basic rules of the game, the same argument borrows still another method by referring to the "delicatessen dealer's mathematical *dogma*," meaning thereby the arithmetic of counting as it is used by the tradesman. This is a somewhat extreme example, but it well illustrates the trick of borrowing from some point-of-view a method which seems likely to enforce an argument which apparently could not be supported by the observation of its own method. If theology cannot justify its doctrine on the ground of observations made with the method appropriate to theology, then that dogma certainly cannot be reinforced by an attempt to support theological fact with a mathematical or a recreational method of observation and analysis.

The borrowing of methods is not usually so brazen and naive as that of the above example, but confusion is quite often engendered by borrowing the technique or the terminology of another method to support one's observations, especially if the borrowed method is one which is likely to lend force or popular appeal to the argument. Thus, the definition of emotion as "simply a form of energy generated by our glands, exactly as the power we read or ride by is generated by mechanical batteries" is an illustration of such flagrant borrowing from Physical Science to reinforce a psychological opinion that the result is almost

literally nonsense. We have already remarked the tendency, even among psychologists, to borrow method and terminology from the Physical and Biological Sciences, with the result that what might be legitimate psychological observation quite often represents a complete confusion of analytic methods.

Animism is, of course, an example of borrowing a method appropriate to Physical Man or Person and applying it to objects of Nature. When trees and stones are treated as personalities with wills and desires and needs, the failure to maintain a distinction between two essential categories makes almost impossible anything which could be called Biological Science. An amusing instance of animistic confusion of methods was the phrasing of a news item from Germany, which reported that economic-dictator Goering had *ordered* all hens to increase their production of eggs from 90 to 140 per annum. Those that did not *comply* were to be "killed and eaten."

One of the clearest cases of Borrowed Method is the common employment of the method of Politics to describe the function of Administration. This confusion is the source of a very general belief in the United States that party politics could not survive if deprived of patronage in the form of administrative appointments. That this belief is not at all supported by an analytic observation of the facts is attested by several communities which have reduced patronage to a minimum—notably Cincinnati and Milwaukee. When an adequate analysis is made of Politics and Administration as distinct functional sciences, employing distinct methods of observation, the assump-

tion that there is any necessary connection between the function of politics and the administrative function is seen to be groundless. Naturally, it is to the private interest of some individuals to nourish the conviction that the method of Politics is the proper means of observing fact from an administrative point-of-view. The fact remains that the gradual extension of civil service—that is, the increased employment of a proper method of observation in Administration—has interfered not one whit with the method or the function of Politics. In the communities referred to above, where administration has been brought almost wholly under civil service, no lessening of interest or activity in the political area has been observed.

Sometimes the borrowing of method takes the form of describing a science or a function in terms which apply exclusively to one of the two categories which are involved in the relation established by the science. What is perhaps an adequate description of the characteristics appropriate to the category is taken as a sufficient description of the science itself. Thus, a professor of economics who states that "Always the government is the men who do the governing" is apparently trying to describe the function of Politics in terms of Person merely because the category of Person seems somehow to be involved in the relation maintained by Politics. The possibilities of confusion which accrue from such analytic vagueness become evident in the inference made from the above statement—that "a government is not old or mature unless it is run by mature or old men" and "we cannot expect the government to do things that individual men cannot do."

Similar to the above instance of Borrowed Method is the assertion, this time by a professor of political science: "Democracy in the United States will be safer and more enduring if political parties continue to appeal to the voters more largely on personalities than on fundamental social and economic issues." In short, this is a suggestion that Politics is not a legitimate function and has no method of observing fact, and that what is erroneously called the function of Politics can best be performed by deliberate restriction to one category of the Individual point-of-view

These examples of the fallacy of Borrowed Method are sufficient to indicate the nature of the error involved when any science or point-of-view is documented by observation made with the method of another science or point-of-view. It does not follow that the relations between and among various specialized methods of observation are not to be recognized and exploited in terms of adjusting and integrating the whole of knowledge. If, however, in the endeavor to integrate knowledge we lose sight of the essential distinctness and the analytic independence of specialized areas of observation, the integration will be achieved at the expense of the very valuable contributions of these specialized sciences. The integration of knowledge is not a reduction of all methods of observation to a single confused, indiscriminate use of any method of observation from any point-of-view. The method of observation is an indication of the point-of-view being taken, and the borrowing of method, therefore, involves assuming the point-of-view to which that method is appropriate.

DISGUISED DIVISION

A second kind of fallacy in observation indicates an internal rather than an external deficiency of method, inasmuch as this error usually arises in cases in which the method of observation is quite proper to the point-of-view being explored. What may be called the fallacy of *Disguised Division* is the result of a failure to meet the demand for systematic classification—a requirement which must be fulfilled if observation is to serve the purpose of clarifying and adjusting new knowledge to the body of knowledge already known and accepted. Unless the observation of new fact takes account of this necessity for classification within the entire system of the science, the new facts will be incoherent and largely useless.

Classification, as we have earlier remarked, utilizes a principle of division which is largely arbitrary. If I am observing men, the principle or unit by means of which I divide men so as to classify them will depend almost wholly upon the purpose or point-of-view of my observation. I may list men according to their religious preference, their age, or even in terms of the length of their toes. The point of importance is that, whatever principle of division I may use, my observation will have no precise meaning to another person unless the exact nature of that principle or unit of classification is made quite clear. The statement, for example, that a certain company has throughout the past year had a low percentage of "industrial accidents" is almost meaningless unless information is also given as to

the precise unit of classification used in determining what constituted an "industrial accident." Was the division made on the basis of medical attention rendered or in terms of hours lost from work, and was it inclusive of normal accidents?

It is clear that failure to define the unit of division renders any statistical report of observation at least questionable, if not entirely without meaning. It is perhaps an exaggeration to assert that "anything can be proved by statistics", but it is certainly true that a single instance of observation can, by variation in the selection of the statistical unit used to record the observation, be so presented as to document quite contrary interpretations. Consider the results of a psychological test of increase in efficiency through practice

<i>Person Tested</i>	<i>Before Practice</i>	<i>After Practice</i>	<i>Gain</i>
<i>A</i>	10 per min	15 per min	5
<i>B</i>	4 " "	6 " "	2

If, however, the results of the same test are tabulated in terms of the time required to perform the operation, the statistics will appear

<i>Person Tested</i>	<i>Before Practice</i>	<i>After Practice</i>	<i>Gain</i>
<i>A</i>	6 seconds	4 seconds	2
<i>B</i>	15 "	10 "	5

According to the manner in which the observation is reported, the results in terms of gained efficiency can be made to appear exactly contradictory. Nor is this importance of the statistical unit minimized if the report is extended to include percentage of gain, for in the first

instance, using the unit of "operations per minute," both *A* and *B* show a gain of 50 per cent, while in the second report of "seconds per operation," both *A* and *B* show a gain of only $33\frac{1}{3}$ per cent

The autobiographical account of the wife of a former President of the United States offers an amusing example of Disguised Division. According to her statement, this secretary-wife never made a single decision of importance in regard to the presidential disposition of affairs of state. The only decision she made, so she asserts, was simply that of determining what matters were and what were not of sufficient importance to call to the attention of the President. This is somewhat reminiscent of the explanation which a man gave of his continued state of marital happiness: that, before marriage, he and his wife had agreed that she would decide minor problems and he would have the decision of all major problems. Their happiness, he added, was due to the fact that during the twenty years of their married life no major problems had arisen.

The statistical unit or principle of division used in the classification of facts is, then, of the greatest importance in analyzing the results of observation. If this unit of division is not clearly evident, or is not precisely defined, the facts of observation are open to a variety of misinterpretations. It is apparent also that if the principle of division is disguised, it will be practically impossible to verify or disprove the observation without repeating the entire experiment from which it was supposedly derived, in which case the observation and report of results are serving no useful purpose.

RANDOM SAMPLING

Random Sampling is the final fallacy of such common occurrence as to merit inclusion in these errors of observation. The process of sampling introduces another principle of division into observation, and thereby doubles the possibility of confusion. The effect which a unit of classification has upon the interpretation of observed fact has already been emphasized, but consider how much greater is the possibility of distortion if the very act of observation is itself subjected to a principle of division which is largely arbitrary. The principle of Random Sampling is based upon the assumption that if a barrel contains ten thousand black and ten thousand white beans, thoroughly mixed, the chances are that successive handfuls will each approximate an equal number of black and white beans. Here, of course, no deliberate division is practiced in the act of observation, for the alternatives are limited to black and white, and reliance is upon chance and the law of averages.

When, however, the subject of observation is a complex mixture, such as public opinion, the alternatives involved are no longer two simple divisions. The possible alternatives in public opinion on any subject cover a wide range of number, complexity, and variability. No longer can reliance be placed on simple chance and the law of averages. There must be introduced into the observation itself a unit of classification which will insure that the sample selected at "random" is a representative or average sample. What is often forgotten in analyzing the sample is the fact that what constitutes a fair or average or representative

sample is by no means a statistical matter of averaging or abstracting from what is already known. If I knew what would constitute a representative sample of opinion on any given subject, I should also know what public opinion was on that subject. In other words, in order to state a unit of classification for the determination of what is a sample, I should have to know beforehand all the factors and elements which were of importance in constituting a fair or average sample. The process of Random Sampling is, in such a case, anything but random.

This criticism does not imply that there is no validity nor any informative value in the sampling process, but it does indicate that the analytic status of such sampling can be determined only by a proper definition of two more or less arbitrary units of division. The first is that mentioned above, the unit of classification which is applied to the observed fact itself, the second is the division which is made of the material to be observed, made prior to the observation. It is, therefore, of the greatest importance in analyzing the data adduced by sampling to note carefully the manner in which samples have been selected, it is clear that when the subject matter involves more than two simple factors, such as black and white, the selection will become less random with an increasing number of variables.

Consider, for example, the following apparently simple instance of sampling opinion on the subject of movies. The question presented only two alternatives: did the movie-goer prefer single- or double-feature programs? The results of the poll showed a seven-to-three preference

in favor of double-feature programs, but someone was wise enough to inquire as to the unit of selection. Was the poll taken in theatres showing a single-feature program, in theatres showing a double-feature program, or in both? Those who had conducted the sample poll admitted that the data had been collected only at theatres showing double features, thereby rendering the poll largely meaningless. One might as well seek data on liquor consumption by questioning only the habitués of bars.

The units of selection for sampling consist of a set of controls which serve the purpose of including and balancing all factors which seem of importance in the selection of the sample. Once again, it is quite clear that in order to determine such controls accurately, it is first necessary to know or to assume what factors are of significance in the particular matter or opinion under investigation. To Dr. Gallup's American Institute of Public Opinion must go credit for publishing a clear statement of what is considered an adequate set of controls for the sampling of public opinion on matters of social and political significance.¹ These controls, as formulated by Dr. Gallup, are six in number and aim at the maintenance, in the Institute's surveys, of proper proportions of the following divisions

- 1 Voters from each state
- 2 Men and women
- 3 Urban and rural (five size groups)
- 4 Voters of all age groups
- 5 Voters of low-, average-, and above-average income.
- 6 Voters of all political parties

¹ *The New Science of Public Opinion Measurement*, Princeton, N. J., 1939

The great difficulty of maintaining an adequate sample of such highly arbitrary and rapidly fluctuating group controls is apparent, but it must be admitted that the Institute is approaching the problem of random sampling in an analytic manner, and there is no reason to suppose that it is not performing the task as well as it could be done. The question is whether sampling can ever be productive of analytic or reliable data in any situation in which more than a bare minimum of two or three stable and unfluctuating factors are involved. For example, on many problems of public policy, it seems likely that the use of a single control for the division of observation might well result in data which would be as reliable as an Institute survey, if not more so. On such a subject as birth control, is it not likely that a simple division in terms of religion of the units surveyed would constitute a better sample than any other?

The prevalent superstitious reliance upon statistical data is nowhere more apt to lead to false inferences than in this matter of polling. There is apparently a general belief to the effect that the larger the sample taken, the more statistically correct it will be, but this is obviously not true. If the controls which determine the selection of the sample are inadequate or incorrect, an increase in the number of the samples will but increase the error. This is well exemplified in the remarkable accuracy of the polls conducted by *Fortune* magazine, where the samples are extremely small in number, and the wide margin of error of the *Literary Digest* polls, which took an excessive number of samples. There is no escape from the determining

effect exerted on observation by the selection of controls for division, except in cases in which the subject matter examined is stable, uniform, and unitary. This practically limits the application of sampling to the area of the Physical Sciences, which, as we have already noted, have adopted a method based upon the assumption of a strict uniformity in Nature.

Polls, such as those conducted by the Institute of Public Opinion, have, therefore, exerted an undue influence upon the determination of public policy. In the case of political opinions, it is highly questionable to what extent it is possible to refer to the course of events as a documentation of the correctness of a previous poll. To establish this verification, some information would be necessary on the crucial problem of how much influence the highly publicized poll itself had upon the determination of opinion and policy. That the Institute polls do exert considerable effect is evidenced by the numerous references made to their data on the floors of the United States Senate and House of Representatives. In some connections, it might even be surmised that these polls have had a greater propaganda effect than any other single factor. One need adduce no evidence of the "bandwagon" tendency in matters of public policy, while the published results of the Institute's surveys may in no wise be the result of prejudice or interest, they cannot but influence opinion in the direction indicated by the poll. There is, it is to be hoped, a limit to the influence which can thus be exerted upon public opinion.

So-called random sampling, as a method of observation,

is, then, in any proper sense appropriate only to the method of the Physical Sciences, a method for the observation of the relation of Nature and Mathematics. Upon the assumption of strict uniformity of subject matter, Random Sampling may be accepted as productive of valid analytic information within that area. When the material to be observed is such as to make impossible any such assumption of uniformity, the process of sampling cannot correctly be called random, its value as analytic data will depend, not only upon clarity of the statistical unit employed, but also upon the adequacy of the sampling controls. As has already been remarked, the only analytic verification of the adequacy of controls is upon the basis of the results of the observation, results which themselves are the only adequate indication of what factors are of importance in the selection of material for observation.

There is, indeed, a third consideration of which account must be taken in evaluating the data of sampling techniques. Not only is it questionable to proceed with observation on the basis of an arbitrary selection of *what* material is to be observed, but it is likewise of the greatest significance to notice *how* the observation is conducted. In the case of polls of public opinion, for example, it will make considerable difference to the results obtained in a particular instance if the alternatives are so limited by the form of the question that the voter faces a dilemma. Suppose, for example, that the question asked is "Do you favor the present policies of the administration?" It is not likely—fortunately—that many people in the United States would be willing to answer an unconditional "Yes"

to such a question. Integrity would in most cases dictate the answer "No" if any reservations at all were to be made. Thus, another arbitrary and variable factor is introduced into the sampling process, and the difficulties in ascertaining and evaluating this dual system of controls, plus the determination of the validity of the statistical unit, tend to make the process of sampling highly questionable. When the material observed is variable, such observation is likely to contribute more confusion than data to analysis, for it is difficult to see how any method short of analytic observation could justify the acceptance of sampling results as analytic data.

CHAPTER XII

Fallacies of Inference

FOLLOWING observation, the next general step in the process of thinking may be described as that of drawing inferences from the facts observed. This is, of course, a more formal and systematic operation than that of observation, and one of the concerns of logic is to state general rules governing this formal aspect of thought as inference. As a consequence, formal logic usually comprises also discussion of a set of fallacies which occur when the formal rules of inference are violated. These rules are to inference as grammar is to language or axioms to mathematics.

Our concern here, however, is not with the particular rules of method for any science or category, but rather with fallacies common to all methods of analysis. These so-called stages of thought, to be sure, must not be over-

emphasized, they provide convenient divisions for this particular treatment of fallacies. It is plain that it would be rather difficult to describe observation as distinct from inference, for the very process of classification, so necessary to give meaning to observation, involves some degree of inference from the facts as merely observed. It is a continuous process we are describing, a process which we have hacked up into three convenient segments.

WEASEL WORDS

Somewhat analogous to Borrowed Method is the first error of inference, the fallacy of *Weasel Words*. This mistake, which occurs in statements of the results of observation, comes not from a confusion of methods, but rather from a borrowing of terminology. The two fallacies are very closely related, they represent the same tendency to error in thought and are distinguished mainly by the position in which they occur in the thinking process. Borrowed Method indicates the use of an inappropriate method in observation, the fallacy of Weasel Words describes a confusion of inference by presenting the data in terms not appropriate to the category or point-of-view being described. Every method of observation will develop a terminology suitable to its point-of-view, and the terms of that method will take on precision of meaning in proportion to the development of its system of classification. Neither methods nor classifications nor terms can be interchanged without involving a loss of clarity, if not actual error in reference.

In some of the previous chapters we have noted the

confusion which results when the method or the terminology of a particular category is used to describe another quite different point-of-view. We remarked especially the identification of property with private man, an identification so completely assumed in ordinary thought that property and private-property are in most cases taken as synonymous. witness the recent assertion of a Senator that property rights are among the greatest of human rights and that human rights cannot be realized without property rights. As a matter of fact, the terms *private* and *property* are each appropriate to a different analytic method, when they are put together to form a single concept, they represent an integration of two points-of-view, a process which involves something beyond analytic observation. What such a new concept can be made to mean without doing violence to analysis is a matter of adjustment and definition. "Private property" means only what it can be made to mean in terms of the integration of Individual and Material points-of-view.

The absence of clarity in terminology makes easier the use of Weasel Words for the purpose of deliberate confusion. A recent book stated, for example, that sixty families in the United States control the wealth of the country. To this charge a rebuttal was made to the effect that statistics prove that ninety-five per cent of the people in the United States own eighty per cent of the wealth. At first glance, that appears to be an adequate answer, supported by statistics, but when the statement is subjected to analysis, the fallacy is obvious. Whereas the original statement said "control," the reply said "own," and the

use of "control" and "own" as synonymous terms is not analytically justifiable. How much of the confusion which characterizes our economic life comes as the result of this interchange of terms appropriate to two different analytic points-of-view can be surmised from analysis of the arguments common to such conflicts. There is here no question of the correctness of the method employed by either point-of-view, what analysis does indicate is that the end of organizing and integrating knowledge is defeated if any category or point-of-view is subjected to statement in the terms of a method not appropriate to it.

The fallacy of Weasel Words occurs quite often through sheer carelessness in the definition of terms, or, again, the absence of adequate observation and terminology in one area suggests the easy alternative of description with terms appropriate to another area. Weasel Words also serve an ulterior purpose if they impart a tone of vital significance to something about which a listener is actually apathetic or ignorant. Such is the appeal of the politician to "elect a man who is God-fearing and church-going." Religion is an area quite distinct from that of politics, but religion is a matter of more immediate concern to many people than qualifications for public office. Weasels are slippery, however, and the user of such words may find that he has thrown a boomerang. Such was the case when a Congressman of the United States, in a published article, proudly claimed to be a "liberal" and an advocate of liberalism, two pages later in the same article, he asserted that "every crackpot from Socialist to Communist" was wont to call himself a "liberal."

Note the confusion of terminology between biology and religion which is involved in an objection made against the showing of a moving picture of childbirth. "Because it is a scene too sacred" to be witnessed by the public. Another Member of the House of Representatives made the statement that hysteria of public opinion was panic, and proceeded to the inference that panic implied bad business and unemployment. That the term "panic" as here used is straddling two points-of-view is clear, one might almost argue that "good business" seems to involve a degree of one kind of public hysteria or panic. A somewhat more subtle instance was the answer made by a member of the board of regents of a state university to a charge that the publicity bureau of the university censored news. The bureau, said the regent, did not censor news, for it had "no notion of withholding news from one paper that is given to another." The strictest propaganda censor could make that claim, could he not?

One of the most persistent instances of this substitution of terms is a Weasel Word which appears often in the history of political and legal theory. The terms "natural law" and "natural rights" are as misleading as the concept of private property. The use of "natural," as signifying the category of Nature, in connection with "law" and "rights" is completely unjustified except on the basis of a demonstrated integration of the points-of-view involved. We can, of course, refer to the nature of man or of property or of language, but "natural rights" are meant to indicate something more than an observable characteristic of Physical Man. The sort of thing which has been tradi-

tionally defined as a natural right is neither natural nor a right.

What is intended by "natural" in this connection does not derive from Nature, but is some kind of guarantee by Law or by the State. In short, what is meant by "natural" must be carefully defined, and the same holds true for "right." If by a natural right is meant a physical want or need, that is one thing, but it would reduce the concept of natural right to the level of such desires as hunger and sex. If, on the other hand, natural right means a rule of Nature, then it is a concept dealt with by the Physical Sciences, not directly deriving from the Individual point-of-view at all. To be sure, neither of these definitions is what is meant by natural rights, but the fact of the matter is that what is meant by natural rights is in most cases largely meaningless.

Why, then, has the term "natural" been so consistently used in this unjustifiable manner? Why does a president of the American Bar Association proclaim that "Justice is a manifestation of the natural law which is in turn a manifestation of the eternal law"? The source of the error seems to be an even deeper confusion of terms and categories. The appeal to nature to document both rights and law has not been made in terms of the Nature we have described as an analytic category. The term "natural" as applied to rights and law implies the further assumption that what is natural is therefore a product of divine creation, possessing thereby characteristics of universality and goodness. Thus, the concepts of natural right and natural law represent not only a confusion of Individual

and Material points-of-view, but they are also in a very real sense religious concepts, resting upon a definition of the relation of God to the world and to man. If, however, such doctrines are put forward in the name of theological dogma, they rightly belong in the area which relates Individual and Formal, and the reference to nature is inappropriate

This is but one historical example of the unmitigated confusion which can be engendered through the use of terms without regard for their analytic meaning and reference. Religion seems generally to be the greatest sufferer from this misappropriation of terminology, owing undoubtedly to the fact that religion has historically occupied such a sacrosanct position in man's affections that its terminology has often been made the tool of those whose methods and purposes were not religious at all. It would not be difficult to adduce examples covering the entire range of analysis, examples in which the terminology of religion has been used to describe that which analytically has no relation to it at all. It must be admitted that the general failure of religion to recognize its own analytic area has in large part been responsible for the ambiguous status of religion in analysis. The constant interference, by that which claims to be religious analysis, with the observations of other sciences has had two vitiating effects on religion itself. The first is, of course, that the proper subject matter of religious analysis has been neglected, the second is the inescapable loss of prestige which religion has suffered in the unequal conflict with other methods and sciences. It is hardly to be expected that one method of

analysis can invade the field of another specialized method and usurp the observation and data of that field. Sufficient to the science is the method thereof, and the repeated defeats suffered by religion in the fight against physical science, against the developing concepts of biological science, against the changing customs of moral science, should have indicated to religion that a successful battle against specialized methods of observation cannot be waged by applying to other methods and points-of-view, in either positive or negative fashion, terms appropriate to religious analysis. It is meaningless to criticize in religious terms such concepts as the biological theory of evolution, the relative nature of custom operating as group morality, the geological hypothesis of the earth's development, or legislation concerning alcohol, birth control, or war. Such a use of terms appropriate only to the area of religious analysis is an indulgence in the fallacy of Weasel Words, for which there is no analytic justification and from which can be expected to result only a confusion of knowledge and action.

CHANCE CORRELATION

A second fallacy of inference is *Chance Correlation*. This is not a misuse of terminology, but rather an association of concepts or data for which there is no analytic ground of association. Several circumstances combine to make haphazard association one of the most common errors of thinking. In the first place, it is extremely difficult to avoid associating, as if there were some analytic connection, those things which often appear together in our

experience This tendency is so strong in experience that Hume was inclined to explain all our causal association as deriving from an observation of sequence and contiguity between two things or events Naturally, the more vague is our body of knowledge, the more inclined we will be to explain new experience in terms of Chance Correlation. Thus, the primitive islander who sees a whale shoot forth a spout of water, shortly before a typhoon strikes the island, will be likely to make a connection between the sea monster and the storm

The fallacy of Chance Correlation is unfortunately not restricted to the primitive level of thinking It is the primrose path of which all thought must be wary, especially is this true in connection with propaganda, for it is upon the tendency to establish these nonanalytic correlations that the propagandist particularly plays. This is an aspect of thought which must be continually subjected to scrutiny in regard to the maintenance of analytic clarity. One of the most annoying of thought's characteristics is the tendency to make such correlations without deliberation It is certainly a common experience to realize suddenly that one has already accepted such a correlation and is conditioned to it, yet with no awareness of when or where the association was originally made. This is a continuing task of self-analysis the recognition, and elimination from our body of knowledge, of these products of chance correlation which, regardless of their origin, have no analytic validity. The task is by no means easy, it is only at the price of constant vigilance that man can maintain the minimum status of rationality, of knowing what he is

thinking and why he is acting. Aldous Huxley in *Brave New World* portrays with startling vividness the *reductio ad absurdum* of conditioning by chance correlation. In the possible society of tomorrow which he there describes, children are conditioned to their future existence by means of correlations well established during infancy. Those who are to be workers, for example, are allowed to crawl toward a book in the middle of the floor, but just as they reach for the book, a screeching siren is sounded, and the infants recoil in terror. A few such instances and the children are well conditioned for life against the subversive effect of books and literature.

Let Huxley's vision not be discounted with too cavalier a humor, we have but to consult the psychiatrist concerning the effect upon our thinking of these correlations made unconsciously and never subjected to the scrutiny of analysis. There is, of course, no limit to the range of Chance Correlations, and what we correlate will be determined largely by the chance of circumstance. It has often been remarked facetiously that a statistical correlation could be demonstrated to exist between the birth rate in Tibet and the fluctuation of prices on the New York Stock Exchange. But is such a correlation any more implausible than the statement by one of the most widely known economists in the United States that "A general failure to keep the Sabbath holy is the chief cause of America's economic ills"?

Chance Correlation is perhaps more common within the Formal point-of-view than in any other area. That this is so is due mainly to the association of one word with an-

other word which already has in our thought an established, conditioned meaning. Slogans, tags, and symbols play an important part in the game of influencing public opinion. In many cases, the success or failure of a public movement or of a political campaign hangs upon the selection of compelling linguistic symbols, great, indeed, is the handicap of a movement which finds itself labeled "mugwump" or "tory" or "monopoly" or "machine."

One of the most amazing and amusing examples of Chance Correlation is the lip service paid to the doctrine of *stare decisis* in legal procedure. In a previous chapter, we noted the source and significance of this regard for continuity in Law, but in actual practice, this reliance upon precedent as the ground for decision in cases at law has reached a point of diminishing returns. When a lawyer, in order to get a favorable decision from a judge, must search the records of cases until finally he comes upon a suitable precedent—perhaps a case decided in England in 1724—then indeed Chance Correlation is being elevated to the status of judicial dictum. Apparently, the reliance upon legal precedent rests mainly upon the linguistic correlation to which we have referred. It is upon the similarity of phraseology and terminology that the precedent is largely based, for the actual analogy of circumstance between cases occurring a hundred years apart is not likely to be either close or compelling.

In its origin, the effort to maintain some degree of continuity in the application of the law through the maintenance of consistency with preceding decisions was certainly a necessary and commendable desire. But instead

of working out a structure of analogy and correlation by means of which legal procedure could function with such a degree of Consistency as to facilitate reliance and prediction in regard to legal decisions, the courts on the whole had recourse to the easier procedure of Chance Correlation. That cases at law do evidence analogies of circumstance and correlations of procedure certainly cannot be denied, and that the formalization of this correlation for purposes of continuity is one of the chief tasks of law has already been implied in the previous description of Formal analysis. But the rule of precedent in law has lapsed into a sheer device by means of which a veneer of consistency disguises the more prosaic substance of the judicial process.

The necessity of performing this ritual of Chance Correlation in every legal process is the source of a veritable word-mania, the achievement of which constitutes a large part of the training of lawyers, and the results of which make the legal process and decision as unintelligible to the layman as the gibberish of more primitive witch-doctors. The perpetuation of the precedent myth is a deliberate indulgence in the fallacy of Chance Correlation. How else can we analyze a process in which a lawyer, after observing the facts, preparing his argument, and drawing an inference, then searches madly through the volumes of previous decisions to find a case or cases the terminology of which more or less resembles his already prepared argument?

Law presents the most dignified, as well as one of the most obvious, instances of Chance Correlation through

the manipulation of linguistic symbols, but this fallacy is by no means confined to legal verbalisms. There are, in our thinking, many correlations indicative of associations so established that they are seldom if ever questioned or brought to attention. One of the most persistent of these is the assumed correlation between private virtues and public functions. In the first place, there is some ambiguity in the concept of "private" virtues or morals. Whether privacy is taken literally or figuratively, however, it is one of our most common assumptions that a virtuous man will be a good public servant. In spite of all the examples to the contrary which history and our own experience produce, this seems to be one of the associations most difficult to eradicate. It is perhaps a vestigial remnant in our thinking, left over from that period of man's development in which there was an established and accepted identity of moral, religious, administrative, and political sciences and functions. When priests were politicians and when law claimed imperative status because of supposed emanation from God through the priest-politicians, to be virtuous in terms of religion and morals was at the same time to be legally or publicly good.

Except on the basis of some such assumptions as these, assumptions which are analytically unjustifiable, it is at least arguable that the relation between private morals and public function is a chance correlation. This relation rests upon nothing more profound than that the agents of public service are individuals, and that individuals are either virtuous or not virtuous according to some particular standard or code of conduct. But individuals are also

either male or female, white or black or brown or red or yellow, tall or short—and what have these distinctions to do with their performance as participants in either a specialized science or a specialized function such as chemistry or economics or politics or administration? Few of us would deny that a man might be an expert craftsman or a competent economist, even though privately quite immoral according to customary rules of behavior, but we deny this analytic independence to politics and administration.

It would be quite as justifiable to demand that the astronomer or the theologian be a skilled craftsman or a specialized economist as thus to require that the politician be virtuous according to some standard of private morals. To be sure, knowledge and action will be incomplete and partial if all the factors indicated by analysis are not considered and included in the pattern of action, and this is true of individuals as well as of society. That is to say, there will be something partial and incomplete about the individual who fails to satisfy the requirements of morality, but it will not be a greater or more significant lack than if he has no vocational activity, or than if he does not in some way participate in politics, administration, religion, art, and science. In terms of the whole of an individual or of society, any inadequacy is lamentable, but one of the premises of analysis is the refusal to admit peculiar or special status to any category, point-of-view, science, or function. All are important, and the neglect of any one of these factors is as significant as, but not more so than, the failure to recognize any other factor.

The assumption, then, that there is some direct and necessary relation between the satisfaction of the demands of morality and the performance of public function is an example of the fallacy of Chance Correlation. This instance of fallacious association is especially important as an indication of how established and recalcitrant to analysis such conditionings can become. The most cursory observation of public function is enough to demonstrate that a man who is privately moral or even privately intelligent may be and often is publicly incompetent to the extent of being foolish. On the other hand, the panel of politics is studded with examples of men who were, by the standards of their society, privately immoral, but who as public functionaries were competent and sometimes distinguished in regard to public service. On this view, we must admit the rare clarity of perception evidenced by a district attorney who said "M is guilty as hell and should have been hanged. That is my belief as an official and I stand by it. As an individual, however, I have no objection if they want to pardon him."

The fallacy of Chance Correlation is, thus, the indiscriminate association of factors which are not only analytically distinguishable, but which analysis indicates are not necessarily correlative. The correlations which are, from the standpoint of analysis, legitimate and necessary within knowledge are those defined and established by the specialized sciences and functions described by analysis. Thus, the relation between man and nature can legitimately be described only by the biological sciences, any factors other than biological which are assumed to be essential to

this relation can in analysis have only the status of Chance Correlations.

ASSUMED CAUSE

The last fallacy of inference is almost an extension of the fallacy of Chance Correlation. When the nonanalytic association which is assumed to exist between factors is formalized to the extent of making one factor the *sine qua non* of the other, inference becomes involved in what may be called the fallacy of *Assumed Cause*. The distinction between the two fallacies is one of the degree to which the association is pushed. It might be said that Chance Correlation makes an association without analytic justification, but that Assumed Cause is an attempt to establish an actual analytic relation or connection and to proclaim that association as a necessary relation.

The source of the fallacy of Assumed Cause is not in the observation of a correlation which merely chances to exist between two factors. Rather, it is the extension of what appears to be a reasonable connection into a causal relationship. It is, in short, a confusion between the *reasons for* and the *causes of* a thing or an event. It should be clear that there is a very real distinction between reasons and causes. A cause is defined as the "sole invariable antecedent" of a thing or an event, the implication of this is that the concept of cause must be restricted to those areas in which a high degree of uniformity and stability can be assumed. As we have seen in other connections, it is doubtful if such an area exists except in terms of the assumptions of uniformity which characterize the method

of Physical Science In other words, except upon the assumption of strict uniformity of subject matter, it is possible not only that a number of circumstances may co-operate to produce a given result, but that these reasons may vary both in degree and in kind.

The selection of one of numerous and varied reasons, and the elevation of that reason to the status of a cause of the event under consideration, is therefore wholly without justification. Such a procedure can lead only to partiality in the process of inference—and both senses of the term “partial” are often evidenced by the fallacy of Assumed Cause. The error may result merely from a concentration upon one reason to the neglect of all others, or there may be a deliberate intent to make it appear that one observable reason is, indeed, the sole invariable determinant of the event in question. Ignorance or intent—the motivation makes no difference to the nature of the fallacy.

A more important distinction is that concerning the nature of the reason assumed as cause It may, in the first place, be a legitimate reason, a valid part of the explanation which analysis demands In this case, the fallacy is simply one of inadequate explanation, a case of what was referred to during the discussion of analysis as *segmentalism* This is the kind of partial analysis which is characteristic of Marxian and Freudian analysis—in fact, of all analysis which seeks to explain complicated phenomena by means of one determinant factor. Certainly it is true that all social activity has an economic aspect, and it might be said that therefore there is an economic reason to be observed and

considered in the analysis of all action. To pick out the economic reason in activity as the determining factor is, however, deliberately to limit and restrict the analysis itself. This would not be a valid procedure for inference even if the economic were proved in most cases to be the most important reason—and this would be a most difficult claim to establish. Even the most important reason in a given case is not the only reason, and the result, whatever it may be, is dependent upon a conflux of reasons and circumstances.

The position of determining significance which is accorded the economic factor by Marxian analysis is, therefore, a clear and outstanding example of the fallacy of Assumed Cause. The results of such deliberate restriction of analysis appear in the narrow and limited scope of the inferences which result from such observation. The contention that adjustment of the economic factor in action will *ipso facto* be productive of adjustment among all the other numerous factors involved in human activity is, to say the least, optimistic, to say the most, fantastic. There is no more analytic justification for selecting the economic reason as a determining factor of activity than there would be in picking out sex, communication, skill, or custom as such a sole determinant. It is extremely doubtful that any single analytic factor is in all cases of activity the most important reason, but it most certainly is not in any case the only reason.

This fallacy is the epitome of overstatement, contrasted with one kind of thinking which has been described as “jumping on a horse and riding off in all directions at once,”

Assumed Cause seems rather to be the tendency to "ride a good horse to death." Perhaps it is the paucity of observation in much of our analysis that forces us to place the entire burden of inference on the one reason of which we are aware. An outstanding medical authority recently declared that the real cause of disagreement between labor unions and employers was a lack of vitamin B₁ in the diets of the individuals concerned. Inference of this kind is likely to degenerate into the singing of a theme song, with effort concentrated on variations of the theme rather than on additional observation and analysis. Nevertheless, because there is some factual content in the inference, this overstatement of a single reason is the least reprehensible of the instances of Assumed Cause, but it is not for this reason any the less confusing to analysis. The illusion of simplicity which such a concentration upon one factor can give to a complex problem is itself one of the most vicious of misrepresentations in analysis. The popular argument that political democracy and all other aspects of democracy will follow necessarily upon the establishment of economic democracy is a naive and illusory statement of the problem of political organization. The achievement of economic democracy may well be essential to an integrated democratic society, but to look upon economics as the magic touchstone which will solve all problems of political organization is to expose oneself to disillusion.

A second form of Assumed Cause is that in which the purported causal factor is not even one of the *reasons* which analysis indicates to be relevant to the explanation of

the thing or event under consideration. Besides reasons, there are also in every situation circumstances which are more or less incidental to the result, and an entirely distorted inference results if such accidental factors are presented as causal, or even as reasons determining the result. As an example, the statement that neither Abraham Lincoln nor Thomas Edison had a college education is factually true, but to draw the inference that therefore college training has nothing to do with the attainment of eminence and usefulness is to translate an incidental circumstance of time and place into a reason and cause. That such incidental circumstances are "true" does not add weight to the argument, for not anything and everything that happens to be true is relevant to a particular inference.

Many of the cases in which an irrelevant factor is magnified into a cause arise from a failure to take account of other reasons which are not only effective in the result being analyzed, but also are actually the source of the circumstance which is fallaciously being cited as a cause. Of this kind is the argument that the use of the "Christian calendar" by Chinese Communists to date their issues of currency is a testimony of their acceptance of "Christ's advent." This inference completely ignores the major reason for such a use of the accepted calendar—namely, convenience. Another instance of ignoring reasons for both the circumstance and the main result is the argument "If you want to stay married, have the knot tied by a clergyman", or from another point-of-view, the assertion that a marriage is twice as likely to end in divorce "when the bride has no hope chest." Both of these statements

are supported by reports, surveys, and "statistics" What is neglected in these proposed inferences of causal relationship is the obvious fact that persons who are married by clergymen, and girls who have hope chests, are likely for other reasons to be the kind of persons one would not expect to find in divorce courts The fundamental and important factors here are the reasons, not only for disinclination to divorce, but for the hope chests and the marriage by clergy as well.

A peculiarly incautious inference of this kind occurs in the recent book of a noted scientist. Remarking upon the number of people now confined in insane asylums, this scientist goes on to say that insanity and nervous disorders seem to have become more frequent. Medical records undoubtedly record also more deaths from cancer and more cases of influenza than were observed in the past, but is it because of an increase in the disease or because of an extension of observation? It may well be true that there is now more insanity than ever before, but it would be a dubious inference for the astronomer to claim that the galaxy of stars which he sees with a new and more powerful telescope must have just appeared in the heavens. The expanding possibilities of observation impose upon thought a continual and inescapable demand for caution in inference, new facts will lead to erroneous conclusions unless inferences are drawn carefully, not only in terms of the new data, but in terms of the whole body or classification into which those data must fit.

Finally, we may remark briefly upon the kind of Assumed Cause in which the factor presented as determining

the circumstance is not a valid reason, is not even incidental, but is, indeed, a sheer fabrication. When, for example, Herr Streicher proclaims that the only reason the Pope intervened in behalf of the Jews was that the Pope has Jewish blood in his veins, we see committed a fallacy of Assumed Cause in which the assumption is neither a reason nor a fact. It is interesting to note that even if the assertion itself could be verified—that is, if it could be proved that the Pope has Jewish blood—this would not eliminate the fallacy of Assumed Cause from the argument. It is a fallacy on two counts first, because the factor adduced is not factual, and second, because even if it were factual, it might well be an incidental circumstance of the Pope's intervention rather than the *cause* of his action.

Such fallacies, in which an actual denial of fact is evidenced, seem rather obvious and easy to detect, but notwithstanding the apparent simplicity of the error, it is surprising how often this technique is used at the argumentative level. As an analogy to the Nazi assumption above, it is most disheartening to hear from a university student an argument in justification of lynching on the ground: "It is the only thing a 'nigger' can understand." The ability to accept as cause an assumption which is obviously and blatantly contrary to easily observed fact indicates a condition of intellectual paralysis which precludes any possibility of thought and analysis. If, in other cases, the Assumed Cause is not readily accessible to observation, or is not subject to verification, then the burden of proof rests upon the person who makes the assumption—the burden of proving first the fact, then the suggested rela-

tion. If I contend that a man holds certain views because he is a Communist, I must first prove the fact that he is a party member, and then demonstrate a necessary connection between his membership and the views in question. Otherwise, my inference is analytically worthless and might very well be a guess or a falsification.

To summarize, the fallacies of inference occur when the results of observation are not utilized with analytic clarity and distinctness. Observation itself, as we have seen, is not a simple process of "looking," and even more complicated is the task of maintaining systematic continuity and consistency in the inferences or conclusions from that observation. Things are, indeed, not always what they seem, not even when observation has been performed with care. When the process of thinking is no more than a casual acceptance of *appearance* as constituting the *meaning* of things, the final stage of the thought process is rendered vague, incoherent, and largely useless. The possibility of prediction, as the end-product of analysis and thought, will to a great extent be proportionate to the validity of the observation and inference which provide the only analytic ground for that prediction.

CHAPTER XIII

Fallacies of Prediction

THE conception of thinking and analysis as directed finally toward the adjustment and control of action has been predominant throughout all the foregoing discussion. It has been assumed that the significance of knowledge and the importance of thinking are proportionate to the facility acquired in the solution of problems and the integration of experience as action. The effectiveness of thought in action will, then, be dependent quite as much upon the manner in which knowledge is used to anticipate, to plan, and to control future conduct, as upon the clarity of observation and the consistency of inference. These three—clarity, consistency, and control—are the significant characteristics of analytic thought in terms of action and experience.

The pattern of analysis which has been described is no-

where more clearly evident than at this point where thought makes its final impact upon action—*prediction*. The effort to control action will certainly be in terms of individual purpose. Most important to me will appear that knowledge which enables me to achieve ends, to realize desires, to satisfy wants, and this realization in action through anticipation and adjustment is for the individual both the justification and the verification of thought and knowledge. Likewise, the changes and utilization of material instruments which prediction makes possible will be the measure of thought's effectiveness, and the nature of the materials envisioned in the process of prediction as available or desirable must be adjusted to purpose if actual control is to be realized. The Formal point-of-view is, too, an essential factor in prediction. Systematic analysis of the factors of chance and probability, for example, are of the greatest importance in setting formal limitations on thinking as prediction.

A word of explanation would perhaps not be amiss in regard to control as the end-product of thought and analysis. The legitimate demand that knowledge should be useful and effective in experience and activity has in some quarters been the occasion of a complete overemphasis and oversimplification of the process of analysis. One of the most popular and apparently influential schools of educational theory rests upon the assumption that the proper method whereby to utilize knowledge for problem-solving is to start the acquisition and analysis of knowledge from the standpoint of the problems to be solved. At the level of the ridiculous, this theory takes the form of an

attempt to supply the learner with answers to specific problems, the result of education being envisioned as a sort of encyclopedia of useful information, the modern version of *Helpful Hints for Happy Homes*. In one such course, designed for junior colleges, the unfortunate victims were presented with a large manual which embodied information on such vital problems of everyday experience as soundproofing one's bathroom, courtesies of the classroom, and oiling the troubled waters of domestic controversy.

Of all examples of the cart-before-the-horse technique, this method of inculcating knowledge is one of the most extreme. This is perhaps the most vicious of all the fallacies to which analysis is subject, for it spells the destruction of analysis itself. Such a procedure denies the most basic premise of analysis—namely, that every situation of experience and every problem of activity present factors of significance for every point-of-view, every category, and every specialized science. This short-circuit of analysis, through the inculcation of set answers to selected problems, is essentially the nonanalytic technique of the propagandist, regardless of what the intention or motivation may be.

The function of analysis, including observation, inference, and prediction, is to make possible deliberation which will serve as a guide for conduct—for rational, intelligent, and fruitful conduct. The aim of analysis, in this respect, is to apply as much as possible of what is known to the solution of problems and the control of action. There is no short-cut to rationality in action. What an

ideal world it would be if we could assume that knowledge would implement itself in action, that right really would make might¹ What more tragic lesson can history teach than to show the recurrent spectacle of knowledge—of the very best that men have done in thought, morals, and art—reduced to groveling subservience before a monopoly of power which is neither thoughtful nor moral nor æsthetic² The implementation of knowledge demands a concentrated and continuing effort on the part of those who desire to act rationally

That it is not enough merely to know is the conclusion forced upon us by observation of man's comparative achievements in knowledge and in action. The function of prediction, of planning action which will be consistent with what is known, is the goal of thought But to make the goal itself the method of achieving the goal is to stalemate the implementation of knowledge On the other hand, to become so intent upon the realization of a goal as to propose the adoption of *any* method whatever for its achievement, involves necessarily a willingness to sacrifice most, if not all, of the goal in the process of attainment Irrational methods will not realize rational action, no matter how much desire, intent, or fervor may have gone into the idealization of the end. The method for rational action is rational thought and knowledge, and the prevision or prediction of controlled action must be in terms of the method by means of which experience is to be ordered. Prediction is of particular importance, then, as the point of contact between method and goal, between knowledge and action

There are three major rules of prediction from this general standpoint. (1) the restriction for sources of data to what is known, (2) the consistent use of all the knowledge appropriate to the deliberation, and (3) the statement of a plan or pattern in terms which will make that knowledge available for action. It is the violation of these main requirements which constitutes the fallacies of prediction. These requirements, of course, overlap, but the three errors to be noted are meant primarily to illustrate the lapses which invalidate prediction in these three ways.

EXTRAPOLATION

Violation of the first requirement leads to the fallacy of *Extrapolation*, in terms of the above description, this is an error which arises from failure to restrict the prediction to data which are actually knowledge. To be sure, all prediction goes beyond what is known, it is a venture into the unknown and the factually unpredictable, but it is certainly the most primary demand of rationality that prediction use only those data which are established as knowledge. Otherwise, prediction becomes guessing or unsupported opinion. The most obvious examples of Extrapolation will, then, be those in which the data used are not knowledge, cases in which there is no fact upon which to ground the prediction. Within this species of prophecy lie all the divers varieties of fortune-telling, soothsaying, and astrological forecasting. None of these claims to prediction has demonstrated the data which it uses to be valid as knowledge, and until that is done there is no ground for the prediction. It is seldom, of course, that the forecasters

admit this so bluntly as in the astrology note which predicted the end of the war by June 4, 1940, and then added as a sort of afterthought. "The speed of the German drive in the west has increased the faith of astrologists [*sic*] that Germany will be the winner."

It would be but a waste of time to consider further this form of quackery. More important to our purposes are other kinds of extrapolation. It is not unusual to discover in attempted predictions an unwarranted assumption that facts or trends will continue, with a sort of arithmetical progression, the pattern already observed. That is, the facts which have been observed may well be unquestionable, but the assumption that things or events will continue to occur in the future as they have in the past implies much more than a mere descriptive knowledge of those past events. It is very difficult, when one has discovered a trend which the facts document, not to extrapolate the observation beyond the limits of valid inference. It was, for example, so startling to an editorial writer to discover that the discus was thrown 95 feet in 1896 and 162 feet in 1940 that in his excitement he wrote a column headed *Diskobolis Was A Piker*. His conclusion was that 162 feet is "probably twice as far as Diskobolis [*sic*] ever threw it." In the first place, we have practically no record of the times and distances achieved in the ancient Greek Olympic games. The editorial writer assumed that if there had been a progression from 1896 to 1940, there must therefore have been a progression from 500 B C to 1896. But if this is true, and if the degree of progression is in any sense proportionate, it is clear that the Greek

discus-thrower must have thrown the discus for a loss of some 3,000 feet.

The validity of extrapolation does not depend solely upon the truth of the data upon which the prediction is based. The data for prediction are facts, but facts are, to a great extent, dependent upon circumstances of time and place. It may be statistically verifiable that "at all age levels, from the cradle to the grave, the death rate for females has been falling more rapidly than the death rate for males", but it is certainly an unjustified assumption to conclude from these statistics that "this means, inevitably, a disproportion between the sexes that will continue to increase for a generation, no matter what changes may come in the future trend." Suppose a disease more deadly to female than male should spread in epidemic proportions! This is an extremely dangerous kind of prediction to make, even when the facts upon which it is based are statistical. Another instance of the same tendency to assume an arithmetical continuance of trends is illustrated by the conclusion from a survey which showed a startling decrease in virginity at marriage of those born since 1890. It was carefully admitted that the trend would slacken as it reached the vanishing point, and that "an occasional virgin will come to the altar for a few decades beyond these dates." The extrapolation continues: "It will be of no small interest to see how long the *ideal* of virgin marriage will survive as a moral code after its actual observance has passed into history." It would be tiresome to enumerate the number of factors which might retard, change, or completely alter this trend. Sad would be the lot of the manufacturer who

predicted, for example, that because people bought ten thousand radios in 1936, twenty thousand in 1937, and thirty thousand in 1938, therefore they would buy forty thousand in 1939

The tendency to ignore the great variety of factors which may influence the future course of events—factors other than those upon which the prediction is based—is perhaps the most pernicious of the fallacies of extrapolation. I should like to believe the argument that a continued advance in science and the utilization of natural resources will lead *inevitably* to a “general condition of progressive plenty”, but there are so many other factors, both as obvious and as factual as the strides of science in the past, that I must discount this easy extrapolation of past trends into future achievements. How disillusioned must be the person who, a couple of years ago, predicted the possibilities of war in terms of the distribution of copper! After showing statistically that Japan had only two per cent of the world’s supply of copper, that Germany had one and one-half per cent, that Russia’s reserves were unknown, and that Italy existed on imports of copper, the writer indulged in the easy extrapolation, “The distribution of copper enables us to chart the possibilities of war.” The chart of copper distribution would, however, have been a poor guide through the troubled waters of the period which immediately followed.

The third type of extrapolation has been aptly described by Santayana in another connection as an “argument which advances from ‘therefore’ to ‘therefore’.” From a textbook on marketing, as an instance, comes this illuminating

example of the possibilities of argument. The NRA, so says the text, was an attempt to plan our economy, a plan in which the government reserved a power of veto over the plan. Had this legislation been successful, the argument goes on, "the government would probably have gradually taken over more and more supervision until the economic system was entirely under its control." This, as a matter of fact, should rank with the forecasts of astrologers as an instance of prediction which demonstrates no ground in established fact. The merits of the NRA are, of course, not here in question, but on the face of the facts presented in the argument, it would be as justifiable to argue that the veto power possessed by every state executive would eventuate in entire control of the state and its processes, and such has obviously not been the case.

The tendency to extrapolate seems to manifest the general characteristics of a snowball on a hill—the further it rolls, the faster it goes and the larger it becomes. Note the number of concealed premises, unverified facts, and inconsistent inferences which are evident in the following argument, which, to say the least, covers much argumentative ground with a minimum of logical leaps. A Congressional Representative expressed himself as opposed to government purchase of utilities because "it means the beginning of outright government ownership of the electrical utilities of the whole United States", and as if this were not far enough to extrapolate in one breath, the Representative adds for good measure, "and ultimately the railroads, telegraph and telephone companies." But extra-

polation is a disease, apparently, and the statement, which has ceased to be an argument, continues apace "That means state socialism and the destruction of democracy."

These successive sentences which purport to be an argument are not by any means a unique example of argument by extrapolation. This jack-rabbit jumping from "therefore" to "therefore" is a trick-in-trade of the argumentative man in a hurry. Neither is it a peculiar technique of any one method or science, how often has the observation that there are some things which science cannot explain provided the shallow ground for an extrapolation to the effect that there must therefore be a teleological design in nature, the hand unseen which worketh wonders of which science knows nought?

As a final example of extrapolating far beyond factual observation, prediction without benefit of data, let me summarize an argument which had for its purpose the proof that putting more men to work might in the end hurt business. The first premise was an assertion that if more men are put to work to produce automobiles, for example, then the price of automobiles will advance, and, proceeding from "therefore" to "therefore," the argument went on therefore more goods will have to be exchanged for a car. On this ground it was contended that therefore fewer cars will be sold—though, of course, this does not logically follow at all. The second premise was that a car which is in service for five years will necessitate more man-hours of labor in the form of servicing than went

into the construction of the automobile—a very arbitrary assumption. Therefore, if fewer cars are sold, fewer men will be employed in servicing the cars after they are sold. The conclusion of this rapid extrapolation was that “ten extra men employed to make a motor car may kill the jobs of 100 men on the outside ”

These examples, as illustrations of an almost accepted technique of argumentative prediction, should be sufficient to encourage wariness in regard to all extrapolation beyond known fact. Prediction is essential if thought is to exercise control over action, but better a small prediction which is consistent with knowledge than a large prophecy which steps off the firm ground of fact only to wallow helplessly in the quicksand of prejudice and pretense

ASSUMED ALTERNATIVES

The second manner in which prediction is often confused to the point of error is through involvement in the fallacy of *Assumed Alternatives*. The statement of possibilities and probabilities is, of course, one of the most important contributions of thought functioning as prediction. It is only by the definition and understanding of what alternatives are presented to action as possible of achievement that any fruitful planning of action can be undertaken. It is, then, of the greatest importance that the alternatives considered be exhaustive of the possibilities, consistent with knowledge, and possible of realization in future action. This is the fundamental distinction between speculation as deriving from analysis and speculation

as a mere exercise of imagination. The fruits of imagination are sweet, and its reward in pleasure and satisfaction is great indeed. In imagination I may castigate my enemies, eliminate my critics, remold the world to heart's desire. But this is not analysis, and sorry will be my lot if I try to realize in action these imaginative achievements. The therapeutic benefits of such unrealistic day-dreaming may justify occasional indulgence in it, but what parades as prediction must justify its claims on grounds of knowledge. Alternatives for action must be such as derive from the analysis of facts as known.

Among the errors classified as fallacies of Assumed Alternatives must be included those predictions which depend on an assumption of alternatives which either have no basis in fact or are irrelevant to the prediction being made. Alternatives are in this sense subject to the same difficulties as are correlations: the wide area of action presents almost innumerable alternatives of conduct, but not every conceivable alternative is pertinent to the particular situation of action which the prediction hopes to control. A case in point is the proposal, as a method of calculating the chances of divorce, that a comparison be made between the number of divorces annually and the number of deaths of married persons—"since all marriages are eventually broken by one or the other." The textbook which quoted this suggestion called it a "brilliant contribution", but I confess some difficulty in understanding how it is that the statement or analysis of these alternatives is going to facilitate the *prediction* of divorce. Mere statement of alternatives can be trivial, though often

amusing The above example is similar in structure to the credo of the aviator.

When you are in the air, you will either be flying
straight or turning over

If you are flying straight, there is no cause to worry

If you are turning over, one of two things is true
you will either right the plane or fall

If you right the plane, there is no cause to worry

If you fall, one of two things is certain you will
either be injured or uninjured

If you are uninjured, there is no cause to worry.

If you are injured, you will be either slightly or
seriously injured

If you are slightly injured, there is no cause to
worry

If you are seriously injured, one of two things will
happen you will either die or recover

If you recover, there is no cause to worry

If you die, you can't.

As was remarked above, the value in personal satisfaction of being able to conceive and construct pleasant alternatives must not be abridged or denied, but such a statement of alternatives hardly provides an adequate or dependable ground for the control of action.

In contrast to this casual and uncritical imagination of alternatives, there is the converse fallacy of refusing to admit what appear to be valid possibilities of action. This fallacy most often takes the form of refusal or inability to understand the nature of hypothesis. The use of thought in the control of action necessitates holding in suspension, during the process of deliberation, all the hypotheses which appear to be actual alternatives to the conduct under con-

sideration. The scientist does not deny all other hypotheses while he is experimenting to prove or disprove one. Without this flexibility which comes only from the ability to cognize alternatives as *possible* ways in which to act, we could use in activity only what we know positively and beyond question of doubt. The use of thought necessitates going beyond what we know, in prediction, in examining and testing hypotheses, we are out-talking our information in order to get more information. The "going beyond" is not, however, necessarily a step in the dark; it can be rational and analytically valid. The lack of analytic discrimination in stating alternatives, of which we talked a moment ago, is matched by the refusal to contemplate as possible anything which is not already verified. It is a strange scientific attitude which is reflected in the proclamation of a prominent doctor: "Until we learn more about it, any program which contemplates prevention of infantile paralysis is a bogus campaign." Notice the term "contemplates," which suggests the formulation and examination of hypotheses, the campaign apparently made no "claim" of preventing paralysis, which would have implied a hypothesis already verified. If what the doctor says is true, then the entire history of science has been a continuous series of bogus campaigns, and any effort to go beyond what is known, to develop hypotheses, to explore possibilities, to extend knowledge and control future action, is, in the doctor's uncompromising terminology, "bogus."

More common among the fallacies of Assumed Alternatives is the failure to take into account all of the alterna-

tives which knowledge indicates to be at least possible. This is the hypothetical form of the Assumed Cause fallacy, in which a present factor is assumed as the inevitable and inescapable cause of an effect predicted in the future. The same errors characterize both fallacies—the concentration upon one or two causes, reasons, or incidental circumstances, and the elevation of these factors to a status of determining significance in the explanation of events. Of course, in the case of projected alternatives, the facts may very well be such as to provide the ground for only one or two possibilities, in such a case, prediction must, indeed, not assume more than the knowledge warrants. When, however, the prediction is upon such a subject as the American policy in the Philippines, the possibilities are not limited by knowledge to these dilemmatic alternatives: “To clap a czarist censorship on the Islands, forbid freedom of speech, and shoot the nationalist leaders—or to clear out the American occupation, root and branch.” The limitation of a prediction to such meager and exclusive alternatives is simply to admit that one’s knowledge of the subject is in a decidedly elementary and impractical state.

Prediction by hypothesis is always a convenient argumentative device, for it is difficult actually to disprove a guess as to what might happen in the future when no facts are given to document the guess. It is easy, for example, to reiterate the prediction that “if the United States goes to war, we’ll have a dictatorship,” and repetition probably tends to obscure the other alternatives which knowledge should indicate as at least possible. Such hypothetical predictions are hard to refute, even though evidence be

adduced to indicate that the United States has survived several periods of war without reaching the political form of a dictatorship. What answer could be given to the argument, "Improper taxation, which tends to cut off the sources of governmental income, must lead inevitably to dictatorship, communism, war"? This suggests a distinction which is of primary importance in the evaluation of predictions. Prediction of facts, prognostication of actual events, must necessarily be taken with several of the proverbial grains of salt, and not only are such forecasts highly questionable, but they are not the kind of prediction which is really useful for the control of action. In the desire to utilize as much of knowledge as is possible in the control of my future conduct, I am not so much interested in what is inevitably going to happen, not even in what certain facts indicate as likely to happen, what I want to know is rather, on the basis of known fact, what can be visualized as practical alternatives of action. The use of knowledge in action is not the mere acquiescence in what appears likely to happen, but the envisaging of possibilities which would not be likely to happen unless I exerted effort in the direction of their realization. What this implies is that prediction, while it derives from and is grounded in factual knowledge, is less fruitful when stated in terms of specific future factual situations, the purposes of control are better served when prediction is formulated in terms of policies or principles of action. In the previous illustration, for example, to stop with the prophecy that war means dictatorship is to use but a minimum of available knowledge; the function of an intelligent person is to formulate policies

for future action which seem most likely, on the basis of past experience and present knowledge, to insure future action, of whatever kind, on the basis of desirable political principles. A remarkable illustration of this distinction between prediction of fact and prediction of policy is provided by utopian literature. We are still discussing speculatively the principles of policy outlined in Plato's *Republic*, while many a Utopia of 1900 which attempted to predict the factual conditions of society is now but the object of condescending amusement.

The last of the fallacies of Assumed Alternatives is that in which the possibilities stated represent little more than wishful thinking. Once again, wishes and imagination may have great therapeutic value, but they tend to distort analysis. When I read a statement that "Communism aims to be a majority rule when the majority qualify to be Communists," I but recall the number of ideal Utopias which in a first chapter describe a land flowing with milk and honey, populated by persons who are so intelligent that they recognize and praise the good even though they cannot create or understand it. Would that it were so, murmured Plato halfway through his discussion of an ideal society—but Plato went on to describe how the guardian-legislators, through the perpetration of a "royal lie" enforced by power, must maintain law and order in the state.

Assumptions such as these pervert the usefulness of knowledge as prediction. The point here is by no means the contention that prediction must be limited to things as they are, but simply that anticipation in terms of controlling action involves a consideration of the method of

realizing the proposed end. This is why fruitful prediction must take the form of defining policies of action rather than of forecasting events. A policy or principle of action is a method for the realization of an end, and to state an end in the absence of a consideration of the method whereby it is to be achieved, is to court disillusionment. There are not two processes, one of determining speculatively an ideal end, and another of selecting or constructing a method by means of which to attain that end. The two are inseparable aspects of the same process—prediction, and to separate the idealization of ends and the planning of action is to preclude any possibility of rational control over action.

GLITTERING GENERALITIES

The final fallacy of prediction deserves but passing comment. Predictions in the form of *Glittering Generalities* obviously have no claim to analytic validity, but like flies, the pests by their multiplicity and persistence command our irritated attention. Generalities take two principal forms, the first of which engenders confusion by so thorough a diffusion of whatever factual content there might be that any specific reference is lost. Witness the indulgence in generality by an investment counselor, one who deals in stocks and bonds of specific values

Whether the inactivity and relative stability of the market indicate rather the uncertainty of the moment than foreknowledge of events is likely to become clearer during this week.

One of the forms which the Glittering Generality of confusion is likely to take is that of withdrawing so far from the subject under observation that details are dimmed by perspective. This is the familiar technique of "flattening the curve." Emerson describes this generalization figuratively by comparison with the course of a ship, which when looked at "microscopically" takes the form of a "zigzag" line. When observed from a distance, however, the ship appears to be traveling in a straight line. From this illustration, an economist draws the implication that price structure is of the same nature—looked at in short-run periods, it appears zigzag, but observed in the long run, it shapes into a general trend. Unfortunately, the navigator of a ship is not usually able to assume this distant view, his function is to get the ship some place, and he must know how to "zigzag" in order to do it. The economist, likewise, cannot afford to ignore the significance of short-run periods of price fluctuation.

From a sufficient perspective of generality, details merge into a vague and indiscriminate picture of confusion. When factual units begin to lose their clarity, all kinds of generalities of glittering nature can be observed. Fading distinctions enable it to be said—as it is repeatedly argued—that the state is just like an individual, only larger, and that if an individual cannot do such-and-such, then the state cannot do it either. One does not have to retreat very far from a diamond and a piece of quartz before it is possible to generalize both into "glittering glass."

Generalities are, secondly, the result of a sheer expansion of factual data. The resulting confusion is much

the same as that engendered by a retreat from detail. When a magazine perpetrated such a generality in the statement that "all" great musicians were prodigies, a reader questioned the universality of the classification. The reply of the journal was to name *thirteen* musicians who had been prodigies. The expansion from "thirteen" to "all" is not analysis, but legerdemain. Enthusiasm quite often outruns discretion in this fashion, as perhaps when it is discovered that some ancient society had good roads or divorce laws or philosophers or art, and these interesting details are fluffed up into some such generalization as, "Actually we stand in civilization today just about where we stood two or three thousand years ago."

As a final remark on the indiscretion of generalities, one has but to note the recurrence of arguments to the effect that women—or any other classification which is under consideration—will normally or generally or always behave in a particular manner. The psychologist-author of a newspaper column, while discussing the subject of "pick-ups," remarks that women are inclined to accept proffered rides, for women are not by nature accustomed to think about the consequences of their action, but only of the immediate pleasure or circumstance. This will serve well as the *reductio ad absurdum* of fallacies in analysis.

APPENDICES

Experiments in Analysis

APPENDIX I

The Individualism of Jeremy Bentham

THE point-of-view which emphasizes the importance of the Individual in the political complex seems to be a heritage of English and American thought, and no better spokesman could be found for this perspective than Jeremy Bentham. The thoroughgoing nature and far-reaching effect of his analysis are attested by the authoritative acknowledgment of Sir Henry Maine that not a single legal reform had been effected in England or the United States since Bentham's day which could not be traced to his influence. There is perhaps no other thinker of his stature who has shown more tenacity in the expression of the point-of-view which he deemed primary and elemental in the analysis of political meaning. Although his persistence sometimes led him into difficulty, Bentham insisted that the Individual, as such, be granted the status of polit-

ical fact, that the Individual and his characteristics should not be interpreted or theorized out of consideration in political analysis. It is to our purpose to follow Bentham in this establishment of the Individual as political fact, noting especially what documentation he provides for the categories we have stated as appropriate to the Individual point-of-view.¹

Whatever chronological position it may occupy in his thought, the hedonistic principle of pleasure-pain was the genetic origin of Bentham's analysis. Proceeding from the observation that the happiness of man constituted the only intelligible formulation of an ultimate end of moral and political speculation, he defined that happiness in its simplest terms as consisting of the acquisition of pleasure and the avoidance of pain. So strongly was Bentham impressed by this principle that he gave it dogmatic statement: "Every act whereby pleasure is reaped is, all consequences apart, good." (*Deon*, Vol. I, p. 59) Just what constitutes a pleasure or a pain, Bentham never tells us, except to say ambiguously that they are "interesting perceptions" (*Prin.*, p. 33). To be sure, he lists for us *his* scale of pleasures and pains, but he is forced to admit, "Every person is not only the best, but the only proper

¹ Abbreviations will be used as follows: *Prin.* = *An Introduction to the Principles of Morals and Legislation*, by Jeremy Bentham (Oxford, 1907), *Frag.* = *A Fragment on Government*, by Jeremy Bentham, edited by F. C. Montague (Oxford, 1891), *Theory* = *Bentham's Theory of Legislation*, by Etienne Dumont, tr. by C. M. Atkinson (Oxford, 1914), 2 vols., *Deon.* = *Deontology or the Science of Morality*, from the MSS. of Bentham by John Bowring (London, 1834), *Works* = *The Works of Jeremy Bentham*, edited by John Bowring (London, 1834), 13 vols.

It is unfortunate that much of Bentham's work is available only in the form of commentaries or editions of his notes.

judge of what, with reference to himself, is pleasure, and what pain" (*Deon.*, Vol I, p 59)

Then, as a matter of fact, it would seem that at the very outset Bentham quite effectively forestalled analysis by proposing a system of moral and political anarchy, and this is, of course, what we might expect to eventuate from such a restricted definition of the Individual point-of-view. Any analysis in terms of pleasure-pain is limited to a statement of the physical and psychological characteristics of *Physical Man*. Hedonism is, indeed, a statement of anarchistic principle, if there can be such. But Bentham does not really mean all he says, and he is by no means satisfied to dismiss pleasure-pain in this cavalier fashion. Apparently he could never forego the conviction that this observation of man's physical and mental activity, which was not a particularly unique observation on his part, would provide the principle for a comprehensive analysis of moral and political fact, much of the merit of Bentham's work lies precisely in the fact that he admitted the need for a method of analysis, as well as in his clear statement of the concept he employed. This recognition of the necessity for a method of analysis called for a statement of pleasure-pain in terms of analytic observation. "Nature has placed mankind under the governance of two sovereign masters, *pain* and *pleasure*." (*Prim.*, p. 1) It must be agreed that needs, wants, desires, satisfactions, and dissatisfactions are observable characteristics of *Physical Man*. These are undoubtedly dominant factors at this level of individual existence, and we might well have used the term "pleasure" or "satisfaction" rather than Fitness as an appropriate con-

cept here. We must also agree with Bentham that some degree of satisfaction of these primitive requirements is the prerequisite to any further development of the individual. In terms of our analysis, then, "mankind" in Bentham's statement means man as physical, and "pain and pleasure" indicate characteristics of the individual as thus observed.

Now, if Bentham had meant simply to imply that these elementary characteristics are the source of all moral and political determinations, and that man's experience is determined by the wants and desires of the physical level, the limitations of his observation would be evident. As a matter of fact, there are points at which Bentham seems deliberately to limit analysis to this restricted point-of-view, analogous to Descartes' proposal to construct a physical world out of matter and motion is Bentham's boast. "Give me the human sensibilities—joy and grief, pain and pleasure—and I will create a moral world" (*Deon*, Vol II, p. 10). Thus does he recognize and stress the characteristics of the first category—Physical Man—as they appear to the analyst who takes the Individual point-of-view. Bentham was not content, however, to stop with this simple observation, his construction from pleasure-pain was as limited as his statement had been exaggerated. One major difficulty in the remainder of his thought is the indiscriminate use of categories of analysis, for Bentham obviously recognized no necessity of making clear the category to which any particular observation or analysis had reference. When, for example, he refers to pleasure and pain as "human sensibilities," he has already passed too casually to an observation which implies another analytic

category, that of *Social Group*. The substitution of the term "sensibilities" for pleasure-pain determinations cannot be assumed without explanation. Certainly, these two might be taken as synonymous if so defined, but in ordinary usage the term "sensibility" is indicative of a development beyond that of simple physical determination, Bentham takes advantage of usage to extend his concept of pleasure-pain to cover the range of two categories. Thus, in the list of circumstances which influence sensibility, we find such valid physical or first-category characteristics as strength, bodily imperfection, degree of knowledge, intellectual powers, firmness of mind, perseverance, and bent of inclinations, but there follow without distinction other characteristics observable only under the second category, *Social Group* moral sensibility, moral bias, religious sensibility and bias, sympathetic sensibility and bias, antipathetic sensibility and bias, pecuniary circumstance, and the like. (*Prim*, pp 44-45, *Theory*, Vol. I, Chap IX) If the latter are characteristics descriptive of pleasure-pain determinations, then they indicate a departure from Bentham's original principle, a relapse which deprives pleasure-pain of any exact meaning or connotation. This point marks the distinction between psychological or egoistic Hedonism and moral Hedonism or Utilitarianism.² Actually, Utilitarianism proves to be hedonistic only in setting and emphasis, it is better understood as a restatement of good-will theory from the point-of-view of Individualism.

Bentham recognized and criticized the fallacy of extrapolating beyond the limits set by a particular method of

² Cf Henry Sidgwick, *The Methods of Ethics* (London, 1930), p 84 f

analysis, especially as the fallacy is evidenced in contract theory, but he proceeded to commit the same error in confusing the categories of individualistic analysis. The reality and nature of the facts which, taken together, are designated by the category of *Social Group* present a new complexity which the method used at the level of *Physical Man* is inadequate to observe. That Bentham did to some extent recognize a difference of kind between these categorical or methodological levels is evidenced by the division he made in ethics between that concerning duty to one's self and that concerning duty to others. He never realized, however, that the "interests" which he made elemental in ethical determination were not to be defined simply by an extension of the observed characteristics of pleasure-pain, but were valid facts of another area of analysis. He came close to the point when he suggested that if "Experience is the Mother of Wisdom . . . Interest is the Father" (*Frag.*, Chap. III, Sec. XVI), but the full implication of his facetiousness never eventuated in an adequate analysis of interest as contrasted with pleasure-pain. As a consequence, he persisted in the attempt to interpret all fact with a restricted analysis and with the limited method appropriate only to the first category, although on his own statement it appeared manifestly impossible. Thus, despite his affirmation of an ethic which might be called social, he feels constrained to state in the very next paragraph that only self-interest will serve as the compelling motivation for all men, at all times and in all situations (*Prim*, p. 313).

This insistence upon definition in terms restricted to the

category of *Physical Man* is the source of that much-ridiculed proposal, the "moral calculus." (*Theory*, Vol I, p. 43) It is true that since Bentham's day we have learned much about the technique of measuring the reactions of physical man, but the limits of psychological measurement are prescribed by its method, and to propose a technique of moral measurement, a calculus of interests, appears so naive that we are suspicious of a jest on Bentham's part. Ask anyone who has tried to weigh and balance interests within the comparatively limited range of his private opinion how readily they respond to measurement! That Bentham did recognize the extremism of his view is evidenced by his own admission of the confusion resulting from his failure to distinguish between pleasure-pain, happiness, sensibility, interest, and utility. He admits

The word *utility* does not so clearly point to the ideas of *pleasure* and *pain* as the words *happiness* and *felicity* do: nor does it lead us to the consideration of the *number*, of the interests affected, to the *number*, as being the circumstance, which contributes, in the largest proportion, to the formation of the standard here in question. (*Prim*, p. 1, note)

For one who, in other connections, laid great stress upon the necessity for precision in terminology, Bentham was peculiarly negligent in the definition and use of the terms designating his categories of analysis.

The above quotation makes understandable the state of confusion in observation which is inescapable unless a clear distinction is maintained between categories of analysis, and, more importantly, unless the distinction of methodology implied by these categories is recognized. Hence

the persistent ambiguity of pleasure-pain and interests and utility. The *Social Group* begged analysis, and several times Bentham appeared ready to explore this area, as, for example, when he distinguished a natural from a political society, stating the essential characteristic of a natural society to be the "habit of conversing" (*Frag*, Chap I, Sec. XI), a recognition of Communication as a characteristic of the *Social Group*. It is unfortunate that the relation of private and social was not more carefully analyzed by Bentham, the confusion makes difficult a description of his method for analysis from the Individual point-of-view, for he continually insisted upon a limitation of methodology to the description of a technique peculiar to the observation of *Physical Man*, which is only one of the categories comprehended by the Individual point-of-view and by no means expressive of the range of Bentham's analysis.

Despite the repeated attempts to state his method in physical terms, Bentham did to some extent arrive at an integration of the Individual point-of-view, largely because he was too sagacious to ignore obvious fact. The ambiguity which prevails throughout his work is in strange contrast with his demand for systematic classification and precise terminology. Only his persistent and painstaking regard for the observation of fact makes his construction of Individualism noteworthy. His inconsistencies and violence to logic are among the worst in a school of thought which did not emphasize systematic clarification. The categories explanatory of the Individual point-of-view never seem to have assumed their proper relation for Bentham, except that he reiterated the basic and elemental

nature of *Physical Man*. From this inadequacy of analysis springs that mixture of terminology in which we find him talking in a single breath of pleasures, interests, legislation, and law

Having attempted to explain the social area of his view by a simple extension from the first category, Bentham found himself in an embarrassing position with regard to the formulation of a principle for the facts indicated by *Social Group*. He makes a distinction between private and public and goes so far as to include other persons, and even animals, in the consideration of ethical duty, but there remains the disturbing problem of how to manipulate the adjustment of private pleasures and pains within the social complex "By what obligations, can he [man] be bound to obey the dictates of *probity* and *beneficence*?" (*Prin*, p. 313) This, by the way, is a tacit admission that the principles of probity and beneficence are not explicable in terms of the physical category. Bentham is here granting that there is a specific area of social fact, but he cannot define it, for he has adduced no proper methodological category, rather, he insists upon the description of *interests* in terms of the first category. The manner in which he chooses to escape this dilemma is, from the utilitarian point of view, not commendable:

In answer to this, it cannot but be admitted, that the only interests which a man at all times and upon all occasions is sure to find *adequate* motives for consulting, are his own (*Ibid*)

That is simply a restatement of the principle of the first category and suggests no answer to the problem of con-

flicting interests at the social level, as Bentham well realizes, for he goes on to add weakly

Notwithstanding this, there are no occasions in which a man has not some motives for consulting the happiness of other men. In the first place, he has, on all occasions, the purely social motive of sympathy or benevolence. in the next place, he has, on most occasions, the semi-social motives of love of amity and love of reputation. The motive of sympathy will act upon him with more or less effect, according to the *bias* of his sensibility. the two other motives, according to a variety of circumstances, principally according to the strength of his intellectual powers, the firmness and steadiness of his mind, the quantum of his moral sensibility, and the characters of the people he has to deal with (*Ibid*)

Bentham never explains whence are derived these "social motives," nor how a "quantum of moral sensibility" is measured, nor how "characters of people" are to be measured in terms of his physical analysis, but despite this tentative excursion into the social area, Bentham proceeds, immediately following the above quotation, to a discussion of legislation as deriving from what he has called "private ethics," ignoring the implications of his assumptions just stated

In view of Bentham's attention to method and the systematic structure of analysis, it is disappointing to find him searching for premises among the hopeful affirmations of wishful thinking. The theory of good-will as the regulative force observable from the Individual point-of-view is contradictory to all that Bentham has affirmed concerning pleasure-pain, interest, and utility, yet it is upon the

back of this straw man that he places the burden of his argument—and simply because he failed to examine interests as existing in their own right and domain

The first law of nature is to wish our own happiness, and the united voices of prudence and efficient benevolence, add,—Seek the happiness of others,—seek your own happiness in the happiness of others (*Deon*, Vol I, p 17)

I doubt that Bentham could have felt very proud of this restatement of the Christian gaining-by-losing paradox, and his term “efficient benevolence” is more suggestive of policy-honesty and fire-insurance-salvation than of philosophical analysis. The assumption of good-will does not follow from any argument Bentham has adduced, nor does it follow from his method that, “of all these sorts of motives, goodwill is that of which the dictates, taken in a general view, are surest of coinciding with those of the principle of utility.” (*Prin*, p. 121) Certainly no such judgment follows from an observation of the first-category principle of pleasure-pain determination. The pious assurance, “The dictates of utility are neither more nor less than the dictates of the most extensive and enlightened (that is *well-advised*) benevolence” (*ibid*), is not helpful in view of the fact that we have not yet learned what constitutes “benevolence.” If it is a pleasure-pain determination, then Bentham has taken us for a ride on a moral merry-go-round.

Bentham’s hesitant admission of the social category is illustrated further in his statement of sanctions. In the *Fragment on Government* (1776) he states three political,

moral, and religious. (Chap V, Sec. VII, note) These indicate, respectively, circumstances of punishment, society, and a Supreme Being. The *moral* sanction is definitely a recognition of the social, for Bentham really prefers the term "popular" to designate it. Four years later, in *An Introduction to the Principles of Morals and Legislation* (1780), four sanctions are listed, the addition to those above being that of physical, referring to the circumstances of nature. Dumont (1802) likewise lists four, defined as above, but Bowring (*Deon*, 1834), probably following the list in "Logical Arrangements" (*Works*, Vol. III, p. 290), sees fit to add a fifth, the social or sympathetic sanction. This he defines as a "sort of mixture of the selfish with the social regard" (*Deon.*, Vol I, p. 90), while retaining the other four, including the moral or popular sanction. The addition of the moral sanction was itself a significant gesture toward the level of *Social Group*, for Bentham himself says it is "better termed *popular*, as more directly indicative of its constituent cause." (*Prim.*, p. 25, note) In another of his analytical lapses, he hesitates to use the expression "public opinion" here, because it exercises influence over action only "through the medium of the affections and the will" (*Ibid*).

This insistence upon returning to terms of the first category of *Physical Man* to analyze observation to which that category is not immediately relevant becomes somewhat tiresome and irritating. Even after this clear indication of the inadequacy of the first-level principle, Bentham once more reiterates it as an explanatory principle for the entire Individual point-of-view. "The question is not, Can they

reason? nor, Can they *talk*? but, Can they *suffer*?" (*Prim.*, p 310, note)

This stubborn refusal to admit a methodological advance to the second category of analysis led Bentham into another impasse in regard to a problem so pertinent to the field of legislation that the anomalous status in which he left it well-nigh vitiates the whole of his thought. Having but casually noticed that communication is the specific function of the social level, what will Bentham do about that most important technical problem—representation? Remember his statement, "Every person is not only the best, but the only proper judge of what, with reference to himself, is pleasure, and what pain" (*Deon*, Vol I, p. 59), and also the further qualification of legislation "Private ethics has happiness for its end and legislation can have no other." (*Prim*, p 313) If happiness, the end of both man and society, is defined in terms of pleasure-pain, as it most decidedly is, then what reason or excuse is left for the existence of any government at all? As a matter of fact, Bentham does not trouble to justify the existence of government, as he is clearly obliged to do on the basis of his own developed point of view

The idea of government, it may be observed, is introduced here without any preparation. The fact of its being established, I assume as notorious, and the necessity of it as alike obvious and incontestable (*Prim*, p 214, note)

But is the necessity of government so "obvious and incontestable" from the Individual point-of-view? It most certainly is not, if that view can adduce only the principle

of pleasure-pain determination, for in terms of government, this spells anarchy. Bentham rests his case upon the "greatest happiness of the greatest number" formula, but how determine that "greatest happiness"? The fallacy in supposing it to be merely an aggregate or sum of individual pleasures must have become evident to Bentham, for Atkinson (the English translator of Dumont) says that Bentham dropped "the greatest number" and simply stated "'the greatest happiness' as representing the true object of morals and politics" (*Theory*, Vol I, p. 121, note). But—who decides what is the greatest happiness of a society or government composed of men whose happiness is determined by pleasure-pain which only they, as individuals, can evaluate?

The Platonic escape is never a real alternative for Bentham, his English spirit revolts against the suggestion that the legislator actually constitutes himself a guardian or dictator of happiness, deciding for the people what is really best for them.

Nor is any man now so far elevated above his fellows, as that he should be indulged in the dangerous licence of cheating them for their own good. (*Frag.*, Chap I, Sec XXXVII)

One of the nine pretenses of legislation which Bentham describes as "despotism" is the claim of the lawgiver

I am of the number of the Elect now God himself takes care to inform the Elect what is right and that with so good effect, and let them strive ever so, they cannot help not only knowing it but practising it

If therefore a man wants to know what is right and what is wrong, he has nothing to do but to come to me (*Prim*, p. 18, note)

On the other hand, what does it matter whether the ballot of election be cast by God or by one's self, so long as a single ballot decides the issue? Who elected Bentham to define happiness for men, to mete out their punishment, to design their codes, statutes, and penitentiaries? The plea of *expertness* will not suffice, for there is no expert in pleasures and pains save him who enjoys or suffers them. Of the real problem of representation—communication—Bentham had little to say. Certainly, in this respect his democratic sentiments suffered some limitation, for he would have placed restrictions upon the privilege of franchise, in one instance denying it to women, in another deciding they might deserve it (*Theory*, Vol I, p. 106, note 2). Whether or not the people are going to like, obey, or resent his laws is a problem which apparently caused Bentham no worry. Yet he has agreed that "it is their *duty* to obey, just so long as it is their *interest*, and no longer" (*Frag*, Chap I, Sec. XLIII). Bentham has, indeed, set for his legislators a task which presumes an Elect in expecting them to design laws which will be obeyed because they acknowledge and sustain the *interests*—that is, the pleasure-pain determinations—of each individual upon whom such laws impinge.

Not to court fatigue by emphasizing further Bentham's illustration of the difficulties incident upon a confusion of levels of analysis, let us note in a more general fashion the possible integration of the Individual point-of-view as sug-

gested by Bentham's analysis taken as a whole. He began, as we have said, with the assumption that the happiness of men is the only justifiable reason for government, and his originality consisted in the refusal to accept a vague, indeterminate abstraction as a substitute for happiness defined and implemented in terms of the actual individual. Bentham was justly sceptical of principles of government so far removed from the individual as to appear meaningless in relation to any and every particular individual. To the end of achieving this happiness, he postulated *Utility* as the principle of activity described from the Individual point-of-view. Let us say, then, that Utility became for him the principle of definition by means of which the individual was to be defined in the process of legislation and government. Utility is the only ground upon which legislation can be justified (*Frag*, Chap IV, Sec XL). Utility was, hence, an evaluative principle, a means of achieving the integration of fact pertaining to the individual and of securing his greatest possible happiness.

Utility is not a Law. For utility is but a quality, a property, a property an act has of increasing happiness. . . . A dictate of utility is not a law. For a dictate of utility is but someone's opinion that there is utility in a certain mode of conduct. (*Theory*, Vol I, p 1, note)

This is a very nice statement of utility as a methodological device to be employed by the legislator, but it leaves unanswered the interesting and pressing problem of motive and justification. That is to say, the mere statement of a methodological principle has analytic interest, but no

moral or political significance beyond that of suggested technique.

This raises one of the most important questions involved in any attempt to state a methodology of activity. The fact adduced in support of any point-of-view must be integrated, or else there will be points-of-view within points-of-view, and Bentham proposed an integration of the observation of the Individual point-of-view on the basis of the principle of utility. But why utility? Why not efficiency? or progress? or salvation? or any of a dozen other possible principles? In other words, what motive or reason lies behind the selection of a principle to integrate the analysis of any point-of-view? Is such a selection determined by the point-of-view itself? If so, then Bentham has not established his case for utility. His attempt to evade the question by identifying utility with pleasure-pain we have seen to be inadequate and inconsistent with his premises. Neither pleasure-pain nor interests nor utility constitutes a sufficient ground of selection, they are principles or techniques of method, analytic operators, methodological categories—call them what you will, they are not determinants of activity until given the impetus of motivation. To define these categories as *desires* is simply an escape mechanism, for, while desire is indeed an adequate—in fact, the most general—statement of motivation, it is by no means identifiable with these principles. One of the persistent facts of political activity is the conscious denial of interests, of pleasures, and certainly of utility—and this very denial may, indeed, become the means whereby the Person achieves integration in situa-

tions of practical conflict. Method actually *does* nothing, it is a means of getting something done.

This is the point at which we must return to a consideration of ideological rather than methodological principles. The principle of integration which is chosen to co-ordinate the analysis of any point-of-view does not appear possible of derivation from the factual analysis of that or any other view. It is a matter of choice, it is, as we suggested in a previous chapter, an ideological determination. Certainly, analysis places limitations upon what principle *can* be chosen, but within limits defined by method and analysis, there seems to be always a more or less extensive range of alternative possibilities. This is not so happy a state of affairs as if we could argue that once having defined an adequate method, integration awaited only the observation and analysis of fact. Whatever adequacy of analysis may be attained, the choice of a principle of integration for any point-of-view will remain—a choice. It is, then, correct to refer to the motives which determine the selection of analytic points-of-view as principles, and in so far as these principles give direction to the methodological categories, a co-ordination of principle and practice is attained.

The principle which determines the integration of his Individual categories is for Bentham the principle of Freedom, expressed in the practical or *defining concept* of Utility. The purpose of private morals and ethics is to assist man in achieving the greatest degree of happiness, and the end of legislation must be no different. The distinction between private and public is a real one, for legis-

lation functions only through the motivation of punishment. It is, then, from Bentham's point of view, essentially negative in character. Without presuming upon a fuller description of Bentham's construction of Law, let us note his emphasis upon Freedom or Liberty.

Legislation is designed primarily for the punishment of actions which will render difficult or impossible the attainment of happiness by the majority of individuals within the political organization. It is, thus, a negative assurance to them of freedom, the guarantee of an opportunity to achieve and maintain the highest possible degree of integration through the operation of the method dictated by their private morals.

Liberty is neither more nor less than the absence of coercion . . . The idea of it is an idea purely negative. It is not anything that is produced by positive Law. It exists without Law, and not by means of Law. (*Theory*, Vol. I, p. 125, note)

No restraint should be imposed, no power conferred, no coercive law sanctioned, without a specific and satisfactory reason. There is always one reason against every coercive law, and one reason which, were there no other, would be sufficient by itself: it is, that such a law is restrictive of liberty. (*Works*, Vol. I, p. 301)

Bentham was not aware of the fact that Liberty was insufficient to ground law, and his failure to maintain but one point-of-view in observing fact forced him again into flat contradiction.

I have ranked 'equality' among the objects of the law. . . . Some persons may be surprised to find

that 'Liberty' is not ranked among the principal objects of the law. But, if we would avoid confusion, we must regard it as a branch of 'Security.' (*Theory*, Vol I, pp 124-125)

The acceptance of Security and Equality as valid principles is certainly in agreement with our previous assertions, but they are not the ideological motivations of Bentham's analytic point-of-view. The method of Individualism is an attempt—successful, in my opinion—to document the principle of Liberty. The casual observation that Equality and Security are equally valid principles is an interesting ideological comment from Bentham, but it only adds confusion to his analysis and method when he tries surreptitiously or by force to attach these alien principles to his point-of-view. Individualism gives ideological lip service to Equality and Security, but leaves them suspended in this ephemeral realm without factual documentation or methodological integration.

APPENDIX II

The Corporatism of E. Jordan

IT IS customary, in this kind of presentation, to rely for illustrative material upon men and works which afford the benefit of historical perspective. Such perspective may well tend to encourage discretion, but too great a distance may change perspective into obscurity. The democratic environment offers no suitable example of Corporate theory which would meet, as did the works of Bentham, the requirement of age without sacrifice of vigor. Corporatism is not indigenous to democratic soil, it has come to attention by impact, not by choice. The Corporate tradition has flourished in atmospheres not peculiarly democratic, and for the purposes of continuity it appears advisable to select a contemporary work which is oriented to democratic thought, rather than to attempt the difficult and extensive job of translating terminology,

tradition, and temperament. I am of the opinion that any orientation of continental Corporate theory within democratic structure could be accomplished only by a thorough remodeling of that theory, and, even if this were accomplished, it would neither serve the present purpose nor continue the demonstration of the manner in which the analysis was originally constructed.

Within these limitations, the most comprehensive analysis of the Corporate view of political meaning is that undertaken by E. Jordan¹, one might say that Jordan's statement of Corporatism is unique in the philosophical speculation of the United States. The nature of the work is such as to justify the assumption that Jordan will most likely reflect whatever is significant for our purposes in the structure of traditional Corporate theory. This statement of the Corporate point-of-view will not be directly analogous to Bentham's observation of the Individual, for Jordan does not begin with a primitive category and employ thenceforth the simple method of extrapolation. The method to be described here is that appropriate to the Material category of *Institution*, and what is implied concerning the categories of *Nature* and *Property* is largely in terms of their status as integrated factors of the institutional level. In other words, there is in Jordan's observation an implicit structure analogous to that which I have assumed, used by him in the derivation of categories and methods relevant to the Corporate point-of-view.

¹ Principally, *Forms of Individuality* (Indianapolis, 1927) and *Theory of Legislation* (Indianapolis, 1930), these works will be referred to, respectively, as *Forms* and *Theory*.

Whereas Bentham evidenced clearly the difficulties of analysis occasioned by a confusion of methods within his point-of-view, the point I shall stress in discussing the Corporate point-of-view is that of confusion between points-of-view. Let me repeat that the analyses I make here are necessarily selective, and hence do some violence to the works as a whole

The recognition that Jordan's roots were firmly planted in individualistic tradition and that his development has been entirely in the atmosphere of democracy precludes the inference that he is unaware of the methods and categories of the Individual point-of-view. His concentration upon the Corporate comes as a reaction to overemphasis upon the Individual, and in his effort to bring to awareness a neglected point-of-view in political speculation, he sometimes neglects what is valid in Individual analysis. The fact that such exclusive emphasis is equally common to both Individualism and Corporatism and is the source of a vitiating dichotomy in the analysis of political fact explains the concern here with this methodological aspect to the neglect of the important factual content of both Bentham and Jordan.

Thus, we find that Jordan grants the existence of "classes within the real," one of which "may be called the class of personalities" (*Forms*, p. 327), and we find that he likewise makes a triadic division of personalities into objects, human personalities, and institutions (*ibid*). From the standpoint of methodological emphasis, this appears to be a primary confusion of analytic points-of-view, but from our own premises it must be admitted that the

best method of analysis is that which best suits the facts to be observed. It may be that the method implied by Jordan's categories is more adequate than that used in the foregoing chapters, or it may show greater competence and relevance in the explication of a particular point-of-view. That is precisely the question we are concerned to investigate. There is, however, one thing which cannot be emphasized too greatly—namely, that no method, regardless of its point-of-view, can legitimately disparage what is fact for another equally valid point-of-view. The Individual and the Person we have already found to be observable categories of the Individual point-of-view, we must admit the same status to the Corporate categories, whatever they may prove to be, but exclusive concentration upon the Corporate point-of-view has the result of obfuscating Individual categories.

Jordan grants at the outset that Person is one of the facts with which ethical and political speculation must be concerned, and in an earlier work (*The Life of Mind*, Indianapolis, 1925) he undertakes a redefinition of personality and individuality in terms suitable to his emphasis. The definition of Person in terms of the categories of the Individual point-of-view is criticized as a "material contradiction," and utilitarian analysis is characterized as "tool-philosophy." (P. 268) We note here an immediate emphasis on the failure of individualistic analysis to recognize the "material" factors present in political meaning, and Jordan sets himself to the task of explicating these neglected factors. He endeavors at the same time

to make it clear that this Corporate emphasis need not imply a denial or neglect of valid Individual categories.

It is true that the individual man holds some kind of peculiar claim on the relations which obtain between him and the things and persons with which they at the other end connect. The individual can claim that these relations are his, and that they proceed out of his very being as an individual. (Pp 271-272)

This appears to be a decisive statement of the methodological distinctions implied in the recognition of analytic points-of-view, and it likewise conveys the important admission that relations exist both between and within these points-of-view.

It must be admitted that the material analysis of the Corporate point-of-view has a claim of relevance equal to that of the Individual point-of-view, but it is a denial of that parity of significance, through which alone the integration of points-of-view is possible, to contend.

This inward turn of such facts toward a central unity, while it constitutes perhaps the most important aspect of the facts, *in the matter of the understanding of the practical life may, nay, must*, be largely ignored. (P 272)

How can that which is "most important" be of so little significance in the area of practical meaning as to justify this cavalier "ignoring"? If it is meant here to suggest the necessity of a dichotomy between the individual as such and the individual as a part of the experiential or "practical" complex, then what is being proposed is that,

although existence and fact may, indeed, be observed from three points-of-view, practical meaning can comprehend at most but two of these points-of-view. That there is a conflict of public and private in the integration of the Person we have already admitted, and that there may be conflict involved in any possible integration of Person, Institution or State, and Law we stand ready to admit; but conflict, in analysis as elsewhere, is not resolved or adjusted simply by ignoring or eradicating one or more points-of-view which appear not to be immediately relevant. If it is necessary, in order to justify observation and analysis from the Material or Corporate point-of-view, that cognizance and credence be denied the categories of the Individual point-of-view, then political speculation is not rational analysis, but only a process of "choosing up sides" and waging incessantly a war of theoretical armament. That Jordan implies such a diremption of analysis, with a preponderance of emphasis upon one point-of-view, is suggested more directly

Human relations are not intelligible when interpreted in terms of the persons involved, but must be considered by themselves and as if they were real when they do not hold between persons at all. (P. 274) -

With the contention that nothing is intelligible taken out of the context of the whole of meaning within which it occurs, I should, of course, agree—observing, however, that since the whole of meaning is the whole of everything possible, apart from divine omniscience we must accept degrees of "truth and reality" and meaning. Furthermore, it is not clear why the wholeness of intelligibility

and meaning which is denied to particular and specific facts of analysis should be attributed to particular and specific relations.

These relations *stand on their own feet*, are real by themselves, and can be described as such (P 275)

We have already noted the fallacy present in a confusion of the categories resulting from analytic or methodological distinctions with the real or objective nature of the factual complex.

Moreover, it is difficult to talk about relations, however self-sufficient, without taking into consideration *what* they relate, we find that Jordan is holding in reserve a substitute anchor of relationality, a new category of personality.

There must be *another person* hidden somewhere which we have not seen . . . there is a superpersonal person involved in *every* practical relation, whether that relation be selling a carrot or saluting a saint (P 275)

We cannot but suspect at this point that here is a somewhat surreptitious translation of Person into terms of the Corporate point-of-view, and in terms of Corporatism, this new category of personality should be called an *Institution-State* in the foregoing analytic pattern. The correctness of this suspicion soon becomes evident

Each of these essentially human, and therefore personal, qualities [right, justice, etc.] creates its own appropriate objective form, embodies itself as soul in this form, and thus helps to make the enduring realities of life . . . These embodied souls of the mind-life we call *institutions* (P 286)

The nominal recognition of Individual categories throughout Jordan's work operates to little effect if the implications of those categories are always to be translated into concepts not suitable to express their meaning, concepts which are rather the particular analytic media of the Corporate point-of-view. The justification adduced for this restrictive emphasis upon analysis in Corporate terms and categories is not convincing.

The essential fact of the practical life is that it is
*constituted entirely of outside relations to and among
persons and things.* (P 274)

I am not at all clear as to what is meant by the description of a relation as "outside." Without becoming involved in the logical argument of internal and external relationality, it seems not too naive to ask how a relation can be considered as "outside" the point-of-view from which it is observed. When we speak of relations "within" and "between" points-of-view, we are referring to methodological devices of abstraction, but a relation as "outside" is still something else. If it is contended that relations exist independently in the areas between or outside the analysis of points-of-view, then we have postulated a final separation of relations and the analytic concepts which they relate, this appears to me to be a suicidal destruction of the very concept of relation. The minimum of content to be ascribed to the term "relation" is that it implies connection and continuity at both ends. As for the contention that

When we examine these relations as flowing from the spontaneity of any person, *that person ceases to be a true and real person* (p 274),

I submit that while this may well be the case, it is hardly legitimate to present this dilemma as the only alternative analysis of facts and relations to that of "outside relations." That this statement of the independence of relations is not actually descriptive of Corporate analysis is evident from the postulation of the inherence of these relations in Institution, which Jordan chooses to call a Person.

Jordan's analysis is clearly an attempt to describe individuality and personality in terms which will make possible their implementation. Jordan sees clearly what individualistic tradition never saw, that in the absence of such implementation individuality and the individual remain hypothetical abstractions with little or no implication of meaning for political analysis. What appears questionable in Jordan's procedure thus far is the assumption that such implementation is to be accomplished by reducing the category of Person to terms of the Corporate point-of-view. This necessitates, by omission if not by admission, the denial of any legitimate point-of-view which might be called Individual. A later consideration of "The Institutionalized Mind" (*Forms*, Chap. IV) starts from the premise that "specific meaning" is a contradiction in terms, a proposition which does not seem contrary to our previous discussion. The corollary that "no meaning can ever be attained by putting facts together" (p. 138) may be legitimate as calling attention to the particularity and inadequacy of specific analytic data. This methodological premise does not, however, provide the factual ground for an observation that "the content of mind is external to the mind." (P. 157) The further advance from an inference that "so-called individual interests are

then really *personal* interests" to the conclusion that "these individual interests, when seen whole, are the functional relations of institutions" (p. 167)—this is to confuse the status of fact with the methodology of observing the fact. It appears to ignore the contributions of Kant and Bradley in their emphasis upon the functional contribution of the process of knowing, their insistence that what is known is not simply *fact*, but *fact-as-known*. The legitimate criticism of individualistic point-of-view analysis—that "in the absence of institution . . . man appears executively impotent in all practical connections" (*Theory*, p. 231)—is hardly the ground for extreme segmentalism which says

It is the outward life-processes which determine the make-up of his mind, and not he that controls conditions (*Forms*, p. 175)

Nor is there ground for this extreme statement:

Man . . . neither as individual nor collectively, is responsible for the organization of human affairs into such bodies as an industrial corporation, nor is he capable of controlling them or of determining the direction of the line of policy which they will follow (*Theory*, pp. 230-231)

No one emphasized more forcefully than Hegel the Corporate point-of-view, and yet he realized and stated clearly that the description of the Individual in terms of this characteristic of autonomy derived from observation of Corporate evidence would inevitably result in the deterministic inhibition and circumvention of any possible activity. (See especially *Philosophy of History*)

That Jordan recognizes the individual as active, as, in fact, the motivator and manipulator of activity, makes the more significant his continuing failure to accord proper recognition to the facts of Individual analysis, for it indicates the primary importance of a method of observation which will take into consideration all of observable fact. It is repeated many times

The individual's obligation is the obligation to think, to prepare in idea and anticipation the intent of the whole of experience which as objective agency may become active in the execution of a plan (*Theory*, p 228)

At the same time, it is taken as a premise of significant political action that

The merely being an element in the structure of institutions does not lay any ground for the effective action of the intelligence of men in controlling or even affecting the life of institutions in any considerable degree (*Ibid*, p 77)

This poses the question of how intelligence can possibly make itself effective in activity

The motive which lies at the root of this almost exclusive concentration upon the analysis of the Corporate point-of-view is the assumption that corporeity is synonymous with the possibility of order in the political structure.

The essence of individuality is *corporeity*, for this is the ground of the possibility of order, and the purpose of science and knowledge is to examine and explain the forms of corporation, and the laws by which these forms are incorporated (*Forms*, p 187)

It is not clear to me why there should be supposed more order present in the integration of State or Institution than in the integration of Person. They represent analogous categories of two different points-of-view, and while it is quite true that no construction of political theory can completely ignore either category, there is likewise no ground upon which either should take precedence over the other. It may historically be the case that "it is the more or less blind pressure of institutions upon the life of individuals that is responsible for very much the larger part of his activities", but does it follow from this that "it is these pressures that constitute the real content of political action"? (*Theory*, p. 76) They are not more real simply because they are the *only* real factors, this would spell institutional determinism and circumvent any activity that could be called political. It can hardly be contended that the area of individual activity is confined to the speculative—that is, to understanding the process by which institutions determine the activity of the speculating individual—and Jordan appears in no wise averse to admitting

In the administrative motive of legislation, the individual is presupposed in his capacity to think and to idealize ends, but his character of peculiar importance here is his capacity to *act*. By action here also is meant the bringing about of changes in the order aspects of objects, the capacity to change objects in such of their attributes as quality, position, etc. . . . The individual thus as a factor in the administrative aspect of legislation is important because of his relation to the changes in the orders of objects which legislation effects (*Theory*, p. 379)

Such a statement of the possibility and necessity of individual activity within the political arena certainly designates a very "real content of political action" over and above that exerted by the factors peculiar to the Corporate point-of-view.

It would seem, then, that *order*, in the sense of political meaning, is not the exclusive prerogative of the Corporate point-of-view, nor does the individual have only the alternative of maintaining a passive state. Yet at one point it is asserted

The institution, when operating as creative agency, transmits or extends its element of order to the systems of objects produced by individuals as natural agents, thus incorporating these orders of exclusive objects into cultural ends, or the ends of civilization (*Theory*, pp 87-88)

The function of the individual cannot be restricted to that of producing objects, for it is clear that the Institution does not function as a "creative agency" except through the activities of reflection, speculation, and experimentation—and the agent of these functions is the Individual. Jordan recognizes this when giving a summary statement of the "constitutional principles of order which become explicit in organisms of the natural and social types"

Three main forms have appeared as fairly clearly definable. These are the speculative principle, the experimental principle, and the reflective principle (*Theory*, p 464)

How any of these principles can approximate implementation without implying specific activity on the part

of individuals is a question which Corporate analysis must answer.

There is one possibility which should be noted—namely, that the order which Jordan conceives to be the essence of corporeity is meant also to be identified with mind or intelligence itself. In some respects this seems to be the implication of the above references, and it is supported in numerous other observations.

The human mind is then the unity of order in the institutions of life. And the degree and worth of that inner order of mind will depend upon the type and quality of order that can be set up in the complex of those institutions. (*Forms*, p. 180)

There is no means of effecting changes in the mind of the individual person except through changes in the external and objective forms which his mind takes in property, etc. (*Ibid*, p. 309)

It is this presupposition of a natural, divine, or metaphysical order as providing the ground of law, both civil and moral, which has been largely responsible for the neglect, by democratic speculation, of the suggestions contained in traditional Corporate theory. Jordan likewise fails to establish any real possibility of relation between an individual as agent and an institution as order, but he is apparently unwilling to reflect the disdain of *agency* which is common to extreme Corporatism. Rather, it is the recognition that agency cannot be a characteristic of the isolated individual of individualistic analysis that drives him to a reformulation of the concept of agency, and once again we find a suggestion of the levels of analysis which we have formulated here.

One of the original, natural things which lie embedded in the foundation of the practical life, and constituent to the corporate political body as one of its units, is the natural person, the human individual (*Theory*, p. 290)

The individual assumes meaning, however, only when observed as a higher order of fact—that is, as a Person

The concept of person is, in its lowest terms, essentially the comprehension of the unity of things as occasioned by their circumstance, it is the idea that the simplest elements of order in a body of things implies the inclusion within the order of the facts which circumstantiate that body (*Ibid*)

This is, in its generality, essentially a definition of what we have indicated as the integrating category implied by the analysis of any point-of-view. Such comprehensive categories serve to provide social and political speculation with definitive concepts which comprehend the essential observation of respective points-of-view. That Jordan should choose to call this integration itself “personality” seems unfortunate, for it indicates a dual confusion of structure and content, as well as a failure to recognize Person as a legitimate category of the Individual point-of-view. He is critical of the analogical confusion of points-of-view in analysis

The characteristics which we attribute to the social body in the more or less careless analogy we make between it and the human being, especially with respect to the human being’s capacity to formulate ends, endows the social body with a good many capacities for the existence of which we can find no objective evidence whatever. (*Theory*, p 322)

Yet, this appears to be precisely what Jordan is doing when he defines the Institution as Person, and attempts to justify this characterization by ascribing the function of *will* to the institutional or corporate entity. This deliberate fusion of two analytic points-of-view is the source of an elaborate identification of Individual and Corporate categories for which it is doubtful that any "objective evidence whatever" can be adduced. At times, the identification appears contrary to any possible analytic observation.

There is no essential difference between the corporate or fictitious and the natural person (*Forms*, p. 129)

The corporate body . . . is to be considered in every way a reality of the same order, principled by the same law, differing from the natural person only in degree (*Ibid*, p. 309)

Regardless of the context in which such statements may have been made, they indicate a cavalier refusal to accept any point-of-view in analysis except the Corporate.

If analytic distinctions are not maintained, the political process becomes something decidedly less rational than the compromise to which Jordan so heartily objects. To call an Institution a Person, and to fabricate a will with which to endow this personality, is simply to make impossible any adequate comprehension and co-ordination of either Individual or Corporate categories. It is largely upon this aspect of the will-nature of corporations that Jordan bases his attribution of personality to such entities. The manner in which this development is accomplished provides an interesting example of the way in which meaning may be

restricted by the method of a point-of-view extended beyond its observational limits. The individualistic premise that *will* is the practical manifestation of the observable tendency to self-realization through growth is accepted, and this suggests that any analysis of individuality must issue in a theory of will. (*Forms*, p. 148) It is then stated as a matter of observation that the isolated individual does not manifest all the fact necessary to this self-realization. In other words, the adequate fulfillment of *will* demands an integration not comprehended by the categories of Physical Man and Social Group.

And the corporate or civil is the full form of individuality because it embraces referentially all the fact and at the same time is characterized by all the typic or generic forms of order. (*Forms*, p. 234)

That this should imply, however, that "Will is then merely the propulsive tendency to order in fact, or the fact that fact can exist only as ordered" (*ibid.*, p. 237) does not seem to follow directly. The mere fact that the tendency, propulsion, urge—whatever it may be called besides simply *will*—which is characteristic of the nature of the individual should necessitate and demand for its incidence and fulfillment a range of fact external to the individual considered merely as a Physical Man does not necessarily imply anything so drastic as the negation of the original tendency or propulsion manifested by the individual. It appears that this extension rests upon a confusion or identification of will and activity, of motivation and accomplishment, of purpose with practice. If I *will* to construct a table, for instance, it is certainly true that the manner in which I con-

struct the table—that is, implement my will—must to a large extent accept determination by the nature of available material, and other material considerations such as use, and so forth. The activity itself must be adapted to these material factors, but the *will* to make a table remains just that—the *will* to make a table, if that *will* is thwarted in activity by a total absence of material possibilities, it yet remains a *will*, and as thwarted it may occasion a degree of disintegration rather than the anticipated satisfaction of self-realization. There is every intention here of maintaining the critical attitude justifiably demanded by Jordan toward the inadequate definitions of *will* which characterize some individualistic statements, but the deterministic picture of the relations involved between Individual and Institution does not account for all observable facts, one of which is the characteristic of *will* or agency manifested by individuals *as individuals*. Individuals can and do, upon occasion, deny any or all of the pressures exerted by corporate or institutional factors. It may mean suicide—physical, intellectual, social, or spiritual, but the fact remains that this is a prerogative of the individual, and it is not conducive to clarity in analysis to deny or to ignore the obvious.

That an Institution manifests any characteristics identifiable with this tendency or propulsion as common to the Individual is doubtful. The term which appears more descriptive of the propulsive tendency of corporate bodies is *Autonomy*, and this is implied in Jordan's definition of the corporate will as blind and indifferent. (*Theory*, p. 280) As for the possibility of attaining any integration

of these two kinds of will defined by corporate theory, let us observe the characteristics of each

The corporate body which is the practical reality, has therefore a will that is propulsive, a consciousness that is apprehensive and representative, and an intelligence which is incapable of comprehending ends and so of giving it direction. The individual person that is one of its constituents has a will that is ideative, a consciousness that is comprehensive, and an intelligence which postulates the order within which direction is significant. The one creates the rational or the irrational indifferently, it has no ideal or will capacity of choice, the other ideates the rational, but creates nothing. This is the situation which constitutes the problems of political theory, and the difficulty of political practice (*Theory*, pp 280-281)

The distinction between corporate and individual as stated in this passage seems to be that between will as immediate and will as mediate, but inasmuch as will carries the implication of activity, it is better described in a political sense as intermediate, I infer that this distinction might be acceptable to Jordan. This statement would then be in essential agreement with our original analytic designation of points-of-view, and in general it may be said that Jordan is formulating the problem of public and private integration in political activity. But simply to make the distinction on the basis of a difference in kinds of *will* provides no ground for that integration—unless, that is, the distinction of *wills* is interpreted as implying a common will-substance, but this is only another way of reducing *will*

or agency or Individual to the descriptive terms of the Corporate point-of-view.

The possibility that this is the implication of Jordan's position may be inferred, not only from previous citations, but from a further clarification of how it is that the individual becomes an agent in the political process. Besides his obligation to think and to know, the individual is admitted to have a "capacity to act." (*Supra*, p. 312) In this respect, the individual is a "manipulator of means", but note in the very next sentence the restrictions placed upon this capacity to act

And in this capacity we may describe the individual as one among the various instruments of which the public will makes use in the pursuit of its administrative purpose . . . Hence for the purpose of making the administrative function clear in its legislative implications, it is allowable to treat the individual as an instrument and means in the hands of the public will (*Theory*, pp 379-380)

What precisely constitutes this "public will" which manipulates the individual manipulator is not quite clear. In the first place, there is no possibility of identifying it with public opinion, for Jordan has already said that "there is no such thing as public opinion" (*Theory*, pp 339, 341) It is that peculiar kind of intelligence which is "incapable of comprehension," and in no way analogous to the ideative capacity of the individual. It is interesting to note that Bentham rejected public opinion because it would imply will (*Supra*, p. 292), while Jordan rejects it because it would imply mind. This seems to me a highly

significant comparison, summarizing the essential distinction of analysis between the two points-of-view. Public will is defined as representing the characteristics of "continuity" or order manifested by any and all corporate entities, and it would therefore be typical of institutional forms. It is, moreover, the "integrating tendency in public life," and as such it appears to be a natural or inevitable accompaniment of the association of fact. Further, "this will effects a perfect continuity with the life of nature *beyond* the localized area", this means that the primary problem of political activity is that of "finding appropriate instruments of the public will" (*Theory*, pp. 234-235, 408-409)

This attributes about the same degree of agency to the individual as might be allowed a guinea pig on a treadmill. The reduction of will to the autonomy or continuity of the corporate entity leaves to the individual only his "ideative" capacity, his only agency is that of knowing. This is, in fact, literally to eliminate the individual as a factor of political meaning, for, as Jordan himself says

If recent events in the political world mean anything more than accident it is that intelligence is among the least of the factors that determine the course of the political life. (*Theory*, p. 76)

The question is whether political meaning can be made to comprehend *anything* more than "accident." The restriction of the individual to ideative capacity brings us back to institutional determinism, for it is clear that if mediation or intelligence means anything, it implies some degree of comprehension of all factors in the political complex

This necessitates the inclusion of activity itself as a constituent element of that meaning. The possibility that any such group as Mannheim's "socially unattached intelligentsia" could exercise their peculiar capacities of speculative discrimination from a position of complete "objectivity" is extremely doubtful. In the first place, no one has shown more clearly than Jordan that to speak of an individual, or an intellect, as "socially unattached" is to speak what is meaningless. The dilemma appears to be final for Jordan. "Man must do his own political thinking, yet cannot, such is the surd of politics" (*Theory*, p. 25). This is the inescapable result if the individual is denied the capacity of agent in the political process. Such a reduction of the individual rests upon no ground more cogent than the arbitrary refusal to admit more than one possible analytic point-of-view.

On the positive side, Jordan's analysis is of the greatest significance in clarifying the facts and categories of the Material point-of-view. Describing the "ground of experience" as "feeling-mass" (*Theory*, p. 112), Jordan identifies "objective feeling-mass" with "the corporate order of human life as embodied in institutions" (*ibid*, p. 117). More specifically

A specific instance of feeling mass or life, and as a stage of its objectification into custom, etc . . . is the *thing*, the physical or materialized object which, as effective, is a specialized instrument. (*Ibid*, p. 122)

This is a clear statement of the category of *Nature* in its character of immediacy, but the demand which Jordan

seems to feel for identifying Individual and Corporate categories renders somewhat ambiguous the relation between the natural "thing" and the Property object. The principle of *Use* suggests that the thing "becomes objectified into commonalty through transcending its self-referent privacy", but that for this reason it should "become the object of *exchange as the lowest stage of communication*" (*ibid*) seems a direct contradiction of the defining principle of *Use*. Upon what grounds can we justify a definition of the natural object as "the ordinary experience ground of mediation between the individual and the social" (*ibid*)? What necessity dictates the use of such individualistic terms as "communication," "individual," and "social group" to explain the essential nature of Property? Property is not a means or function of communication. It is, as Jordan says, "*arrangement of material or historical objects into abstract form*"—a passive or at least immediate "form," for Property is then "ready to receive the infusion of influence of life and law which will make it over into real corporate order" (*Ibid.*) This seems to indicate that the Individual and Formal points-of-view will coalesce in the Corporate category of Institution, another indication of the tendency to conceive Corporatism as the determining point-of-view in analysis. Once again, we cannot object to choice of terminology, and if Jordan means by "corporate" to refer to the whole analytic complex, inclusive of all three methods and points-of-view, it is his privilege so to use the term. But we can and do object when that same term "corporate" is defined as the peculiar characteristic of Institution, a category of one particular

point-of-view. Corporeity is certainly one, but not the only, quality of the analytic pattern.

It is not surprising that Bentham had nothing of importance to say concerning Property, that is, he refers to it simply as equivalent to *interest*, a thing which is *created*, which must be *possessed* by some individual. The attempt to implement this uncritical conception of Property in our political structure has been one of the primary sources of our failure to comprehend the nature of corporeity. Until political analysis recognizes the corporate analysis of Property suggested by Jordan and ignored by economic science, we can expect no proper recognition of natural objects and instruments within activity. There is no point in reproducing here that analysis, except to indicate the general structure of the treatment. As already defined, Property is the embodiment of natural objects as external means (*Forms*, p. 329), and Jordan makes clear the falsity of the assumed correlation between Property and ownership. Property is, thus, not a category of the Individual dimension, its relations to individuals are neither direct nor determining. Legal tradition has placed emphasis upon the right of disposal in regard to Property, rather than emphasizing its real characteristic—enjoyment or Use. The rights to Property are not, and could not be, exclusively enjoyed by isolated individuals, excluding, of course, that legitimate and restricted area of private anarchy which comprehends wives (generally) and tooth-brushes (universally).

Jordan notes again the fallacy of collectivistic logic in calling attention to the fact, "A usage is not the mere

sum of repeated uses, nor is it the resultant tendency to act in a specific way which comes from repeated action " (*Forms*, p 336) The very concept of Use implies the integration which can be described only in terms of the category Institution: "Usage then is institution, and institution is the objectivity of use." (*Ibid.*) The Institution is, thus, the corporate form of integration by means of which natural objects, through the co-ordination of Use, become institutional or corporate instruments The implication of this concept of Use and Property is that every natural object and every Property-Use is endowed by its very nature with institutional relations and purposes and obligations. Property is a concept essentially institutional in nature, rather than hedonistic or utilitarian This is true because it is only by and through such instruments as are represented by Institutions that any purpose at all can be realized, or any *will* implemented, however individualistic that purpose or will may have been in origin This is what we mean when we refer to social responsibility, but we seldom know what we mean

The ultimate person who carries responsibility is the whole, the system of human purposes as institutionalized in the public body (*Forms*, p 340)

We are beginning to realize vaguely, in certain connections such as criminology, that violent reprisal upon the physical person of offending individuals is neither the cure nor the expiation of the error.

The corporate aspect of every purpose or end or *will* is, then, that it can approximate implementation only by

the use of instruments which exist as institutions. Not only is "the corporate body the appropriate organ for the expression and realization of public purposes" (*Theory*, p. 303), but, since every purpose demands a means or instrument, and since such instruments are characteristically corporate in nature, all purposes whatsoever imply the Institution as their point of final incidence. What must be assured to the individual in any adequate social structure is the availability of these necessary instruments. This is precisely what is meant when we say that abstract liberty divorced from the possibility of exercising that liberty is meaningless. It should be noted that this implies affirmation not of the principle of Equality, but of the principle of Security. It is not that every individual should have equal access to instruments, nor that all instruments should be equally available, but that there must be some assurance that ends and purposes can be given actual, material implementation. When an adequate integration is achieved in the Institution or State, the characteristic autonomy exhibited by that corporate or institutional body will give assurance that the material factors necessary to the fulfillment of activity are available.

APPENDIX III

Formalism in Legal Theory

NATURALLY, I find more than mere coincidence in the observation that legal and juristic theory has developed along three main lines of emphasis. It may be that there could be established an analytic analogy between the fundamental cleavage of legal methods and the three points-of-view of Individual, Material, and Formal, but it is sufficient at the moment to note that legal theory itself divides into three distinct schools of thought, commonly known as the Analytical, the Historical, and the Philosophical. It is to be expected that I would find in these three lines of development an explication of the categories peculiar to the Formal point-of-view *Mathematics and Logic, Language, and Law*. It cannot, however, be assumed that this relation is obvious, and for the purposes of analysis I suggest a brief examination of the method of

observation employed by each of these legal constructions.

If there is any relation between the major political and legal traditions, Austinian jurisprudence will parallel the thought of the positivistic or formal school of politics. To John Austin¹ must go the credit for recognizing the necessity of a definitive method by means of which to distinguish and define the aspect of meaning with which law or jurisprudence is primarily concerned. The major interest evidenced by Austin in this delimitation of method was that of distinguishing the sciences of jurisprudence and ethics. The tacit identification of these two sciences, as well as of law and morals generally, had already occasioned a reaction on the part of the Historical school of juristic thought, which had attacked the notion of legislation as a positive science. Austin's immediate endeavor was to define, delimit, and specify the exact nature and content of a possible science of positive law or jurisprudence, the methodological pattern which he constructed fits into our triadic analysis without distortion.

There are, says Austin, three kinds of law (1) laws of God, (2) positive laws, and (3) positive morality. (*Lect V*, p. 170) Laws of God are identified with "laws of nature" and consequently must be taken as representative of the Material point-of-view. It is true that both positive law and positive morality manifest some resemblance and analogy to so-called divine law, but the relationship is not immediate and does not establish any relation of dependence among the three kinds of law. It is interesting to note that on the basis of this explanation, the concept of

¹ *Lectures on Jurisprudence* (London, 1911), 2 vols

"God" would be appropriate to a possible metaphysical level of the Material point-of-view. Positive law is defined by Austin as the setting of the law "by men as political superiors" or "by men, as private persons, in pursuance of legal rights." In this definition, we may eliminate the latter restriction as precipitating a circular argument, to define law as the execution of legal rights is not explanatory. What Austin means, as indicated by further explanation, is "by men as political superiors or by the agents of those superiors." This definition would seem to imply that the sole source of law lies in some form of vested sovereignty, and such might, indeed, be taken as Austin's meaning if it were not for the fact that there is a recognizable area of "judiciary law" which proceeds from the execution of the science of jurisprudence and not from the fiat of political superiors.

The distinction of positive law from positive morality rests upon a separation of private and public sciences of morals. Positive morality includes all the rules of human conduct, organization, and communication which are not established either as laws of God or as dictates of sovereignty. Thus does Austin set off Formal analysis from that of both the Individual and Material points-of-view.

If Austin is to maintain the separation of powers which his methodological approach implies, and upon which he insists, it is obvious that the assertion of judiciary law raises a serious question. From what source can judiciary law be said to derive its imperative element? Austin grants at the outset the essential nature of law as command (*Lect. I*), and seems to admit that such an imperative must

derive from some established form of sovereignty. But if it is granted that judiciary law reflects this imperative which is vested in sovereignty, then adjudication can no longer be said to operate independently of that sovereign, no matter whether the latter assumes the form of legislative activity or executive fiat. Austin would, thus, fail his primary purpose of establishing the independence of jurisprudence, the judge would be a mere agent of the "political superior," and the Formal would be reduced to the Individual

Statutory law is admittedly an effort at the precise formulation of legal rules, a formulation which will constitute the universal major premise by means of which the legal status of any particular act may be determined by logical deduction. In such procedure, the court acts inductively to determine and establish the fact in the form of a minor premise. The function of the judge is, then, that of logical analyst, in that he deduces and formalizes the conclusion in the form of a judgment or decision. From this view, judicial procedure is the mechanical process of drawing inevitable conclusions from general rules and established facts. The statute might be compared to a mathematical or logical postulate, aiming at a degree of abstract generality which will cover all possible instances of particularity, and the judicial process would thus combine logical deduction and descriptive induction. The fact that the knowledge and skill of those who design statutes are not adequate to formulate such a comprehensive generalization is not a criticism of the procedure as a method. The scientist is never aware of all the facts when he makes his

generalization in the form of a "law of nature," but he proceeds as if his generalization were exhaustive until forced to admit otherwise. Judicial procedure thus bears a marked resemblance to scientific experimentation in the manner in which both make use of the necessary fictive assumption of inductive procedure.

The necessity of this fiction of universality as a methodological device is too often forgotten in criticisms of Analytical jurisprudence. Austin is quite right in rejecting, as not to the point, criticisms of codification which refer to the inadequacies or failures of attempted codes (*Lect XXXIX*, p. 663). Neither is it justifiable to argue that the legislative function is purposive rather than formal, for this assumes that a purpose cannot be given precise formulation. Is there any reason to assume that a generalized, universal formulation of purpose or policy cannot be drafted? Is not every piece of legislation actually a determination and statement of policy? Even though such precise codification may remain merely an ideal, that in itself is not an argument against the method which conceives the judge as interpreter, without legislative or imperative capacity. From this view, judicial rules are principles of procedure, rather than additions to the content or purpose of statutory law, and as such there is no reason why they could not be formulated in precise and systematic manner. As a matter of fact, this is exactly what the judge does in setting a judicial rule, such rules become the "general grounds or principles . . . whereon the cases are decided," and the "process of induction by which the principle is gathered before it is applied" is "this very process of codifying such

principles, performed on a particular occasion, and performed on a small scale " (*Lect XXXIX*, p. 666)

That the consistency lent by such systematic codification is not only desirable but necessary within the political organization appears obvious. The demand made by law for precedent, for system, and for continuity springs from the same necessity which dictates consistency in mathematics, in logic, and in every formal system by means of which facts and relations are formulated and communicated. The categories of the Formal point-of-view may, then, claim a status of validity and necessity equal to that of either of the other two points-of-view, for without the formal structure there could be no continuity, no judgment, and, hence, no adequate meaning

Austinian theory is justified, therefore, in insisting that law, as the formal rules of social procedure, be given formulation in the most precise, systematic, and consistent form possible. Austin's analysis has suggested that both legislative and judicial rules are capable of such codification. Further, the Analytical argument appears correct in asserting that failure to achieve perfect codification in no way affects the demand that such a method be employed in formulating judgments about facts and relations. It is probably the case, as Austin claims, that the failure of codes has been "grossly exaggerated." The difficulties of codification have been used to good effect by attacks which seek to find therein an excuse for various forms of judicial extravagance, but the fact remains that statutory codification is proving highly successful in ever-widening areas of operation. The extension of uniform codes of procedure

among the many states of the United States has been extremely handicapped and slow, but it is being recognized as the only available method for attaining any appreciable degree of that consistency and precision in the enforcement (that is, recognition) of law which will make integration at this level possible.

The difficulty with the Austinian analysis, however, lies in another direction—the analogy between judicial practice and scientific procedure will not serve to explain all the facts involved in the judicial process. Scientific generalizations certainly do rest upon the same fiction of universality as do codified statutes, but the manner in which the fiction, and hence the generalized rule, may be subjected to question is entirely different in the two fields of operation. If legal codes could be formulated with the same flexibility, the same ease of adjustment, could dispense with the apparent necessity of imparting to the legal dictum an atmosphere of timeless inviolability regardless of fact—granted this assumption, it appears that codes might be adjusted, redrafted, and maintained as useful methodological instruments in much the same manner as are scientific laws. This is partly a matter of attitude, and to this extent might lend itself to adjustment, but it is not the primary theoretical difficulty involved in the proposal of codified law as the method of observation from the Formal point-of-view.

Austin recognized that law implied an essential element of imperativeness not derived from its formal consistency or structure. The only command to which mathematics as such is subject is that of consistency, and the “impera-

tive" of language is simply agreement. The imperative or command element of the formal structure lies in the internal consistency which the systematic nature of that structure manifests, but this is by no means the case with the legal code. The reason is not that the law may not be sufficiently adaptable to fact and relation, nor is it that the code cannot be so constructed as to manifest a high degree of internal consistency. Further, the difficulty does not arise from the choice offered among various codes or systems of law. After the selection of a formal system suitable to the immediate purpose, the imperative of that system should be patent, but the selection of law does not in itself convey any imperative. Legal rules rest upon an imperative derived from some external compulsion, perhaps from a power resident in some form of sovereignty, as Austin admitted (*Lect. VI*, p. 263). There is implied here a necessary distinction between a *formal* and an *active* imperative, and this explains why a "logic of imperatives" is insufficient to describe the nature of the legal imperative.² Certainly, it is true that the formal system evidences a command element in the sense that there are exhibited necessary structural relations dictated by the nature of the system, but the necessity derives from formal logical grounds. If formal necessity is ignored, we say that the result is "wrong," or, more exactly, "incorrect", and it is incorrect simply because it has disturbed or negated the consistency which is the nature of the formal system.

² Cf. Morris Cohen, *Law and the Social Order* (New York, 1933), p. 256. "A study of juristic logic would be of the greatest assistance in clarifying the relative places of the imperative and the rational elements in law. Logicians have neglected this task because the logic of imperatives has not been developed."

Why, then, can we not say that the act which defies the consistency of the legal code is also "incorrect," and allow it to be sufficient proof of illegality deserving punishment that the act is contrary to the consistency and structure of systematic law? That judicial procedure cannot be conceived as functioning in this purely formal or systematic fashion is implied in Austin's recognition that the judicial function is in reality included within sovereignty, although the sovereign now ordinarily delegates these powers. (*Lect. XXVIII*, p. 520) Then it would appear that some essential characteristic of sovereignty is carried over into the judicial function, this would preclude the conception of the judiciary as objectively formal or mathematical in operation. Even though we grant the possibility of attaining a high degree of precision in the codification, not only of the letter of the law, but of policy as well, yet the judge is by his decision enforcing the will of the sovereign, and hence acting as the agent of that sovereignty. In the delegation of judicial responsibility, a degree of policy-forming or legislative capacity is vested in the judiciary as subordinate to the sovereignty.

A command, then, as embodied in legal formulae, is an expression of the desire of the sovereignty, and what distinguishes this from other expressions of desire is that the sovereignty wields sufficient power to enforce its desire—that is, to threaten punishment for defiance of law. (*Lect. I*) The power resident in sovereignty is, thus, the source of the legal imperative, but this determination of source does not answer the question of why such external compulsion should be necessary to the formal legal system.

Austin makes no attempt to justify this exercise of power over the legal system, in describing the sources of law, he merely says that unless a rule has the expressed or tacit consent and support of the sovereign, it is not a proper law. The force of law is in all cases established immediately by the authority of the sovereign (*Lect. XXVIII*, p 521). Thus, laws passed by sources subordinate to the sovereign carry his tacit approval, while custom can be interpreted as law only when it is formalized within the legal system which reflects the authority and imperative of the sovereign. Austin is forced to admit that there is no real imperative element in judicial law (*Lect XXXIX*, p 655), for to admit it to be as imperative as statutory law would be to identify the judiciary with the sovereignty itself.

There has already appeared a close correlation between Austin's treatment of law and jurisprudence and that of Bentham. The latter's concern for the codification of law is well-known, and mention was made of his consistency with this view even in regard to the possibility of a calculus for the judgment of private morals. Bentham likewise appeared to assume that the imperative element of the legal code derived immediately from the sovereignty, and his elaborate analysis of punishment is convincing evidence that from his view the command aspect of law rested upon a power external to the law itself. One of the questions raised in connection with Bentham's analysis was that of how he justified the legislation of pleasures and pains for individuals as such, how, in fact, he justified the exercise of sovereignty by government.

Austin fails to clarify the nature of the legal imperative,

for to state its source in sovereignty is not to define its legal status. The active imperative is strictly a legal concept, as Austin admits in the very first sentence of his work, when he defines law as essentially a command. Yet, the imperative cannot be explained simply as an integral function or part of the legal or formal system—at any rate, not at the level of analysis employed by the Analytical school. In practical terms, the problem may be stated quite simply. It might be conceivable that a board of experts could draft a code of laws for the United States which would incorporate the elements of consistency, flexibility, precision, and availability, such a code might even be made comprehensible to the layman, and hence obviate one of the greatest difficulties of law in democracy. But however perfect the code, the question would remain as to how the law was to be implemented. Upon what principle could states, courts, judges, and individuals be persuaded to adopt this uniform procedure? In short, how is the relation between Formal and Individual to be described? This in itself, it must be admitted, is to pose a problem of magnitude, but consider the additional difficulty involved in enforcing the law after it had been formally accepted. How, that is, could the relation of Formal and Material be maintained? Reliance upon the inherent rationality and intelligibility of the law itself is too optimistic to fit the facts. That, as has been suggested in another connection, is the major premise of utopian thought, a condition the realization of which would make the integration of social structure child's play by comparison with the task of any realistic analysis.

It remains that codification, however possible it may appear, is not of itself sufficient to establish the imperative nature of law. For the Analytical view, as we have seen, this imperative depends upon power resident in the sovereignty. The independent function of the judiciary which Austin sought to establish does not appear to follow from his analysis. However precisely the premises of the legal syllogism may be stated, drawing the conclusion is not simply a matter of logical deduction.

The fact may be perfectly ascertained, and so may the law, as far as it is capable of being ascertained. The rule is known, and so is the given species. . . , the difficulty is in bringing the species under the rule, in determining not what the law is, or what the fact is, but whether the given law is applicable to the given fact. (*Lect VI*, p. 230)

The determination of the applicability of law, I suggest, is itself the very essence of that imperative which is essential to law as command. Thus, as Austin admits, the real nature of the judicial decision is not that of drawing an indicated conclusion or decision from two established premises, but the much more arbitrary determination of whether any conclusion *can* be drawn. The judge, in other words, determines whether or not he will apply the code in this particular case, and the formal code does not provide the grounds for such a determination. The judiciary thus exercises a highly arbitrary power of imposing legal imperatives.

The only justification for the exercise by the judiciary of power resident by definition in sovereignty is to regard

the judicial function as immediately subordinate to and derivative from the sovereign, and we meet again Bentham's legislator, self-appointed. This situation would render codification practically impossible, inasmuch as every judicial decision would derive its imperative only from the determination of the will of the sovereign in that particular case. The imperative utilized by judicial analysis is left indeterminate by Austin's failure to define sovereignty. The sovereign is, according to him, necessarily a monarch or an aristocracy, for it can exist only where there is a division of society into rulers and subjects. "The sovereignty can hardly reside in *all* the members of a society" (*Lect. VI*, p. 237). The concept of a judiciary as delegated officials of a sovereign breaks down, however, in the actual process of legal development and procedure. Upon what ground can Austin afford to admit that if judiciary law "be generally disliked, although it be perfectly perspicuous, it probably will be abrogated by the tribunals at the instance of public opinion"? (*Lect. XXXIX*, p. 656). He will not admit, however, that custom (and how else define "public opinion" in this connection?) is proper law, as positive morality, it may be termed a "source" of law, but its "continuance as law depends on the sovereign pleasure." (*Lect. XXX*, p. 537). By a devious route, Austin has developed the statement of the legal imperative so as to pose the problem for Historical analysis.

The rationalistic basis which had been assumed by previous legal theory, asserting that positive law was the immediate product of human thought and hence derived its

imperative nature from its essential rationality, appeared unsubstantial to the Historical jurists. Kant attempted to replace this rational basis of the imperative with a structure which was metaphysical in import but essentially logical in nature, the implications of that logical foundation were developed and formulated by Hegel in his identification of *ought* and *is*. The structure defined by the Historical school as the ground of the legal imperative was *natural* in character, and the major deviation which it manifests from the traditional school of natural law is merely that the Historical school went the whole way in the recognition of the natural basis of positive law. Whereas the natural law school had declared that positive law was constructed on the basis of certain *principles* of natural law, the Historical school, under the influence of Hegel, asserted that not even positive law could be constructed, but was only discovered or recognized.

It is the national spirit present in all individuals that is the creator of the positive law. This latter is therefore not accidentally but necessarily the same for the consciousness of every individual. . . . We must assume its existence in the common national mind. And the language of the statute book gives it merely an external embodiment and expression (SAVIGNY)

This meant that the imperative element of law came to be interpreted as a kind of inevitability manifest in the process of growth and development of society, law, and custom. Custom or culture, as the embodied formulation of that natural code of activity and behavior, was thus

posited as the comprehensive source of law. First, custom manifestly exerted greater pressure than any other form of legal rule. Custom likewise was reflected in judicial decisions and the accumulation of precedent, finally, the construction of positive law by legislative bodies was described as an attempt to approximate in systematic form for practical purposes the unformulated and unsystematized body of custom which actually was the law. The Historical school may, then, be said to comprise those theorists who establish the imperative of law upon the real or actual nature of social structure.

These phenomena—law, language, customs, government—have no separate existence, there is but one force and power in a people, bound together by its nature, and only our minds give them separate existences. What makes it a single whole is the common conviction of the people, the like feeling of inner necessity, to which all attribute a contingent and arbitrary origin. (SAVIGNY)

Of great importance in the Historical view is the recognition of progress as over against the more static view of the natural law analysis. It is clear that the Historical method would find codes an inadequate expression of law, but this does not mean that it rejects the necessity of codification. Codification for the express purpose of maintaining as high a degree as possible of precision and consistency in judicial procedure may well be admitted, but the Historical view insists that this formal structure of the legal code does not explain the principle or source of law. It merely describes a method of applying or utiliz-

ing the law. The foundation of the law lies in the society from which the law arises, its nature will be determined, not by the formal structure, nor yet by any superimposed principle or criterion, but by its inherence in the reality of the social process or culture which it reflects. The Historical school is, thus, objecting to the claim that any real imperative can be derived from the superimposed authority of sovereignty. The only imperative is the command of nature, of social progress.

This organic evolution of law with the life and character of people develops with the ages, and in this it resembles language. As in the latter, so in law, there can be no instant of rest, there is always movement and development. For all the progress of mankind, including the development of law, is governed by the same power of internal necessity as simple phenomena. Law grows with a nation, increases with it, and dies at its dissolution, and is a characteristic of it (SAVIGNY)

We have thus far seen illustrated in these two legal theories a definition and development of the first two categories of the Formal point-of-view. Law, as has already been said, must represent an integration of the Formal categories, and the first step in this integration is the clarification of what is implied by the two categories. The Analytical school of jurisprudence, thus, contributes a definition of the aspect of Law which derives from mathematical consistency. The Historical school, on the other hand, is interested in defining the substructure of implicit agreement which is also an essential ingredient of

Law. It is interesting to note the references of this school to language as illustrating this agreement, thus does the theory identify itself with the second category of the Formal point-of-view. It is but the normal procedure of such specialized concentration to overemphasize somewhat the importance of that which is being defined, and it is no detraction from their contribution that each of these schools stresses unduly the factor it is describing

American jurisprudence has advanced to the point of comprehending both these fundamental categories of the Formal point-of-view, but thus far has adduced no adequate principle or method for integrating the two in an adequate concept of Law. The attempt to define what has been called the Philosophical or Sociological school of jurisprudence has not been entirely successful, both the theory and the practice appear to be little more than a rather haphazard combination of the two traditional juristic points-of-view. Supreme Court justices today solemnly pronounce themselves logical deducers of Austinian consistency, and tomorrow just as solemnly adduce the hypothetical concept of "reasonable man" as the ground for their decision. Pound has even suggested that the law be divided into two parts, one dealing with property and commercial transactions, where there could be a *mechanical application of fixed rules*: "One fee simple is like another. Every promissory note is like every other." The other division of law would concern problems of "human conduct," where the judge would be forced to utilize *non-mechanical methods*. This plan depends, of course, upon the possibility of thus neatly sub-

dividing the cases upon which law is asked to pronounce judgment.

At any rate, from the standpoint of the imperative or integrative principle of Law, this does not advance the formulation of the problem. As a matter of fact, in either of Pound's divisions, we find the imperative to be defined in an Austinian sense, the judge is either a delegate of sovereignty or a self-constituted arbiter of what is reasonable and just. That such arbitrariness of adjudication will be the inevitable result at the level of procedure, even when the Historical argument is admitted, is remarked by Dickinson in the assertion that pressures exerted in the direction of influencing law are effective only by the method of exerting an influence on the judges. Dickinson suggests that there is usually considerable difference of opinion as to what is customary or natural or reasonable, and in law "the opinion which prevails is the judge's opinion." Cardozo's analysis was somewhat more succinct "In every court there are likely to be as many estimates of the *Zeitgeist* as there are judges on its bench."

The only solution of the problem of the legal imperative suggested by such a description of the process of legal procedure is either that of delegated sovereignty, which is fatal to the formal juristic system, or that of making the imperative resident in the good will or vested power of the particular judge. The latter principle of integration is more appropriate to the Individual than to the Formal point-of-view.

There is another tradition in juristic thought which, I think, merits distinction as a separate school. The So-

ciological or Social Law school of jurisprudence is, at the very least, a discussion of Law which endeavors to define the integration of Analytical and Historical categories demanded by analysis. From among the many works of a contemporary spokesman of this school, Georges Gurvitch, let us refer briefly to his documentary volume, *L'Idée du Droit Social* (Paris, 1932).

Gurvitch recognizes the problem involved in describing the imperative element of law, and he states clearly what for our purposes is the major contribution of this juristic method—namely, that external authority or compulsion derived from a sovereignty, regardless of its power, will not suffice to ground the imperative of law. That is, indeed, a source of law, but the imperative of law derives finally from the relation which it evidences to social structure.

The imperative of law . . . is characterized by two different marks: its character as established by a qualified authority which is not identical with the authority of the rule itself, and second, the actual effectiveness of the rule in a given social milieu. . . . It is easy to see that the "authorities" usually cited as source of positive law—rules, custom, judicial practice, convention, statute, etc.—do not in themselves give any guarantee to the individual of the actual effectiveness of the rule in question. (P. 133)

What, then, is the ground which will guarantee this effectiveness of operation, or, in our terms, the imperative nature of law? We can now agree with Gurvitch that codification will not produce it, and that judiciary law depends upon some external authority for whatever com-

pulsion it exerts, but Gurvitch says that not even custom or convention displays this imperative nature. This marks the distinction between the Historical and the Social Law interpretations the latter is aware that the statement of custom as a source of law is not an explanation of the necessary imperative which it must manifest Gurvitch proceeds to make a distinction between the sources of law, a distinction implied in our account of the Analytical school.

That introduces immediately a new distinction in regard to the sources (of law), the most conclusive of all the distinction between normative facts, or primary sources, and the technical processes of formal declaration, or secondary sources (P 133)

Then it is upon this *fait normatif* that the imperative of law must be grounded, and although custom may serve as a source, and codification as a technique, unless law reflects the essential nature of this norm, it will be deprived of any active imperativeness

Thus, we find that Gurvitch is employing a different method and observation in the construction of Law, he does not dispense with, nor minimize the importance of, codification, but he does recognize that no imperative exists at that level of analysis, and that without imperativeness law is not law, but an abstract system of rules. To what describable fact, then, does the *normative fact* correspond?

First, let us note that Gurvitch makes it clear that the law is not simply a mathematical structure, it is definitely a value concept, for he says that if we cannot define justice, "it is illogical to admit that we can define the notion of

law" (p. 96). Consequently, Gurvitch admits that the distinction between conceptions of law is primarily "a different interpretation of justice itself" (p. 96). This is a point which appears to have been admitted tacitly by the Analytical view, in the inescapable inference to be drawn from its reliance upon an external source for the imperative of law. In that case, justice becomes the dictate of the sovereign, or of Bentham's legislator, who "compels men to be free." For Gurvitch, however, such a concept of justice is not an adequate ground of law, and he has already asserted frankly that the description of law will follow largely from the definition of justice. We must appreciate this unusual admission of the relation of ideological definition to methodological construction and allow to Gurvitch his principle of justice, and the method appropriate to it, if he can adduce factual reference sufficient to justify his selection. Gurvitch has, from his own point-of-view, stated the distinction which we made between analytic concepts and integrative principles, we can agree with him that the integration of the Formal point-of-view necessitates a value principle, call it justice or what you will.

The values which are, in general, indicated by the inclusive term "justice" are for Social Law resident in the social structure, rather than in the dictates, rationalized or imposed, of individuals.

The actual values which are embodied in a group, and which it has the capacity to realize, are essentially attached to the objective corporate (sub)jacent community, giving the organization of the group its

propulsive tendency (objectives)—the limited ends which it intends to realize. (P. 29)

Now, this is not only to define the values which constitute justice as objectively present in the social structure, but, when related to the concept of law, it implies an important addition to our notion of legal structure. The assumption that the sole end of law is the realization of justice, when connected with the description of justice as residing in the objective social structure, prepares us for the inference that law is essentially purposive in nature. Thus, the construction of law is in the form of a value-judgment, directed toward the end of realizing in immediate practice and activity the values of justice which objective social structure presents as possible of achievement. This suggests that the judicial function formalizes in Law the value character of the Material, analogous to the factual formalization accomplished by Physical Science

This suggestion is a significant extension of the analysis of law and the construction of the Formal point-of-view, but the question remains as to the factual reference of the *normative fact* in accordance with which law is to be formulated. The first critical reaction to Social Law analysis will undoubtedly be that the norm upon which it places complete reliance is, in fact, nothing more than a scientific generalization. In this sense, the law is not so much a judgment of value as a hypothesis of expediency. The consideration of this criticism will rest upon Gurvitch's ability to adduce analytic data in support of the real nature of the *normative fact*

There is no intention here of following the historical

development of social objectivity through the profound exposition of M. Gurvitch. The manner in which he describes this normative aspect of the social structure can be indicated more briefly. Bringing his analysis to a summation in his consideration of the work of Maurice Hauriou, as representative of the synthesis of Duguit and Saleilles, Gurvitch dispels the notion that the objectivity to which he refers might be interpreted as a generalization or collectivity.

The primary essence of the moral person, of all institutions generally, does not reside in a collective will, nor in a collective conscience, but in an objective idea which it realizes (P 650)

This makes clear the nature of social objectivity as institutional in character and further indicates Gurvitch's description of institution as personal in structure.

Yet the capacity of being personified which is exhibited by some forms of institutionalization is not sufficient to characterize the objectivity which Gurvitch is seeking to describe, for, as a matter of fact, there do exist institutions which do not permit personification:

There are, according to Hauriou, two essential categories which apply to institutions considered as primary sources of law or normative facts: 1. social group institutions, organizations, social structures, and societies which admit of personification, and 2. institutions which do not derive from the totality, which are juristic institutions without being social groups, and which do not admit of personification (P 669)

The existence of these two institutional forms is the source of a continuing conflict between the ground and process of law, between norm and procedure. It is precisely through this conflict and opposition, exerting as they do a mutually corrective and synthesizing effect, that law is enabled to reflect the objective reality which lies as the fundamental ground of the entire process.

The penal law and the statutory law which the institutional body itself generates correspond precisely to these two aspects of the judicial function. They represent to a certain degree the contrary and corrective of one another . . . they maintain a counterbalance, and this equilibrium of law is an element of the total equilibrium of forces which sustains the institutional body. (Pp. 680-681)

It is interesting to note, however, that at the practical level this conflict must always be resolved in favor of procedure rather than of the norm.

Yet, the principles of security, order, and social peace which flow directly from the idea of Justice which law serves, necessarily require the predominance in the judicial function of formal and positive law over intuitive positive law. (P. 136)

It is now clear that Gurvitch is, in terms of our analytic pattern, describing the judicial function as a maintenance of relation and equilibrium between the Formal and the Material points-of-view. This would, of course, make adjudication a part of the general functional science of Administration, a suggestion already made in the discussion

of Administration The dual nature of this function is further emphasized

Social law, law of the integration of a totality, law of corporeity (communion), not only grounds its obligatory force on the normative fact of that totality, but finds the content (ground) of its regulation in the internal life of the group in question (P 21)

Thus, the imperative of law is pluralized among the forces of the objective norm, the compulsion of the formal code, and the "interior life of the group", the latter must be the aspect evidenced by the institutional form, or State. The pluralization of imperativeness is real, not fictitious. "Pure social law is absolutely independent of the order of civil law." (P 36)

As Bentham appeared closely related to the Analytical school, so it is evident that Jordan manifests a close relationship to the jurisprudence of the Social Law theorists.³ I must confess hesitation in regard to the suggested correlation between Bentham and the Analytical school, or between Jordan and the Social Law point-of-view, despite an evident similarity in their analytic methods. There are certainly very real difficulties to be met in any attempt to establish this correlation more precisely. It seems paradoxical that the political organizations which have been most interested in emphasizing and implementing Individual analysis have been the very governments which have shown the least interest or competence in codification.

³ See Jordan's review of *L'Idée du Droit Social* in *Ethics*, Vol. XLIII, No. 4.

On the other hand, codes have become associated with those political forms which tend to emphasize the Material or statist point-of-view. These, and other difficulties, seem to preclude the attempt to connect Analytical jurisprudence directly with the Individual point-of-view, or Social Law theory with Material analysis. Our examination seems to indicate, however, that the Analytical view does appeal to the point-of-view of Individualism for a ground of the legal imperative, while Social Law analysis describes the category of Institution as providing that imperative.

If we consider American juristic thought as an attempt to integrate Analytical and Historical categories in Law and if we accord to Social Law the status of an integrative theory including both analytic categories, American jurisprudence and Social Law achieve the integration of Law by reaching in opposite directions. The American jurists describe the judicial function as maintaining the relation between Formal and Individual points-of-view, or, at least, so their practice would indicate. This position defines adjudication as essentially an æsthetic function, it is not, therefore, remarkable to discover an accepted notion of the judge as a sort of social artist. The Social Law theory describes adjudication as the balance of Formal and Material, the objectivity of the institution is defined as one of the sources of law. This description of the judicial function as administrative in nature seems to me much more plausible from the standpoint of analysis than the view which defines the judge as an arbiter of human conduct. On the basis of this opinion, it can be said that Gurvitch has presented one of the most significant descriptions of

Law as the integrating category of the Formal point-of-view. It seems sensible to suppose, also, that his further clarification of the judicial function might well contribute much of value in understanding the nature of Administration as a functional science.

Supplementary Readings

Supplementary Readings

The following references were not selected on the basis of a uniform agreement with the foregoing discussion. The criterion of selection has been rather first, to supplement the discussion of particular categories and concepts, chapter titles will indicate the references in this respect. Second, considerable attention was given to the matter of readability, the selections avoid as much as possible the difficulty of specialized and technical vocabularies

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