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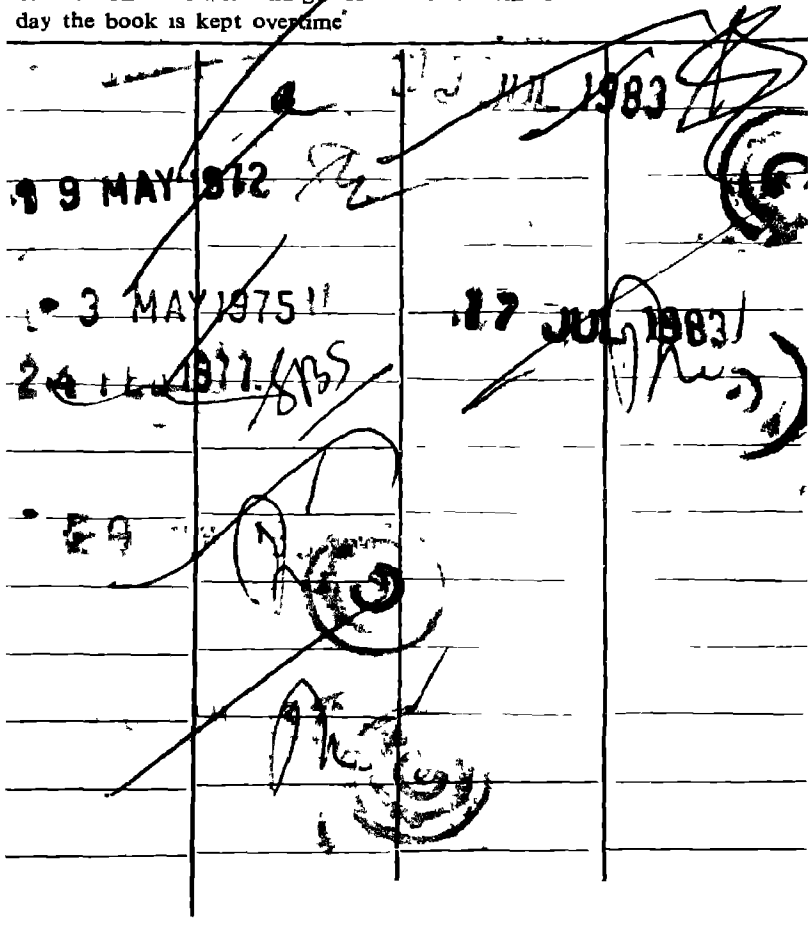
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COMMUNICATION

A PHILOSOPHICAL STUDY OF LANGUAGE

By
KARL BRITTON

LONDON
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To S M C

" Sweet Analytics, 'tis thou hast ravished me ! "

Dr Faustus

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PREFACE

For us all to-day, psychologists, logicians, philosophers, the problems of language are central I have tried to sort these problems out, and to follow some of them to a conclusion. I begin by examining the mechanism of informative sentences, and then contrast it with the quite different mechanism of the necessary propositions of logic, and of scientific definitions I take the view that these necessary propositions are rules of language and I examine the rules of ethics and morality both to discover what are the various senses of the word ' rule ', and to discover what we are doing when we use words to ' assess the value ' of actions and other things I conclude that rules are both informative and emotive, and proceed to examine in some detail the emotive use of words in its most developed form, that is in lyrical poetry My results are summarized in a Conclusion , I hope they will help to display more clearly the mutual relevance of psychology and logic I should call my inquiry a philosophical one, but it nowhere merits the title of ' metaphysical ' (While I make no metaphysical deductions I do not try to refute or expose those who do) In writing the book I have made much use of the work of contemporaries, and in particular of the following —

Bertrand Russell's *The Analysis of Mind*
C K Ogden and I A Richards, *The Meaning of Meaning*
I A Richards's *Principles of Literary Criticism*
C I Lewis and C H Langford, *Symbolic Logic*
L Wittgenstein's *Tractatus Logico-Philosophicus*
R Carnap's *The Unity of Science*
L S. Stebbing's *Logical Positivism and Analysis*
W Empson's *Seven Types of Ambiguity*
John Wisdom in *Proceedings of the Aristotelian Society*, Supp Vol XIII

L J Russell in the same volume
O Neurath in *Erkenntnis*, Band III, p 204, etc.
M Schlick in *The Philosophical Review*, July, 1936

Many other acknowledgments are made in the text I wish also to record my gratitude to my own teachers Professor C D Broad, who was my Director of Studies, Professor G E Moore, Dr Wittgenstein, Professor A N. Whitehead, Professor C I Lewis, Professor R B Perry, Professor H M Sheffer I also owe a great deal to the friends who have discussed these and other problems with me, and in particular to Mr J. O'C. Drury, Dr. John C Cooley, Dr. Donald Meiklejohn, Mr Lewis Feuer, Dr C L Stevenson, Mr G O Roberts, Mr W B Gallie, and Dr Hans Albert Nicol I was fortunate enough to persuade Mr John Wisdom, Mr Max Black, and Mr A J Ayer to read parts of the book and to give me valuable comments on what they read · I am particularly indebted to them, and to Professor L S Stebbing who very kindly read the whole book in typescript and gave me much useful advice and criticism For what is written here, however, no one but myself is in any way responsible

KARL BRITTON

UNIVERSITY COLLEGE,
SWANSEA
September, 1938

Communication

A Philosophical Study of Language

CHAPTER I

THE USES OF LANGUAGE

1 In this book I shall attempt to give an account of some of the principal uses to which language—the most important and valuable of all human institutions—is commonly and properly applied The simple-minded, I suppose, at one time used to believe that language has only one proper and one improper use , the conveyance of truth from one mind to another, and the conveyance of falsehood But thinkers of many ages and countries have insisted upon what they very likely called ' the dangerous influence of words '—an influence which is essentially upon the emotions rather than upon the opinions of mankind And it is chiefly *two groups of uses*, one of which I shall call Informative, and the other Dynamic, that I wish to discuss This important distinction was clearly established in the treatise of Ogden and Richards

" In ordinary everyday speech each phrase has not one but a number of functions We shall in our final chapter classify them under five headings , but here a two-fold division is more convenient, the division between the *symbolic* use of words and the *emotive* use The symbolic use of words is *statement* , the recording, the support, the organization and the communication of references The emotive use of words is a more simple matter, it is the use of words to express or excite feelings and attitudes It is probably more primitive If we say ' The height of the Eiffel Tower is 900 feet ' we are making a statement, we are using symbols in order to record or communicate a reference, and our symbol is true or false in a strict sense

and is theoretically verifiable But if we say ' Hurrah ! ' or ' Poetry is a spirit ' or ' Man is a worm ', we may not be making statements, not even false statements ; we are most probably using words merely to evoke certain attitudes " (*The Meaning of Meaning*, 1923, p 149)

To make an obvious but not very exact statement, in science and history, and unbiassed accounts of what probably has happened or will happen or is happening (even when these are phrased in the rather ambiguous terms of every-day conversation), we are making use of signs primarily for conveying information , and in poetry, rhetoric, political speeches, and complimentary addresses, we are making use of signs primarily for dynamic purposes To which group of uses belong philosophy, ethics, æsthetics, and logic is less obvious I shall argue that all these activities essentially (and not accidentally) involve the use of words for both purposes, although the importance of either aspect varies enormously from one to the other

2 What is meant by ' communication ', and by the other key-words ' language ', ' meaning ', and ' understanding ' ? The following is only a preliminary account, and the rest of the book aims at making their meanings still clearer

(*a*) Communication is a *social* relation one person communicates with another When I look at gathering clouds and notice that it is probably going to rain, I am certainly interpreting *signs* My conclusion is a *learned* response to a certain kind of natural event And my conclusion concerns what is at the moment outside my experience And my inference may be accompanied by present emotional experience I scan the heavens with dismay or with delight But though all these features are to be found in a communication, yet here a necessary element is absent Nothing has been communicated to me because there has been no

other person who has deliberately manipulated the weather in order to promote an inference or an emotion in me [1]

(*b*) The sign must certainly come from a person who is capable of *intentions* As I watch a fellow human being, I am able to conjecture what he is going to do next or what he is expecting to happen next, and these inferences may be accompanied by pleasure or fear or pain But again this is not a communication, for the man may not be *intending* to enlighten or stir me

(*c*) But we may say that A is trying to communicate with B when he acts with the intention of provoking in B some definite sort of response—either an immediately present emotion, or some expectation of what is not immediately present e g A smiles or leers or makes the kind of noise that some people make to children or horses Or (a second example) A points to someone coming, or points to the door and signals B to go, or nods him in, or beckons him In such cases we say that B understands A if and only if his reaction is the one that A intended And if B does understand, then we say that something has actually been communicated (Here the word 'understand' is not confined to the interpretation of information only, it includes emotional responses, cf 'an understanding man' is one of fine sensibilities rather than of fine intelligence)

(*d*) But this book is not about communication in this wide sense it is about *communication-by-language* Language is a man-made instrument for communication—man-made in the same way as institutions are man-made, rather than in the same way as a building or a bridge Events and objects

[1] Of course the similarities between the situation described and a genuine communication have constantly led people to hold that natural events are deliberately used by God to convey truths to mankind Perhaps this notion always requires as a further necessary cause that the natural events should have aroused in men some specifically *religious* emotion, as well as natural emotions See Rudolf Otto, *The Idea of the Holy*, especially Chapter X, see also the rebuke against the 'hypocrites' who could read the signs of the weather, but could not read God's signs in the history of the times

(sounds and gestures and marks) are used repeatedly to promote the *same* sort of response and so come to be habitual and conventional signs for that sort of response When this has happened, *rules are adopted* more or less explicitly, and these determine what is the *correct* response to a given type of sign Thus B may be said to make the correct response to the sign ' PARKING ' by leaving his car near by , and if the Urban District Council *intended* the sign to prevent people leaving their cars there, then they have made a mistaken use of the sign So that there is certainly a sense of the word ' understanding ', according to which B understands a sign if he makes to it the response that is conventional and ' proper ' in the language-group that use the sign—*whether or not* it is the response that the maker of the sign intended It is this sense (not that of section (*c*)) that will be important throughout this book And I shall use ' the (proper) reference ' or ' *the* emotive meaning ' of a sign to mean that response which is customary, generally approved amongst the language group So that in language-communications, B understands A's sentence correctly if he attaches to it the proper reference , he does so on the assumption (which may be false) that A intends to communicate this reference I shall always be discussing communications in which A intends to convey the conventional reference of the signs he actually uses and B understands correctly Much will be said about those misuses of language that arise from their structure and mode of operation But I shall not discuss misuses that arise from psychological idiosyncrasies [1]

3 I shall now outline shortly the main uses of language, beginning with the communication of matters of fact

When one person, say B, speaks to another person, A, a sentence, ' p,' in the Third Person, Indicative Mood—

[1] On the very many ways of misunderstanding, and on the difficulties of communication in general, see I A Richards, *Practical Criticism*, 1929

a sentence such as "The height of the Eiffel Tower is 900 feet"—then these words may affect A in such a way that he *expects* that if he went to a certain quarter of Paris with a theodolite or a very long measuring line, and were to operate and read his instrument in a certain way, then he would arrive at a reading '900' If this expectation really does arise in A, then he has understood and believed what B was saying, and a certain sort of communication—'of matters of fact'—has taken place from B to A And even if the expectation is inhibited or never arises, provided only that A has given his *attention* to the possibility of the answer '900', then a matter of fact has been communicated And if A does ever happen to be in Paris with his instruments and does actually make the measurements, then he is in a position to observe whether or not B's information was true In the next three chapters I shall discuss fully how it comes about that the uttering and hearing of certain sounds (or the making and observing of certain shapes) is able to effect this communication

It might be argued that there are many sentences which create in us beliefs that are not expectations at all, beliefs which do not lead us to suppose that in certain conditions or at certain times and places, anything at all would happen that we might observe In short, it might be argued that there are some sentences which lead us to entertain beliefs without any hope that these beliefs are *verifiable by us*

It is obvious that we are led by signs to hold beliefs which we never *intend* to verify, or at least to verify directly, and also that it is *physically* impossible to verify many of the beliefs we entertain or tell to our friends These facts, however, can be fully allowed in the account I have given in the preceding paragraph For when A hears B say "The height of the Eiffel Tower is 900 feet," A is led to expect that if it were physically possible for him to transport himself to Paris, and if he knew how to set about it, and

actually *did* measure the tower, then he would find that '900' was the result And even if it were physically impossible to go to Paris, as it *is* physically impossible to go to the other side of the moon, still the sentence would create in A an expectation which it is *logically* possible might be refuted or fulfilled

So that, in insisting that 'p' must convey an expectation of something that could be observed, I certainly mean no more than that it must be *logically* possible that the observation might be made by A, and not that it must be physically possible In this way my account makes it possible that such a sign as "There are mountains on the far side of the moon" may create an expectation in A and so convey information to him Similarly, if an athlete says to a little girl "It's very tiring, you know, to run a hundred in $10\frac{1}{2}$ seconds," the little girl can understand this information although she does not expect that *in fact* she will ever be able to run as fast as that

But I dare say that many people would say that there are sentences which convey to them beliefs which it is *logically* impossible that anyone could verify What could such beliefs be? I suppose they may be classified under four heads Beliefs about other people's experiences, beliefs about the past, beliefs about things that are infinite in some way (Perfection, Eternity, etc), beliefs about objects which are not material at all, and so cannot be directly known through the body (the Soul, etc) In later discussion, I shall try to show that my theory of communication of information *can* account for the first two sorts of belief and perhaps also for *some* beliefs of the last kind, and that other beliefs of the last kind, and beliefs of the third kind can be explained by reference to the Dynamic use of words, although, as I must admit, this explanation allows us to call them 'beliefs' only in a Pickwickian, or non-straightforward sense of that word

4 This account is intended to cover the communication of 'empirical propositions' (whether belonging to some special science or not), which are either true or false, not both, and whose truth-value is determined by reference to experience But there is also a body of propositions, communicated to us in the writings of Philosophers and Mathematicians, which are supposed to be *necessarily true* First of all we have those propositions whose denial can be expressed only in a sentence which includes the positive and negative use of the same sign, joined together by 'and' or some equivalent word The Logician writes "All white swans are white" If I were to contradict him I should have to say "Some swans are white and not white" This sentence, it used to be said, conveys an impossibility, it tells me something which it is *logically* impossible that I should ever meet in experience "All white swans are white," on the other hand, conveys a proposition which can be seen to be true, merely by examining, analysing, the subject-term 'All white swans' It is therefore known as a necessary analytical proposition

Secondly, there are those propositions whose denial can be made in a sentence which is not explicitly self-contradictory, but which, all the same, cannot create in A an expectation of a state of affairs that he could (logically) discover The Philosopher writes "Whatever has shape also has size," and the Mathematician writes "The three interior angles of a triangle are equal to two right angles," and the Moralist writes "Murder is wrong"

The necessity that is claimed for all these truths is a logical necessity, it is held that the natural world not only never *does*, but also never *could* (in any sense) prove these statements to be false. How do 'necessary propositions' succeed in 'binding the world' in this mysterious way?

I shall discuss only those necessary propositions that can be shown to be analytical, and I shall argue that sentences

expressing such propositions may be regarded as serving *two purposes* first, they convey information about the way in which certain words are in fact used by certain groups of people (and this information may, of course, be true or false), secondly, they attempt to influence the audience towards the adoption of this same usage of words The second function is dynamic

5 The Moralist, however, raises problems of his own When he says "Murder is wrong", he may be telling us how English-speaking people use the words 'murder' and 'wrong', and recommending us to keep to this usage, but he may be trying to influence our conduct in altogether different and more important directions, and he may be offering us different and more important information

For very often the Moralist tries not to give the meanings of words, but to assess the value of things, to tell us what sort of thing to do and what not to do Such 'ethical judgments' and 'moral judgments' are often regarded as not being necessary at all But most people will agree that they are *not* just the same sort of thing as 'judgments about the natural character', as, e g, the judgment about the height of a building How do they differ?

People often say that the 'ethical predicates', such as 'good', 'right', 'ought to be done', 'beautiful', and the terms we regard as their 'opposites', are not to be determined in quite the same way as the 'natural predicates', such as 'yellow', 'hot', '900 feet high', and that there is not the same agreement as to the predication of the former group I shall argue in Chapter IX. that sentences which would ordinarily be said to express ethical, æsthetic, or moral predications, and also certain other sentences, are used for *two purposes* first, they are used to convey information about the way in which events or other objects satisfy the interests of the speaker and his hearers (and even,

sometimes, of mankind in general) · secondly, to create in the hearers a not-yet-existing interest in certain things

The information sometimes seems to refer to particular interests, but often to whole systems of interests Thus the sentence, " It is a good thing to be merry," perhaps refers to a narrow interest of the speaker and his hearers, but the sentence " It is better to suffer injustice than to be unjust," refers to the whole system of a man's interests, to what would be called ' his deepest desires ', ' his truest self ', and so on Such propositions could all in theory be verified, but they are often such that we have as yet no proper technique for doing so We do not know enough about human beings in general, or about particular persons (not even about ourselves) to be able to assert many of these propositions with any *reasonable* confidence

This is particularly true of æsthetic judgments the sentence, " This picture is more beautiful than that," does seem to me to make an informative statement about the way one picture is more satisfying to me and to other people than the other But I think such judgments are almost always the merest guesswork with no further support than a few fragmentary experiences of my friends and my own

But such sentences have another use

> " Their major use is not to indicate facts, but to *create an influence* Instead of merely describing people's interests they *change* or *intensify* them They *recommend* an interest in an object, rather than state that the interest already exists " (C L Stevenson, " The Emotive Meaning of Ethical Terms," *Mind*, January, 1937)

This second use of ethical sentences has received much recent attention, and it seems to me necessary to insist that it is not their *only* use It is sensible (I think) to speak of the objectivity and the truth and falsity of ethical statements It seems to me that there are value-statements that are universally true , that, e g , it may be true that anger, hatred,

resentment, fear, anxiety are, in themselves, bad things: that is, are contrary to the broad, systematic, and far-sighted interests of every man—of the hater no less than of the hated To regard the statement " Hatred is bad ", as nothing more than *noises* uttered in order to arouse or to relieve feelings, is to put forward a hopelessly unplausible theory [1]

6 I have suggested that Necessary Propositions of Metaphysics, Mathematics, and Logic are all dynamic as well as informative But they are dynamic in a very narrow and restricted sense they state usages that exist (or, sometimes, they state an intention of following a novel usage. this also may be true or false), and they lay down these usages as precedents to be followed They certainly make no use of rhetoric or rhythm, in order to move their audiences, and I dare say that, to the ordinary reader, few things are *less* ' emotional ' than a treatise on conic sections or on foundational logic [2] The propositions of Ethics and Æsthetics, however, are deliberately phrased in words which have quite definite and invariable emotional effects on the average reader There is no doubt that a man who says that " The execution of Charles I was a crime ", does try to influence his hearers to feel indignation against the Regicides and to create in them a feeling of sympathy for the king, which is thwarted and defeated by the remembrance of his ' shameful ' death Here we have a choice of words which habitually and in almost any context tend to express and excite emotions

[1] Cf Bertrand Russell, *Religion and Science*, Chap IX " But in a question as to whether this or that is the ultimate Good, there is no evidence either way , each disputant can only appeal to his own emotions and employ such rhetorical devices as shall rouse similar emotions in others " (p 229) I suggest that there is clinical, medical, and psychological evidence to be considered " Thus Ruskin caused people to like Gothic architecture, not by argument, but by the moving effect of rhythmical prose " (p 235) The ' Pure Sound Theory ' will not really go as far as this ! See the capable discussion in Mr Empson s *Seven Types of Ambiguity*, 1930

[2] Metaphysics may, however, be very moving for example, Parmenides' attempt to dissuade people from saying that ' not-being exists ' See the translation in Burnet, *Early Greek Philosophy*, pp 172–6

But the ' emotive meaning ' and the ' dynamic use ' of these and other words can best be studied in purely romantic, imaginative, and poetic writings

The discovery that the language of poetry is to be regarded as something quite different from the language of science and history was an early, and perhaps a not very remarkable, one

> " In the *De Interpretatione* various branches of significant speech are deliberately excluded, and we are there invited to consider only that variety known as *enunciative*, which, as declaring truth or falsehood, is all that belongs to Logic ; other modes of speech, the precative, imperative, interrogative, etc , being more naturally regarded as part of Rhetoric or Poetic " (*The Meaning of Meaning*, p 36)

Certainly a philosopher who, in this day, should approach the language of a poet with the technique of Analysis that has been developed by the study of the language of science, would meet with nothing but embarrassment He would find, for instance, that the ' propositions ' of the poet are often hopelessly *unverifiable*, and often suggest no *definite* possible state of affairs at all They are often *unlimited in range*, so that, even if they were true, we should be unable to distinguish situations in which they are true from situations in which they are false

> " We are such stuff
> As dreams are made on , and our little life
> Is rounded with a sleep "

This might be compared with the statement that we are all of us, all our lives through, hearing the music of the spheres what could ' silence ' mean then ? How are we to distinguish ' the stuff of dreams ' from the stuff of waking life ?

Again, we cannot remove the *contradictions* of poetry without at the same time losing the ' meaning ' (the ' emotive meaning ') of the words ·

" The Incarnation is the entry into History of that which, by its Nature, cannot enter History, because it is eternal "

" Shape without form, shade without colour,
Paralysed force, gesture without motion "
(T S Eliot, *The Hollow Men*, 1925)

And Poetry seems to prefer ambiguity to plain statement ·

" From the red gold keep thy finger " [1]

may mean · Do not seek riches, or it may mean Do not seek marriage And the fact is that the poet means *both*, and yet also wishes it to be uncertain which he means, he is deliberately making a cryptic, oracular statement, that cannot be interpreted into a definite and observable command

And the ' logical constants ' are used in all sorts of curious ways in poetry Why does Othello say " Yet, Ile not shed her blood " ? We can hardly regard this as a simple statement of what he will not do For there is an infinity of things which he certainly will not do at the bedside of Desdemona why does he say that he is not going to do this one ? Why should Keats begin a poem with a denial that involves *four negations* ?

" No, no ! go not to Lethe, neither twist
Wolf's-bane, tight-rooted, for its poisonous wine, " [1]

And what, after all, is the logician to make of unashamed nonsense ?

" Shall packhorses and pampered jades of Asia
Compare with Caesars and with Cannibals ? "

If such strings of words add nothing to the meaning, why are they there at all ?

In some cases, the answers to these questions are very obvious, but in all cases, I think, the answer is something about the way in which words heaped upon words *affect the emotions of the reader* This effect, which it is a principal part of the office of a poet to *control*, is the real meaning

[1] Quoted from Empson, loc cit

of the verse—the *emotive meaning* The emotive meaning of a sign is an emotional response which a sign regularly produces in any normal listener who is familiar with its use It has a claim to be called a meaning, since it is the effect which a sign, according to a more or less definite convention, has on almost anyone, in almost any verbal context Clearly, signs with emotive meaning are of importance chiefly for the *dynamic use* of language [1]

7 A man who feels an emotion deeply tends to express his feeling in some activity—including often the activity of trying to affect others with his own emotion The *expression* of an emotion takes many familiar forms increase of temperature, gestures, blushing or blanching, cries and speech As everyone knows, even the most trivial and fleeting emotions find their way into speech (and even into writing) a group of people working or resting or travelling together will relieve their emotional tensions in an almost constant stream of words, words, words And poetry may be regarded as the emotional expression of people who are especially sensitive to the effects of words

> "Now many linguistic utterances are analogous to laughing in that they have only an expressive function, no representative function Examples of this are cries like 'Oh, Oh' or, on a higher level, lyrical verses The aim of a lyrical poem in which occur the words 'sunshine' and 'cloudy' is not to inform us of certain meteorological facts, but to express certain feelings of the poet and to excite similar feelings in us A lyrical poem has no assertional sense, no theoretical sense, it does not contain

[1] The distinction between 'dynamic use' and 'emotive meaning' is due to Mr C L Stevenson, op cit "certain words, because of their emotive meaning, are suited to a certain kind of dynamic use—so well suited, in fact, that the hearer is likely to be misled when we use them in any other way The more pronounced a word's emotive meaning is, the less likely are people to use it purely descriptively" (p 23) But it may be possible to use emotive words merely descriptively, and to use words without any appreciable emotive meaning, dynamically

knowledge." (R Carnap, *Philosophy and Logical Syntax*, p. 28.)

This theory gives rise to many puzzles. what, in more detail, is the explanation of the fact that words have this peculiar power of relieving emotional tension in a poet, and also of exciting emotional tension in his audience? Have they this power in virtue of being verbal signs with reference, or merely as physical events—sounds or marks on paper? Obviously their reference must be very important, even here for, after all, *most* of the sounds that poets use are individually symbolic and not mere jingles But if the dynamic use of words does depend, at least in part, upon their reference, can we say that, after all, the language of poetry is *informative*, whatever else it may be? Again, could we say that the emotive meanings of words enable the poet to convey a peculiar sort of truth—a truth verified, not in the senses, but in the emotions? May we even go so far as to say that 'Poetic Truth' includes facts about the more intimate structure, or the more fundamental *physis* of the world? And if poetry does convey a peculiar sort of truth, to what canons of logic are its propositions amenable? If not to the logic of science, perhaps to some *alternative logic*, —if, indeed, this term has any sense at all These questions will be examined in Chapter X

8 I shall approach the problems outlined above, *not* by the examination of my own thoughts, of what the hearing of a word suggests to my own mind, but by discussing the outward bodily behaviour of people engaged in all sorts of communication This does not mean that I consider introspective evidence to be entirely useless in this discussion. In fact it seems to me to be essential, and that some theories that adopt a behaviourist position, cannot satisfactorily describe what happens when two people communicate It

means simply that I think introspection is not the first stage of the argument

I shall attempt to show in what follows that an empirical approach to the whole fact of communication does not necessarily exclude a discussion of the fact that words stand for images, thoughts, and that contingent propositions are verified or rejected by the discovery of, or the failure to discover, in immediate experience, the objects imaged or thought of The method I shall adopt is to start with the study of communication in so far as it is observable by persons not communicating A clear statement of a recent, and very radical, theory of this sort is given by Professor L J Russell in his contribution to the Aristotelian Society symposium on " Communication and Verification "

> " There is no ' problem of communication ' To say that S_1 communicates with S_2 when S_2 understands what S_1 intends to refer to, is to use language which has no meaning What S_1 intends to refer to cannot be reported. The situation ordinarily described as a situation in which S_1 is endeavouring to communicate with S_2 is really a situation in which S_1 is behaving in a way reportable by any S e g · a boy comes up to a man saying, ' You are wanted on the 'phone, sir,' and the man says ' Thank you ' and goes to the telephone Here we have a simple case of the only kind of communication that is possible The boy's ' intention ' and the man's ' understanding what the boy intended ', if alleged to mean anything other than physical behaviour, are pseudo-concepts " (*Proc Arist Soc*, Supp vol xiii, p 185)

This statement is intended to express the views of Dr Otto Neurath According to this view, our discussion of communication must be confined to what is *reportable* by any normal observer who watches and hears two or more people in conversation The eccentricity of this view is perhaps best seen if we consider the report of ' any S ' who happened to recount what he had seen and heard in the hotel lobby.

For S's report is *itself* taken to be no more than a certain form of overt (or at least observable) behaviour—as something that could be seen or heard by any *other* normal observer present at this reporting And, in its turn, the account of what *this last* normal observer observed, is taken to be no more than an account of what any normal observer might have seen or heard And so we are never permitted to say that a report is about anything that the reporter observed—not, indeed, *about* anything at all For a report *is itself* a sort of behaviour, and is not *about* a certain observed behaviour It follows that a camera or a thermometer may be a better reporter than a so-called 'observer' Less radical theories, such as Wittgenstein's theory in his *Tractatus Logico-Philosophicus*, and Professor Carnap's theory in *Der Logische Aufbau der Welt*, allow us to say (or at least to see) that the world that is observed is *my* world, and that it is, in some sense, a world that is experienced Neurath, on the other hand, insists that all propositions about what I (or anybody else) immediately experience either refer to the things that anyone could report, or are meaningless—employ 'pseudo-concepts'

9 These considerations lay the theory open to grave objections, and we must ask ourselves whether, after all, the incident in the hotel lobby is not put forward as a "simple case of the only kind of communication that this theory will explain with any plausibility", and not really as a "simple case of the only kind of communication that is *possible in actual life*" The chief difficulties of this extreme form of behaviourism seem to me to be the following.

(*a*) We cannot say that any words have *significance for* anyone We can speak only of the bodily effects of words, that is, of their 'reference'

(*b*) We are unable to say anything about the relation that may be supposed to hold between a sign and the thing it signifies Wittgenstein seemed to say that facts

about the ' relation of representation ' cannot be said, but are shown in the structure of language Carnap invited us to distinguish signs, not by what they are about, but by their shapes or sounds, and by the rules that have been adopted for combining them together into (not ' significant expressions ') new signs in the ' system '

(*c*) " p is true " cannot mean that ' p ' signifies an actual fact, or that what ' p ' means is a fact " p is true " must only mean that p is consistent with a certain body of other propositions, and this consistency must be determined solely by reference to the rules that have been adopted in the system What determines the character of these rules, and the particular character of the propositions in the system is by no means clear the whole tendency of such theories is now towards a purely relativist account of truth and falsehood

10 In the following chapters I shall be especially anxious to find some satisfactory answer to the problems of Public and Private, and of other people's experiences, and of ' that which cannot be said ', and of the peculiar virtue which, according to Professor Carnap, attaches to discussions about words and their interconnections I want to show that the hypothesis that other people have experiences like mine is a hypothesis about the real world, and one that can be rendered probable by co-operative investigation I want to give an explanation of how the use of some words leads us immediately to verifiable hypotheses, and the use of certain other ('subjective ') words does not And I want to prove that, if anything cannot be said, at least we *can say* what are the reasons for this I want to show that propositions merely about language do imply something about the nature of the world to which language refers us, and to show that it is, after all, only a contingent *convenience* that inclines us to talk of words rather than of things they denote And I want to show that there really is a problem of the ' Law of Excluded Middle ' in the fact (if it is a fact) that all informative language must be consistent

Chapter II

THREE MEANINGS OF MEANING

1 In communication by language, as described in the last chapter, what is it that is communicated? What do sentences mean? I am going to make use of the most ordinary terminology and say: Words are used to communicate thoughts, words mean thoughts or successions of thoughts—very often a present thought about something that is absent

But a 'thought' is a *mental state* and is said to have an object When A communicates a thought to B, what he does is to provoke in B a thought (B's thought, not A's) *of the same object* as A's So that the commonsense account must mean Words are used to provoke in people thoughts of objects of a certain sort—propositions, logical possibilities For example

> The moon will be full to-night
> Do wait for the full moon!
> What a sight the full moon will be to-night!

All these words are used, in different ways, to provoke in hearers a thought of the full moon to-night What is communicated—for the sake of some purpose—is a proposition And here we meet again the two sorts of purpose for which words may be used the words are used to inform, by the communication of propositions, or they are used to *move*—either by the communication of propositions or by other means But very often the same words are used with the two sorts of intention at once

Informative Intention—The sentence "The moon will be

full to-night " may be uttered in order to gain intellectual *assent* for the proposition that the words conventionally mean A proposition cannot rationally gain such assent unless it is verifiable, consistent, and consistent with all other propositions that are believed to have as great a probability I shall discuss below (Chapter III) the means by which we reasonably determine whether or not to give assent to a proposition

How do we judge whether or not a sentence is intended to win assent for the proposition that it means ? The test lies in its grammatical mood (in many languages) and in its context (Is it in the indicative, and is it seriously said ?) Some might regard the very use of the indicative mood as an attempt to express the proposition *with force* , that is, they might say that this way of conveying propositions is itself *emotive* I am quite sure that we are often able to decide that a sentence *is* used with an informative intention, by noticing the forceful language that is used , (" No reasonable being can doubt that " is very *forceful*), but it seems to me that the indicative mood can be regarded as a simple formal sign that the words are to be taken as claiming *assent* to what they mean

But even sentences intended merely to inform us, may very well have the additional effect of moving us For what they say may be of emotional importance for us *if it is believed.* e.g. " Twenty enemy bombers are on their way to London." But I shall be discussing only the emotions that are suggested by the thoughts themselves, whether or not they are believed in an intellectual way , that is, emotions that arise from the words taken in their context, whether a verbal context or the occasion on which the words were uttered And in fact I cannot consider special effects that words may have when addressed to particular persons—the effect of the word ' handcuffs ' upon an escaped convict—but only the general effects on people who understand the language Wherever

the words are so chosen that any understanding person cannot easily avoid feeling in a certain way, then we usually judge that the words have a dynamic purpose, besides their informative purpose, if any

Dynamic Intention —Words may be used to communicate feelings by means of communicated thoughts In this case the thoughts presented need not be consistent with each other or with the previous beliefs of the audience or even with their previous feelings for the same object e g The various inconsistent stories of creation may each contribute something to my *feeling* about the universe There may simply be a succession of thoughts (each one the thought of a proposition but not, as a whole, the thought of one consistent proposition), coming, arousing a feeling—and vanishing The *accumulation* and *interaction* of these feelings may fulfil the dynamic intention of the speaker And besides all this, words stimulate emotions quite directly this will be discussed in Chapter X

Thoughts communicated as an instrument, in this way, need pass no logical tests But the emotions themselves have tests to pass the emotions that we *can* feel depend upon our previous moods and sentiments So that some dynamic communications are far more effective than others [1] But in very many cases we are able to feel quite opposite emotions towards the same situation or object this, of course, is not a logical inconsistency in the sense we have been using

We must distinguish between the use of words to arouse emotions and their use in *expressing* emotions Once again *any* words may be used to express emotions but certain words are, by convention, set aside for that purpose Naturally enough, these are mainly the same words that, by regular association, tend to arouse emotions in others This book is about *communications*, and I shall confine myself to asking how a speaker may properly make use of

[1] See the very important passage in *Practical Criticism*, p 275

words to excite in others an emotion that he intends them to feel (whether or not it happens to be one that he is feeling himself) But it is important to notice here an example of one common use of words *not* primarily for communication at all Men babble on to relieve their own feelings, as well as to amuse or instruct an audience if there is any audience I should classify under the same head the instantaneous reporting of what is happening to us "That was a bump!" Of course such remarks *may be* communicative—for it may interest others to know that we felt a bump, and it may interest *my future self* to bear it in mind by means of the remembered words In so far as these verbalizations are communicative, they all refer in some way to what might happen in the future we shall feel that bump again if we come back this way, or perhaps that knock has injured me [1]

2 But the question "What are thoughts of propositions?" remains unanswered We have said that words are used, these begin a process that results in the stirring of emotions of an audience, and sometimes in their making efforts to observe something at a certain time and place What sort of thing must the psychological term ('thought') in this series be? And how are we to define 'the object of a thought'?

When I am actually believing (and not merely have a disposition to believe) a proposition, then I must be thinking of it And when I have a feeling directed towards a certain object, then I must be thinking of that object Consider several examples

[1] Compare *Mind*, April, 1938, H B Acton, "Man-made Truth," and Helen Wodehouse, "Language and Moral Philosophy" I am indebted to both of these papers Mr Bertrand Russell writes of the *ex post facto* verbalizations in the first paper of the *Proceedings of the Aristotelian Society*, 1937–8 Communications with one's future self are discussed by Dr Otto Neurath, "Protokolsätze," in *Erkenntnis*, III, p 204, etc "The Crusoe of yesterday and the Crusoe of to-day stand opposite one another, just as Crusoe does to Man Friday"

(1) A is thinking to himself. "This young woman is the only child of a multi-millionaire and is rather pretty." This thought is clearly shown in his movements and in his words we might say that A's behaviour is *oriented* towards the girl in a way that would not be the case if he had not these thoughts about her

(2) B is working out a problem in economics. He does this with his head and with the rest of his body His lips move, he walks about And this excitement is *directed.* For if someone suggests certain words, the whole activity reaches a climax a solution!

In both these cases a permanent *tendency* may or may not result from the actual thought—a belief in the dispositional sense of the word

(3) C remarks over the tea-cups "I've another piece of Dresden in the next room," or "This is Mr Smith who has just come from Berlin," or "We like our view from the back windows" Do not these words similarly *orient* the bodies of the audience? Of course the adaptation is of the most fugitive kind

(4) D is reading a novel Although he knows it is fiction, he becomes very excited over it and this excitement too is directed to an object For the words direct his attention to things and events of certain definite sorts And if it is a romance, then the thoughts it arouses in him may be well judged by reference to his behaviour towards members of the opposite sex—as long as the thoughts last

(5) E is at the play The drama leads him to expect a shot at any minute Suddenly one of the attendants drops a tea-tray behind his back To such a sound, E's body is quite exceptionally sensitive This adaptation, however, does not last long soon *he is thinking about* something else

Cf. "Thought . is a direction of the receptive side of the mind, a sort of mental *pointing* to one kind of object or another We think *by means of* images, or words, or by other less describable means, but what is important is not the means but the result We *turn our attention* this way or that to perceive or contemplate something Thought thus implies

something else, not itself, which is what the thought is ' of '—its object." (I A Richards, *Practical Criticism*, p 330.)

The account of thought in (1–5) might satisfy a Behaviourist—with the necessary addition of a more detailed (and speculative) account of ' incipient laryngeal movements ', those inaudible mutterings which certainly do characterize our thinking [1] Mr Bertrand Russell (in 1921) was inclined to think that such an account would sufficiently explain " all that part of the behaviour of other people which is commonly regarded as evidence that they think " [2] Even our thinking of universals cannot be distinguished in kind from an animal's regular reaction to events of the same kind (e g The horse's reaction to the smell of a bear) But *in fact* (Mr Russell said) there is something more in thinking than is shown in outward behaviour For thinking—at least for many people—includes *images*, and especially images of words Consider, for example, "the entirely different response produced by a narrative and by a description of present facts Images, as contrasted with sensations, are the response expected during a narrative , it is understood that present action is not called for " (Ib , p 202)

I suppose that most people, if asked what happens to them when they hear the words " The long day wanes, the slow moon climbs," would say " I see images." Is that what thought is ? Images and bodily reactions ? Images of things and of words ? Some introspectionists have insisted that besides these, there are mental constituents that are ' pure thoughts ' In *The Analysis of Mind*, Mr Russell asserted (somewhat harshly, perhaps) that this attempt to gain recognition for ' ideas ' was " a difficult and revolutionary view of thought " For my part, I have no inclination to enter this dispute

My discussion of the thinking involved in communication

[1] But of course Mr Richards is *not* a Behaviourist.
[2] *The Analysis of Mind*, 1921, p 229.

will be conducted in terms whose meaning will, I hope, be made clearer in the rest of this chapter (*a*) The *reference* of a sentence is the effect that the attentive seeing or hearing of it has on the behaviour of a person who understands it—who has proved himself able, in a regular way, to identify the objects indicated by the separate words in the sentence, and who is acquainted with the relevant syntax This is the 'bodily orientation' of the illustrations of this paragraph. It is 'thinking' in a Behaviouristic sense (*b*) *Belief* is a special sort of reference—a reference which involves special feelings and special behaviour (*c*) The object of thought, or *referent*, is the possible situation towards which a person's body is oriented when he understands the corresponding reference [1] Thus "The King of France is bald" has reference for me it turns my attention towards a possible situation—not, in fact, an actual situation The possible situation is always something experienceable physical situations are experienceable through the senses (*d*) *Significance* is a blanket-term for the thoughts and images which the attentive seeing or hearing of a sentence produces regularly in the private experience of a person who understands it I shall not further describe these mental processes, nor cramp my methods by discarding wide and general terms for others (perhaps not much less vague) which may rest upon a too-hasty analysis (*e*) Finally it is by the actual facts—abstract aspects of *fully concrete events*, independent of my thought, or of my abstracting, that the truth or falsity of statements is tested

3 *Reference and Belief*—An informative communication may be analysed into three important stages For simplicity's

[1] A person who is unable to distinguish between white and yellow, and who does not know of his disability, cannot understand 'yellow', cannot adapt himself to the proper referent of the sign But the sign may, of course, have some significance for him

sake I shall consider a singular proposition, such as " There is a green light round the next corner "

(*a*) There is the utterance of the sign-words spoken or written (*b*) The sign may be understood by someone Another person may see or hear the sign, and this may create in him a bodily adaptation which has reference to some time and place (described in the sentence) He may *act as if he expects* to see a green light round the next corner—he may accept or believe the statement as soon as he perceives it (*c*) The person may try to verify the proposition he has understood Of course he may never try to verify, or may never succeed in verifying, it The bodily adaptation may fade out at any time, by ordinary forgetfulness or in other ways Or he may never reach the place of verification, or he may reach it only after he has forgotten the communication, or he may not reach it within the time mentioned in the sentence But suppose he is at the place within the time mentioned, and that the bodily adaptation remains—what happens then will put an end to the adaptation in one way or another Because the person has received and remembered the information, what happens at this place-time must produce upon him an *emotional* effect that it would not otherwise have had Suppose (to revert to the example) he now sees a green light this will produce in him the sort of feeling that might be verbalized in the words " So it is green," or " Green—so he was right " The new perception recalls the sentence heard and shows the appropriateness of the original sentence to the new situation (" He said ' green ' and green it is ") It is this agreement that produces a new emotional ' satisfaction ' or ' confidence ' and *unmakes* the previously existing bodily adaptation But if, on the other hand, what he now sees is a red light, this produces a ' disappointment ' and a readiness to alter plans—a feeling that might be verbalized by the use of some words that are (by the rules of the language) incompatible with the ' green '

of the original communication · "Not green after all," "Only darkness" This new emotion similarly serves to liquidate the previous bodily adaptation [1]

It will be noticed that each of these three stages, utterance, understanding, and verification, must (if it occurs) have a date and a place of its own Utterance is commonly separated from the other stages in written communication, and understanding is also very commonly separated from verification, if any Information that is to be of use is not about what the audience is actually *contemplating* at the moment of utterance · information need not be about the absent, but the least service it can perform is to *direct attention* to what is already present (e g When a seaman cries "There she blows!" all three stages will probably take place in rapid succession and in approximately the same place) We may notice for further discussion (*a*) that in such situations as the last, use is often made of demonstratives 'This,' 'here,' 'now,' 'that,' 'there,' 'then' If the three stages are not together in place and time, demonstratives lose their reference altogether they merely indicate that there are gaps to be filled in—that the sentence incompletely expresses a fact [2]

And (*b*) that probably no sign is ever *guaranteed* against misunderstanding, though we are all of us inclined to regard this as an ideal at which we can aim If I wished to discuss rabbits and actually produced them and pointed at them, it is still possible for someone to think I am talking about fur, or animals, or a grey-brown colour Similarly if I draw a picture or imitate a note, so long as either is intended as a *sign* (for something other than itself), so long it is open to misunderstanding

[1] In this paragraph I have made use of Mr Russell's paper, "On Verification," *Proc Arist Soc*, 8th November, 1937, and the chapter on "Belief" in *The Analysis of Mind*

[2] Cf Mr J T Wisdom's contribution to the Symposium on "Is Analysis a useful method in philosophy?" *Proc Arist Soc*, Supp vol xiii, pp. 71–4 See also below, Chapter V, §§ 1 and 6

4 But informative communications, *ex hypothesi*, aim at rendering non- or mis-understanding unlikely and so *verification logically possible* There are two ways by which we try to make non-understanding difficult and so to prepare the way for a possible verification of the proposition First we may offer an explanation or analysis of what a sentence means that is, we may offer a new sentence which represents *in more detail* all that the original sentence represented shortly and less clearly In this way we try to avoid ambiguity. The whole aim of the *Analysis of Propositions* is to make verification logically possible That is, to create in the audience a definite expectation about a certain place at certain times an expectation which may or may not be fulfilled

Secondly, we may try to point to *examples* of each of the several sorts of objects which the sentence represents. That is, to *introduce* the audience (whom I will call 'A') to the sort of object to which a given sign properly refers

Suppose I say to a child "The moon will be a crescent to-night," and he does not know what the word 'crescent' means Then the whole sentence does not create in him a definite expectation as to what he will see to-night in the sky I must try to make him understand 'crescent' But I can't point him to the moon For verification of the whole statement must be delayed until after tea time, when the moon becomes visible But I can introduce him to the referent of the single word 'crescent' by drawing one, or finding one in a picture So that I can arrange an altogether different sort of communication, in which not only utterance and understanding, but also verification, can take place within one continuous context of our experience (I say "That is a crescent" and he hears and looks at once) He may then arrive at the proper expectation about after tea time, but still he may not

It is commonly held that there are some signs which cannot

be analysed at all, and that the *only* way of helping people to expect the proper referents of such signs, is to point at present examples, specimens That is, there are signs for which there is no definition but an Ostensive Definition W E Johnson cited ' proper names ' or ' simple adjectives '

> " The ordinary proper name applies to an object whose existence extends over some period of time and generally throughout some region of space The appearance of such an object in perception (or rather of some spatially or temporally limited part of that object) provides the necessary condition for imposing a name in the act of indicating, presenting or introducing the object to which the name is to apply , and this it is that constitutes ostensive definition In extending the notion of a proper name to certain adjectives our justification is that ultimately a simple adjective-name—such as red—cannot be defined analytically but only ostensively Theoretically we must suppose that any name, singular or general, proper or descriptive, substantival or adjectival, has originally been imposed on a particular occasion by a particular person or group of persons In the case of ostensively defined names, the occasion on which definition is possible must be one on which the object is actually presented When, however, the meaning or application of the name has afterwards to be explained, or so to speak re-defined, the only direct method is to secure for the inquirer another presentation of the object in question " (Johnson, *Logic*, 1, pp 94–5)

We might say of such signs or ' proper names ' that they are properly used to make simple references It is natural to suppose that all signs which do not make simple references can be analysed into signs which *do* It is often held, for instance, that whereas a sign for a physical property or a physical object is always definable, a sign for an object or a quality with which we are immediately presented in perceptual situations is not analysable and can be defined only in

Ostentation; and that 'physical'-signs are always to be analysed into 'sense-data'-signs [1]

5 *The Referent*.—What account can we give of Ostensive Definition? The Method of Introduction can certainly be applied to *any* non-formal sign If I wish to show someone what I refer to, and what I believe is properly referred to, by the words 'S Paul's Cathedral', I may point to an object or a picture and say

"That is what 'S Paul's Cathedral' means"

And similarly I might point and say

"That is what 'an internal combustion engine' means"

But in both these cases my Introduction can be challenged For it is possible, I think, to argue

"You are pointing to a shop where people sell Bibles But a cathedral can't be a shop 'a cathedral' means some sort of a church,"

or again

"You are pointing to a steam engine in which nothing is internally combusted so that can't be called 'an internal combustion engine'"

On the other hand, if I were to point and say

"The word 'yellow' means what I am seeing now,"

would it be possible to argue against this introduction?

I think that it would be possible, if we supposed that the introduction were intended merely to be an introduction to the *reference* of 'yellow' and not an introduction to the *significance* of yellow

The reference of a sign is that state of bodily adaptation which enables the body adapted to pick out a certain definite

[1] Professor G E Moore puts forward this view as a possible interpretation of propositions about physical objects See *Philosophical Studies*, 1922, pp 186–192

class of objects How are we to define this class of objects ? I think we can define it as the class of all possible objects which in all relevant and observable respects are *like* those actual objects which we have all agreed (in the past) to describe as, e g., ' looking yellow '[1] What respects are relevant can be discovered by experiment along the lines of Mill's Canons of Agreement and Difference It will be found, I suppose, that all objects which reflect or emit light-waves of a certain wave-length and frequency are, in every relevant observable respect, like those objects which, in the past, we have all agreed to describe as ' looking yellow '

Then if A says " What I now see is yellow," or " ' Yellow ' means what I am seeing now ", we can examine whether or not A's body is in the nervous condition which it was in, on those occasions when he was stimulated by light-waves of the definite length and frequency If not, we may reply " What you now see is not yellow and if you use the sign ' yellow ' as a name for what you now see, you are inventing a new use for the word "

But in all these investigations we do not seem to discover whether, when A uses the word ' yellow ', he uses it to identify a certain colour-quality e g the same colour-quality which the sign immediately suggests to *my* imagination And for all we know, it *might* be the case that when I deny that A is seeing something which looks yellow to him, he really *is* seeing the same colour-quality as he saw in the past when he agreed with me to describe what he saw as ' looking yellow '

6 *Significance* —It seems then that we must here distinguish a new sense of the word ' meaning ' another sense

[1] Therefore ' chimera ' must really refer us to a *complex* of characters that we have observed—not to any simple character The method by which we first agree upon names and afterwards prove ourselves able to agree in the recognition of objects' names is discussed in Chapter III, note It is suggested by W E Johnson in the passage quoted above

which is very important for all discussions of the informative uses of language. Not only may a sign affect the body of a listener in a certain way . it may also affect his immediate experience It may lead him to expect that (at the place and time indicated in the sign) he will (if he goes there) see a certain colour, or see something which will look to him to be of a certain colour The name I shall use for this sense of meaning is ' significance ' A sign has significance for A if it leads to such an expectation And if we regard A's statement " What I now see *looks yellow*," as a statement to the effect that the object he sees is one which the sign ' looking yellow ' *signifies* for him, it does not seem to be open to any challenge at all

For it seems that no one can really say what a sign signifies for A, except A himself and hence no one can decide whether or not a given object does look to A the same as objects called ' yellow-looking ', except A himself When A reports

This looks yellow to me now,

it *seems* as if a uniquely placed and privileged observer tells us something about the character of *his experience now*, and of how it resembles *past experience of his* for which he agreed to use the sign ' yellow-looking ' And what he tells us, no other observer can either refute or confirm

Is this really the case ? Are we obliged to hold the view that whenever A tells us about what he seems to hear, see, touch, he is reporting to us facts which we are compelled to believe merely on his authority ? We can see that this might prove a very serious confession, since there is no doubt that a great part, at least, of the evidence we have for the existence of physical bodies comes from the reports that other people make to us about what they seem to see, touch, hear, and so on Where I have any reason to doubt the evidence of my own senses, I at once ask for testimony from other observers.

In this case, an observer who is not myself (and whom I will call S) makes a report

The observer S reports yellow.

Are we to take this fact as a sign that S is telling me about an object that *looks* yellow to him ? i e

The observer S *seems to see* yellow (1)

Or are we to take the fact as implying merely something about S's body ? His body is stimulated by a certain sort of light, and it *responds* by uttering certain *sounds*—sounds which, by habit and convention, commonly affect his body and mine in the same way create in us a reference for yellow objects ? i e

The observer S says ' yellow ' (2)

The question as to whether " S reports yellow " is to be read as equivalent with (1) or with (2) is one of the main topics to be discussed at length in Chapter IV I wish now to prepare the way for this debate

The first proposition does not really entail the second *If I were S*, then I can readily imagine that my body might not utter the sound ' yellow ', although I did in fact *see* yellow.

And similarly, the second does not entail the first It might be the case that S says ' yellow ' and does not see yellow at all And if I consider S, then I may be quite sure that S says ' yellow ' and yet be entirely unsure *whether anyone except myself has ever, at any time, seen yellow*

7 In his *Dimensions of Consciousness*, Professor E G Boring argues that it is never the business of science to discuss what S sees or what I see Science can discuss only the words we use in our reports and, as we have seen, everyone has to *learn* how to use these words correctly They reply to the question What do you see now ? is (of course) a learned response and not a simple reflex response

" There is not, so the author argues, a green sensation except as a specific response to a specific stimulus The

colour-blind person, for instance, has less specificity of response. Moreover it has often been said that if you see red where I see green, and conversely, both of us with consistent systems, obverse and reverse, then we should never be able to find out that there is any difference in our seeings—a statement that says that phenomena exist for science only as they are reported, and that the report depends on learning "[1]

We can see at once that Professor Boring's scepticism is too limited From his own premises we must deduce that I cannot have any direct knowledge at all about the way things seem to S, and so also about what sort of images or expectation a sign signifies for S—what sort of appearance the sign ' yellow ' leads S to expect

The bodily reference of a sign for S does not seem in itself to determine necessarily the significance of a sign to S I do not call a man colour-blind because I have any direct knowledge that he does not see the same sort of colours as I do Colour-blindness is not at all a rational argument for or against the view that the sign ' yellow ' has the same significance for everybody I call a man colour-blind simply because signs do not make him act in the way that other people act

So that Boring's real conclusion ought to be that I have never any direct evidence about any experiences of anyone but myself This at once lends support to his view that science must in fact confine itself (and must always have confined itself) to making propositions about the way in which people behave So that if S's report is evidence for the real existence of physical objects which I seem to see, I must understand that report in the *second* sense of § 5.

If we were to accept this view, we should have to say that there really is a white patch on the hillside if all observers —or rather, all normal observers—report ' white '—that is,

[1] E G Boring, *The Dimensions of Consciousness*, pp 230–1 This question is ably discussed by Professor C I Lewis in his *Mind and the World Order*, Chapters IV, V, especially p 112, note

say 'white' So that all propositions about the physical world are probably truth-functions of reports understood in the purely behaviouristic sense [1]

8 I have now shown two important senses of the word 'meaning' reference and significance But there is a third obvious and important sense which has already forced itself on my notice in § 3 I often attempt to give the meaning of a word or a sentence, not by pointing to objects, but by giving another word or set of words

I may begin with a species (say Man) and talk of those properties which every member of the species commonly exhibits that is (in J S Mill's terminology) I may try to give the Comprehension of the term Man

> *All men* are inclined to vanity, are bipeds but have no feathers, are mortal, have some sort of reason, have some moral sense, are sometimes inclined to laugh, are animals

Now each of these statements looks at first sight as though it conveyed information about the class of Men But some of the properties here predicated of the class, would certainly be called 'necessary properties' of the species Man The predication of such properties cannot add to our information about all men, since we know already that whatever belongs to this class, must possess these very properties Thus, if x be a man, he must be an animal and he must have a reason If x is not rational, then whatever else he may be, he is no man

So that "All men are rational animals" merely makes explicit what is contained in the very definition of the word 'man' Such statements do not tell us anything about

[1] *The Meaning of Meaning* attempts to confine discussion to *reference*, that is, to the causal effect of a sign upon a body The authors make no attempt to discuss the relation which is often said to hold 'between a mind and its object', nor to discuss the object itself, of which we are said to be 'immediately aware' in perceptual situations—that object which the Rationalists regarded as possessing *realitas objectiva*

men, but they tell us something about the word 'men'. they tell us that the word is properly used to refer to a class of objects which is a part of the class to which the word 'rational' properly refers And if a person already knows the reference of 'rational', this information about 'man' may help him to discover its reference also · and a knowledge of the references of both 'rational' and 'animal' is all that is needed to complete a Real Definition of the sign 'men' This Real Definition implies a Symbolic Definition too For a person who did *not* know the references of these terms, might still gain useful information from "All men are rational animals", if he were offered it as necessary · he might gather simply that the sign 'rational animal' and the sign 'man' are properly used to make the same reference (whatever that may be), and so are *interchangeable* in any expression in which they occur

But what does 'properly refer' mean here? That the two signs are in fact used to make the same reference by everyone who ever uses them? But surely no language usages are absolutely universal Does it mean that the great majority of English-users do in fact use the two signs in this way? This, I think, is *normally* a part of what the definition means, but it is not all For if we seriously mean that the words are *properly* used in this way, then various interesting things follow people who use words in any other way must be misusing them, using them in a way they ought not to do, using them wrongly, talking incorrectly, talking bad English, breaking the rules This at once suggests that what the definition is asserting is related to judgments about duty, about the worth of things—though we might hesitate to say that to ignore a definition is to be guilty of moral failure What exactly is meant by propositions about values of all kinds, is discussed more fully in Chapter IX. but here I want to suggest that, in asserting that words ought to be used in certain ways, we are using words *dynamically*

Besides conveying information about customs actually prevailing amongst a certain group of people, we are trying to command or persuade our audience to follow that custom and not to use words in any other way This use does not itself give rise to truth or falsity—we do not falsify commands by violating them So that a definition is *valid* if it tells us truthfully how the great majority use words but it is a rule simply because it is expressed in words that are imperative or persuasive

To this it might be objected that some rules of language are violated by the vast majority of the language-group this does not prove them invalid It seems to me that the information conveyed by a definition *may* be about the customs, not of the majority, but of a group of whom the speaker approves Compare the rule " Menzies is properly pronounced *mingis* " This tells us how it is said in certain places, and by certain people, of whom the speaker approves Such assertions lead to controversy, since the others, οἱ πολλοι, won't agree about the delineation of the class of ' appreved people ' In such cases even the information conveyed in the rule is infected by the dynamic purpose of the speaker for the words suggest to those who follow another usage that they are ignorant outsiders The functioning of sentences which use ' subjective ' attributes in informative language is discussed in the next chapter I think that it is possible to confine our discussion of the definitions and necessary propositions to those rules that are based upon the customs of the vast majority, and to ignore the controversial cases

We have now seen that the necessary proposition " All men are rational animals " suggests a proposition that is about signs only " The word ' man ' and the words ' rational animal ' ought to be used to refer to the same class of objects " So that there is a third important sense of ' meaning ' . The meaning of a sign ' x ' consists of all those

signs in the same language which are interchangeable with 'x' according to rule We do not add 'because they have the same reference', since there are signs ('not', 'some', for example) which have no reference and yet which are subject to rules of language, and which can be replaced by other signs

But this must certainly be limited Signs are subject to definite rules, but usually one set of rules is applicable to the sign only when it is used for one sort of purpose and the same signs very commonly have more than one important use or *sense* A physicist who talks about 'energy' or 'work done' uses these signs in obedience to very exact regulative Definitions—so long as he is writing physics The same man does not at all acknowledge the binding force of these regulations when he uses these words about gardening or politics A regulative definition holds for a certain 'universe of discourse'—holds for a sign that is being used to make statements of a certain sort, and not usually beyond So that our definition ought to be restated

> When used in any account of Aristotelian Biology, the words 'man', etc

It follows that although every man we have ever met has a tendency to laugh—in fact does laugh openly from time to time—yet we cannot say that "All men laugh" states a necessary fact about men For 'laughing' does not enter into the definition of 'rational' or of 'animal' hence it is not inconsistent to speak of 'a rational animal that never laughs' And so it follows that it is not inconsistent to speak of 'a man who never laughs'—since the word 'man' ought to be used with the same reference as 'laughing animal' And if we do state that all men laugh, we are adding something to the sum of human knowledge or belief—we are making a statement about all men that may be true or may be false, but is not necessarily true or necessarily false

9. The formal signs 'all' and 'some', and the logical constants 'and', 'not', 'or', 'implies', etc, have no meaning at all in the first two senses of the word—they refer to nothing and have no significance But clearly they have an important linguistic function to perform, and they have meaning in this sense Just as we define, in logic or algebra, the linguistic meaning of signs that have no reference, so we can discuss the linguistic meaning of any signs without knowing their reference I may discuss whether or not a is to be defined as equivalent with b c d without knowing what a refers to, or b c d refers to My conclusion will simply be In this language we ought to regard 'a' and 'b c d' as interchangeable A *Language* may be regarded simply as a set of sounds or marks or both, which are combined in obedience to certain Regulations or Conventions A *Universe of Discourse* is a sub-language whose signs are governed by rules designed to promote a specialized purpose (Thus Physics has no use for the word 'good' but does include the word 'energy', strictly defined) To break these rules is to cease to make expressions that belong to the language, just as to break the rules of bridge is to cease to play bridge (Of course it may be more entertaining than bridge Parts of *Alice in Wonderland* are more entertaining than most 'good sense' but still they are *nonsensical* However, what is nonsense in one language may be sense *in another* and what is nonsense in one universe of discourse is often sense in another)

Amongst the problems which are raised by the Third Sense of Meaning, are the following

What is the explanation of the fact that certain non-formal symbolic definitions have been adopted, rather than others?

What is the function of the logical constants? Is there any explanation of the fact that they are defined so as to exclude from a language any inconsistency or contradiction?

Must any language have logical constants subject to this rule ?

What is the connection between the order of words in sentences and the ' structure ' of the references made by those sentences ?

Are there signs which make simple references ? Are all other signs definable in terms of these signs ?

Are there any individuals which cannot themselves be shown to be classes of individuals ?

Has directional analysis necessarily a last stage ? If so, what sort of signs are to be expected there ?

How ought we to distinguish Names from Descriptions, signs for universals from signs for particulars ?

Are there any propositions that assert necessary facts ?

Does the fact that the great majority of people can all learn the same languages argue anything about the similarity of the structure of our experiences ?

10 The three senses of meaning that have been indicated in this chapter must all be distinguished if certain confusions are to be avoided I want now to point out one way in which either reference or significance differs strikingly from definition

The rules that apply to signs are exactly the same for everybody who uses the signs. Anyone who wants to talk English must obey these rules—must regard ' a ' and ' b c d ' as equivalent, interchangeable signs So that ' what " a " means ' in this sense, is the same for all, and can be given *on paper* for anyone and everyone " There is a red light at l at t " may include as a part of its analysis . " If *anyone* were at l at t, he would observe and/or report red " But it certainly does not include as a part of its meaning (in this sense) " If S were l at t S would see red " There is not one analysis for S and another analysis for A But on the other hand the reference or significance of ' p ' for S is not the same as the reference or significance of ' p ' for A The reference is a bodily effect which ' p ' produces on S The reference, of course, cannot be given on paper, nor can the

significance (I can, of course, say that A ought, on hearing the sound 'kettle' to expect to see a kettle, or to adapt his body in such a way that it will deal with kettles when they appear But this is only a roundabout way of saying that kettles are called 'kettles' Cf 'red' means red) And we ought not really to speak of signs *having reference*, except as an abbreviation for 'having reference for S/I–n' And the same is true of significance We can't say "'p' is significant", except as an abbreviation for "'p' is significant for the following people" (If indeed we ever know that it is significant for anyone besides ourself)

S cannot verify a reference unless it is a reference *for him* (He can't find out whether a proposition is true or false unless *he himself* understands it) For a sign must create expectations or adaptations before there is anything to be satisfied or to be disappointed It must lead him to expect that, at a certain place and time, he would have certain experiences It must mean to him (in the first or second sense of the word) *something that is going to happen to him*

But this does not imply that S cannot verify 'p' unless 'p' is *analysable into a proposition about S*—that, for instance, at a certain time and place S would have certain experiences To argue so would be to confuse the different senses of the word 'meaning'

Two people may both understand the same sign 'p', although the sign does not include their names, nor can it be replaced by any expression in which their names occur p is verified by S if at the place and time indicated in 'p' he has certain experiences (or makes certain reports) and p is verified by A, if A at the same place and time has certain experiences and makes similar reports

CHAPTER III

THE THEORY OF CONTINGENT PROPOSITIONS

(PART I)

1 I want to distinguish a group of sentences that are of particular importance to all people who are in the full possession of their five senses and their memories and powers of speech[1]

(1) *Physical Property Sentences*

1 1 The moon will be full to-night
1 2 This radiator is very hot
1 3 His blood-pressure is very high
1 4 The ship was travelling NNW at 20 knots

I want first to distinguish them from other sentences that equally treat of physical objects, but which ascribe to them properties that are not physical

2 1 The moon is looking *lovely*.
2 2 This radiator is *a nuisance*
2 3 His blood-pressure is quite *baffling*
2 4 The ship looks *grim* and *mysterious*

I shall call this group (2) *Emotional Property Sentences*

A most striking difference between them is that the vast majority of people who understood these sentences would, after making certain observations, agree as to whether

[1] By sentences here and throughout the chapter, I mean what the Grammar Books mean by 'a sentence in the Indicative Mood' Not all such sentences really mean propositions

type 1 meant true propositions or false, but that sense-observation is not sufficient to enable people to certify type 2, and the further experiences that are involved would most likely lead some people to assent and others to dissent [1]

Both types 1 and 2 are alike in this Their truth is certified by reference to one's own immediate experience, and any normal person is capable of putting them to the test of his own experience Of course in many cases he must rely on testimony but of that testimony (or of testimony of that testimony) he can have immediate experience His observations may not lead him to feel sure of the *truth* of the proposition but at least they will give him some grounds for asserting a probability one way or the other And in cases where the observations that are relevant happen to be beyond what is physically possible, yet, as it will appear, a sentence of type 1 or type 2 may still mean something, by suggesting that certain observations would be made in certain *logically possible* circumstances

2 For example, the sentence 1 1 suggests to me, and may well be used with the intention of making me believe, that if I were to go out of doors to-night I should see *a bright silver circle high up* But it is most important to notice that this is never all that sentences of this type suggest · for a mere appearance-to-me might be a hallucination How can I remove this doubt ? Of course anything may in fact make me feel certain But I think it is generally agreed that doubt upon this question is always theoretically admissible · new evidence is never absolutely excluded , no assertion about physical objects or events is ever incorrigible But

[1] The distinction must be based upon the different sorts of sign that occur in the different types of sentence, and *not* upon any difference in the kind of proposition that each type may commonly be understood to mean, which is the chief question I am asking about the types of sentence

there are two methods by which the probability of such propositions can be rationally increased The first method is to make further observations and to wait for further experiences, and to notice how these fit together For perceptions of physical objects are distinguished from illusions first of all by their order and connectedness (e g. That is really a dagger if I can touch it as well as see it) The importance of order (rather than vividness) has been well understood by many philosophers—Berkeley and Kant, for instance. But it seems to me that there is a second test whose essential importance has not been fully acknowledged until recently I make sure that the moon is full by consulting other people as to what they see when *they* turn their eyes in the direction of my bright circle I believe that this test is vital, and that part of what is normally *asserted* in I I (and the like) is something about the reports other people people would make, if asked of their experiences Of course this second test is really a special form of the first for it also concerns the character and order of my experiences—other people's reports are a part of those experiences But it is (as I shall try to show) a vital part of the elucidation of the meaning of sentences of the first type And it is important to notice that what I I suggests to a hearer is something that *in fact* every normal observer would perceive out to-night—and unless this were so, how could I I be addressed (as it often is) to *anyone*? And normally I I is used to assert (to make hearers believe) that there will be this universal agreement among all normal people who go out of doors to-night —agreement, that is, in seeing a bright circle Of course the assertion may be untrue but because of the meaning attached to signs for physical objects and properties it is in fact very likely that there will be an agreement of a big majority *for* the proposition, or that there will be a very big majority *against* And it is by the agreement of all normal observers (or the vast majority of observers) that the

existence of real physical objects, properties, and events is established, and the appearances of such things distinguished from illusion [1]

In addition to seeking human testimony, I may use instruments—take a photograph, for example But if at any stage I happen to doubt the real physical existence of the camera or the plate, or the causal connection between them, then I should have to call in the aid of other observers and other cameras The process of confirmation certainly has no necessary end—the last term is fixed only by inertia or by the exhaustion of real doubt But the essential point is that any sentence of the type I always asserts (if it is used to make an assertion) that something will be sense-perceived by any normal observer this is the *crucial* test for sifting reality from illusion [2]

To this it might be objected that a man may do his own normal observation such a sentence as I I simply asserts that a whole series of colours, sounds, etc , will be observable by any normal observer, *in a certain order* A given observer could therefore (at least in theory) verify the proposition without seeking testimony from anybody But the difficulty would be that he would have to pronounce upon his own

[1] Cannot there be a hallucination that is shared by the vast majority ? This question is analogous with Can't there be a dream that is highly orderly ? But we see at once that if the ' dream were *not* incongruous with other more highly organized and prolonged experiences, we should not call it a dream We can t always be dreaming, and the test is to consider wider and wider experiences Similarly, we cannot speak of a collective hallucination unless there are others who do not report the hallucination at all, and their reports are more highly ordered than those that do *Everyone* can't be ' deceived ' in the same way at the same time

[2] If my contention about testimony is valid, it follows that ' a physical object ' is a conception which could not be developed by a man born and reared in solitude This does not mean that he would be quite incapable of doubt about his experiences, since he could, of course, divide the orderly from the chaotic But it does mean that he would never make assertions of physical properties in the same sense as we do It also follows that an Alexander Selkirk might well be haunted by a general doubt that all that he saw and heard was an illusion and if this doubt became focused and he came to attach special doubt to particular things, then it could not be removed by rational process

'normality'; and this he certainly could not do without comparing his perceptions in general with those of other people. So that to demand testimony upon the special question raised by a sentence is logically simpler than to demand testimony upon the general question of normality. And both processes involve a comparison of one's own observations with other people's.

For what is a Normal Observer? He is surely a person who habitually identifies, or can be taught to identify, red objects, green, blue, square objects, circles, loud sounds, softer sounds, sweet things, bitter things etc.—*in the same way as the vast majority*. He is one who can co-operate with the vast majority in establishing Ostensive Definitions for what we see, hear, touch, smell, taste.[1] He is one whose discriminations, in response to stimulation of the peripheral sense-organs, are *standard*, and who can therefore learn to report 'red' or 'circle' *every time* he is presented with *what we all call 'red' or 'circle'*.

Sentences of the type 1, therefore, suggest to a hearer what any normal observer (as I have just explained this term) would see, or hear, or taste, or smell, or touch, in certain logically possible connections. And if one observer actually has done so, this is reason for believing that any other may do so too; and the simplest test of the truth of such sentences is for an observer to put himself in the circumstances specified, find out what he there perceives, inquire of other observers what they are perceiving, and to see if all agree.

Where there is disagreement after every care has been taken, the inference is that all but one of the agreeing groups is *abnormal*. Further tests might show which group—if any—agrees with the vast majority—for it is a *fact* that the vast majority do agree. The others could be tested to see

[1] Obviously a normal Frenchman *can* co-operate with the majority of English people in establishing the Ostensive Definitions of such words as 'red', 'green', 'square', etc. See the note to Chapter III.

in what ways their sense-organs or general body-conditions differed from the majority Some deviation, some bias, might be discovered any person who had a *regular and habitual* bias could make allowance, and so learn to calibrate his report with those of others

The description of the first type of sentence may now be summarized It includes such signs as ' body ', ' colour ', ' movement '—signs that would ordinarily be described as ' signs for physical objects, properties, events ' It excludes such signs as ' A perceived so-and-so ', ' A seemed to perceive so-and-so ', ' A feels so-and-so ', and such signs as ' annoying ', ' pleasing '—signs which would ordinarily be described as ' subjective ' I also wish to exclude from type 1 sentences that include such signs as ' good ', ' ought ', ' right ', ' beautiful ', and their opposites, and signs which could be defined only in terms of these I think everyone will admit that sentences of type 1, so defined, are in very general use both in scientific writings and in everybody's conversation and correspondence What can we say generally about the meaning of such sentences ?

I shall not here be concerned with their emotive meanings, if any The question concerns the propositions that they may mean And we can say generally that many such sentences mean contingent propositions about physical objects in this chapter I am trying to explain as fully as I can what we mean by saying of a particular sentence of type 1 that it means a proposition about physical objects But (*a*) we must not forget that many type 1 sentences are ambiguous—they may mean one out of two or more propositions This may create no philosophical problems, as, e g , the sentence

" My ward is very prosperous ",

but it may happen that a sentence of type 1 can be interpreted to mean a proposition that is not about physical objects only, but is also about something else

" A and B were face to face "

may be understood to assert that they saw each other. This I shall discuss below (*b*) We have also to remember that sentences of type 1 may not mean propositions at all—may make no reference, lead to no possible verification e.g. " John borrows himself " Since it is obvious that this, or any other sentence, *could* be used to mean a proposition, the question " Why doesn't this mean anything ? " must refer us to the rules which connect the use of one sign with other signs, and signs with objects Very often the question " Why is this meaningless ? ", raises no fundamental questions we have elected to use ' loves ' for an interpersonal relation, and so ' John loves $\sqrt{3}$ ' has no sense. But there are sentences which are nonsensical because they break rules of language that seem to be especially ' fundamental ' We *could* use " A and not -A " to mean something, of course But if we did, our new language would have to exhibit something very like the dichotomy which is (at present) expressed in ' A or not -A ' Whether there really are any *unavoidable* features of language will be discussed at length in Chapter VIII

3 Consider now the sentences of type 2, and especially the words in italics, since it is these that are characteristic of type 2, and peculiar to it Do these words suggest to a hearer the sort of experience that any normal person would in fact have at certain locations ? And if sentences of type 2 are used to make *assertions*, do the words mean that any normal person would have a certain sort of experience at a certain time and place ?

The words suggest *feelings*, not sensations No doubt *many normal people* would feel delighted with the moon, annoyed at the leaky radiator, and so on But certainly many normal people would not feel so at all [1] This is evident

[1] And if we persuaded a large group of people to adopt the sign ' a nuisance ' for anything that makes them feel as this leaky radiator now does,

But what exactly are the sentences 2 used to *assert* ? (*a*) That everyone will feel delighted ? (*b*) That some will—but who ? (*c*) That the person addressed would ? (*d*) That the speaker would ?

If we suppose (*a*) *all normal observers* (we are confined to normal ones only because other words in such sentences—' moon ', ' radiator '—seem to be about what any normal observer would perceive) then there ought to be no serious disagreement about the propositions meant by type 2 None of them (or hardly any) will be true But it is *disagreement* and not general rejection that characterizes the type If we suppose (*b*), then again some people (unspecified) certainly *would* feel delighted with this moon, and so on, and all such propositions are true But of course the class of people may be defined, at least by implication, and I suspect that it *is* so defined and that it includes the speaker and his hearer *and others* Of course there may be no hearer present, and the class of hearers must be implicitly defined I suspect that the whole class may include the speaker, the present hearer if any, all those hearers of whom the speaker *approves* and all others of whom he and they *approve* (Besides this, the sentence is also used to *persuade* any listener to feel for the moon This dynamic purpose is doubtless one reason why the sentence *does seem* to suggest—what can't be true—that *any* normal person would do so It carries a little implication that if *you* don't feel that the moon is lovely, you are in some way deficient)

4 In this view of type 2, there will *not* be general agreement as to the truth or falsity of such propositions If I don't take any delight in the moon,' I deny that it is lovely It is not true that I enjoy it, and it may well be true that I *disapprove* of people who enjoy it The class, therefore,

we should find that the next time a member pronounced something a nuisance, some of the group would agree and others not *Ostensive Definitions cannot be established for such words as are italicized in 2*

of people I approve of, determined by my own feeling, does *not* enjoy the moon Hence each person affirms or denies upon *subjective* grounds—that is, upon the evidence of *his own* feelings to the moon and towards people who feel that the moon is lovely And there will never be wide agreement between our feelings Why not ?

All our sense-organs maintain a surprising uniformity of condition throughout our waking life, recovering quickly from the effects of stimulation therefore variations in the reaction of these organs to outside stimuli show a simple correspondence with variations in the stimuli (e g Only in exceptional fatigue do I fail to discriminate between red and pink) The sense-organs of the enormous majority of people are remarkably alike both in constitution and in behaviour so that if one person can distinguish two stimuli, it is likely that all can (Of course some make finer discriminations than others, but the vast majority have in common the main system of their responses) These facts are the basis of the truth that we *can* establish Ostensive Definitions for sense-terms—for the names of what is *suggested* by sentences of type 1

On the other hand, stimuli also produce reactions from us that involve far more than the sense-organs What I see, *moves* me—produces an emotional-affective response Such reactions depend, of course, upon the antecedent condition of the central nervous system But this varies *very greatly* from hour to hour, and knows no very stable equilibrium [1] So that the *same* stimulus (the same tune, or picture, or person) produces very different responses from the same person, at different times And naturally enough, the changes of mood in one person are not simply correlated with any

[1] My mood is determined, not merely by what I am now perceiving, but on what happened yesterday, and ten years ago my attention is directed by the traces of past events, as well as by external stimuli In other words, my emotional organs, whatever they are, do NOT make a quick recovery from the effects of outside stimulation they often never recover but are permanently adapted by such stimuli

changes in other people Hence when we use words as signs for what things make us *feel*, there is never any general agreement So that the words italicized in the sentences of type 2 *are not used to assert the existence of physical properties*—loveliness, mystery, grimness are not open (as heaviness or heat) to the observation of *any normal person* This is not accidental, in the sense that a physical property is *definable* as something any normal observer would observe *through his senses* But it is, of course, a definition that rests upon the quite contingent fact that only the sense-organs yield that *agreement* of the great majority of people Sentences of type 2 are used rather to assert the existence of emotional properties that *are there for those who find them* They help to build up common feeling between those whose characters and environments permit them feelings in common They cannot be used to assert the stubborn and irresistible facts of every-man's life There is not, therefore, that contrast which arises in the verification of type 1 if I see a circle high up and no one else does, what I see is a *hallucination* But if I feel annoyed and on one else does, the validity or reality of my emotion is *not* therefore questioned (Of course reflection soon suggests that whatever reality we allow to emotions, we must allow also to our sense-data see Descartes, *Med*, III)

5 I think the distinction [1] I have made helps to explain the 'importance' of sentences of type 1 for those who belong to the language group

(*a*) The words of such sentences *suggest* (i) words for which there are established Ostensive Definitions and *suggest* (ii) that any normal person (in possession of his Five Senses, power of speech and memory) *would* in certain

[1] The difference is *not* that 'feelings are private' or that propositions of type 1 only 'can be verified by any normal observer' For feelings are private in no sense which requires us to call sensations public And any normal observer who knows the language can verify either 1 or 2

circumstances experience what these Ostensibly Defined words stand for to him. These circumstances, it is logically possible, *may* occur to everyone, so that such sentences as I have a *prima facie* interest for anyone It *might* make a difference to *anyone*, if such sentences mean true propositions

(*b*) They mean propositions that may be *confirmed* by all normal people, hence they may be established with very great certainty indeed.

(*c*) They make possible an exchange of information about physical objects without this, survival (which must be *common survival*) would be impossible

(*d*) These circumstances (*a*–*c*) invariably *suggest* that all normal people have very similar sense-experiences without this fundamental basis, *common enjoyment* of the world would be impossible and our emotional divergences uninteresting.[1]

I have now, I think, sufficiently distinguished types 1 and 2 But I have yet to explain what I mean by writing "Sentences of type 1 *suggest* that any Normal Observer might have experiences which could be *expressed* in words that have established Ostensive Definitions" For I think this leads us to a Third Type of Proposition, whose relation to the other two types, and whose intrinsic interest, I want to discuss fully

6. "The moon will be full to-night," suggests to anyone who knows English what he would *seem to see* out of doors to-night This suggestion arises out of our *acquaintance* with the habits of English-speaking people it may or may not involve the thought of *words* (I may at once think of a white circle, or I may be led to imagine such a circle by

[1] The propositions of the Physical Sciences include General Laws and Particular Statements It is easy to see that the latter are statements of type 1, never of type 2 but they are distinguished from others by being determinate, unambiguous (hence 'numerical'), and (at least very often) so framed as to be understood by *any* trained reader, whether or not he happened to be present at the time and place of utterance (Hence, "*That liquid* boiled at 132° C" gives way to "The ½ litre of salt solution boiled at 132° C")

thinking first of 'white circle'.) But if I were suitably pressed, I could readily tell you *what* I expect to see and hear, if the proposition 1 1 is in fact true I could suggest *sentences* which mean propositions (of a different type from 1 or 2) which must be true if the proposition 1.1 is true · e g "If 1 1 is true, then to-night out of doors I shall either see a bright silver circle overhead, looking a long way off, or I shall see a bright light, looking as if it is behind clouds, or at least when I seem to see the sky, it will look *bright*" The suggestion of sentences is possible because we all have a wide first-hand acquaintance with the *syntax* of our language —a knowledge that it would be very hard to assemble at once, and tedious to express in words, but a knowledge really there when needed

Such sentences express some of the *evidence* upon which the truth of 1 1 depends That evidence is what would appear to *any* normal observer, hence it is what would appear to the five senses of an observer, and so it must be the appearance of colours, shapes, sizes, positions, directions, speeds; temperatures, roughnesses, sounds, smells, and the rest of the *sensible qualities* and relations I do *not* wish to maintain that, on hearing 1 1 any ordinary Englishman could recite for you *all* the evidence that is relevant he would rely very much upon the *promptings* of what he did actually perceive at and near the place and time of the proposition , for most propositions of type 1 1 are *highly determinable* (and so refer to ever so many different possible situations, any one of which would verify the proposition) and also *highly vague* (there are many possible situations which would leave the proposition uncertified) But a person with an ordinary acquaintance with the syntax of English would be able at once to describe *many* relevant appearances, and certainly *would know, that* 1 1 *is to be verified solely by reference to what appears to the senses*, and not at all by reference to what one desires or hopes or fears

or likes or approves This much, I think, *is plain from the syntax of sentences of the type* 1

So that *if we could* write sentences to express *all* the evidence relevant to 1 1, we should then have an *analysis* of the proposition 1 1, in terms of formal signs (' and ', ' or ', ' all ', ' some ', ' if—then—'), signs for places and times and for properties that appear to us through the five senses Then if 1 1 were true, what the analysis asserts would be true, too , and vice versa

We may say, then, that sentences of type 1 mean (*implicitly*) propositions about sense-properties at places at times Of course they are not, in the same sense, *about* normal observers, still less are they *about me*, if I happen to be one who understands the sentence

What I expect is what the proposition is *about*—a bright circle high up to-night and the sounds as of normal observers reporting a bright circle [1]

In a parallel way, we may say that sentences of type 2 are about what any normal person would observe (' the moon ', ' the radiator ' again) and also about what the audience will *feel* in certain circumstances And if one of the audience did observe the moon and did find it lovely this certainly could be called evidence in favour of the proposition And such a feeling might be expressed in words

[1] Mr G Ryle (in *Analysis*, October, 1936) writes that a sentence has meaning if it is ' verifiable by anyone you please ' This might be understood to state my view—that a sentence can be used to assert propositions about the physical world if all its non-formal signs have Ostensive Definitions which *can* be established by any normal people But of course a sentence does not *convey anything to me*, have significance for me, unless I do actually belong to the group of people who have established the Ostensive Definitions of the signs involved in it Mr Ryle writes " I think that some philosophers feel a difficulty in the notion of a sentence conveying a meaning to me when what is conveyed is not a proposition directly or indirectly about me " (p 10) Here he seems to hesitate between saying that I can understand sentences which do not include any signs for me or my experiences or my body , and saying that what a sign means to me (its significance for me) may *not* be an expectation or thought about experiences logically possible for me The second alternative is quite incompatible with my theory of how sentences mean

—in sentences of a different type from 2, which would have to be included in any full analysis of the meaning of 2 1—such sentences as—

I now feel delighted with the moon
I now feel annoyed with the radiator
I now feel oppressed and mystified by the ship

And these sentences would seem to belong to the same type as those that describe what I seem to see or hear or touch For in both cases it looks as if these propositions are particularly certain *for me* [1], but that no one else has any good reason to be interested in them, to dispute their truth or to affirm it—it has often been suggested that no one else can *understand* them Let us roughly describe sentences that seem to refer to immediate experiences, and not to physical objects or their properties—physical or emotional—as *Sentences of Type* 3 Whether they really do after all refer to physical properties, will be discussed below [2]

7 We must notice that our vocabulary for expressing sensation-reports is not so well-developed as that of feeling-reports—where 'feeling' is a blanket term for emotion, desire, pleasure-unpleasure, willing And this is of some significance

(3*b*) *Emotion Reports*

I feel tired, happy, sad, etc (or, A feels)
I like this, dislike that, I want this
This annoys me, attracts me, etc

I think all these belong to the language of reports · I doubt

[1] They cannot be disputed upon the evidence of anyone else's reports *contrast* "This radiator is very hot"

[2] The term 'Protocol Sentence', used by Neurath, Carnap, and others, is confined to sentences about what we seem to perceive through the senses I think it is important to realize that there are important report-sentences that are about feelings and that these have bearing upon the Truth or Falsity of public propositions (type 2), and that from the point of view of the reporter there is no distinction between the two kinds of reports

if any of these, as commonly understood, could be contradicted by the evidence of other people's reports [1]

(3*a*) *Sensation Reports*

Such sentences as .—

I see a bright circle high up

or

A sees

may mean no more than sentences of type 3, but are more commonly understood as implying that there really is a physical object high up, bright, circular from here—these we relegate to a Fourth Type The same applies to the other perception-verbs hear, taste, touch, etc The only quite unambiguous reports of type 3 have to make use of 'seem to see' or 'there appears to me to be', or such jejeune technicalities as 'I am now immediately aware of ——,' 'I am acquainted directly with ——,' 'There is given for me— ' Again the word 'object' ordinarily means a physical object 'sense-datum,' 'sensum,' 'the appearance of,' 'shape,' are framed to avoid the implication of common consent And most of the property words—even 'red', 'heavy', have to be avoided by 'what would commonly be called "red" ' And worst of all, we must replace the co-ordinates of physical space-time by descriptions in terms of the 'here' and 'now' of the utterance Let us be content with very simple cases

"Where I am now, I seem to see a bright circle high up"
"Here and now I am immediately aware of a bright circle high up"

('immediately aware of' precludes a physical sense for the following words)

[1] i e there is no difference between *feel*, and *seem to feel* an emotion or if the latter is used to indicate doubt it is merely doubt about the name, or the probable consequences, of the feeling—its physiological accompaniments But see Chapter IV, § 2

"I now have a bright circular sense-datum high up in my present field of vision"

These may be regarded as a disjunctive part of the analysis of:

The moon is now full

What is reflected in this interesting asymmetry? (*a*) Simply that our emotional reactions differ from time to time, person to person, and the reactions of the five sense-organs *don't* Sentences of type 2 (in respect of their non-physical predicates) cannot in fact be very useful for leading a quite unselected audience to expect that they would have a definite feeling in the presence of a particular event or thing whereas type 1 are extremely efficient in suggesting to such audiences exactly what, at certain times and places, they would perceive Hence (*b*) the type 2 are used far more effectively in conversation, where the audience is known, than in writing intended *for any reader* (*c*) Sentences of type 2 are also used simply to convey to an audience what the speaker or writer is now feeling the implication that others would also feel it is not then taken very seriously (cf 'One feels such and such') (*d*) They are also used everywhere in writing and speech that does not aim simply at conveying information, but tries to arouse feelings, this is discussed below (*e*) But information about the speaker's feelings is more simply conveyed in emotion-reports, and since this is the only information about feeling-reaction that is likely to be accurate, this sort of emotional language has been developed separately and offers an alternative vocabulary to type 2 (*f*) And, by contrast, our sensations are so similar, that we do not bother to distinguish ours from other people's, and hardly know how to make statements about sense-appearances to us, without in the same words implying that any other normal person would be aware of precisely similar appearances

Are we to say that sentences of type 2 normally mean

true-or-false propositions? I think we can only answer by saying that such sentences may be used:

(*a*) To make an assertion about the way almost everyone behaves e g "It is annoying to have to wait for meals"

In this sense they mean propositions about physical objects, and are verified in the same way as "The moon will be full to-night"

(*b*) To make a statement about the feelings of the speaker and the particular people he addresses—equivalent with a sentence of the form "We feel so-and-so" Such a proposition could be indirectly verified in the same way as a report of type 3*b*

(*c*) To state one's own feelings This is verified in the same way as a sentence of type 3*b*

(*d*) To appeal to the sympathy of people addressed to persuade them to feel as the speaker does Assent here is not belief but 'support'—not 'What you say is true', but 'I'm on your side'

(*e*) A variety of other emotive uses

8 But sentences of type 3 present great difficulties I can usefully convey information about my own emotion only But how do I do this? Clearly, sentences of type 3 cannot make at all the same sort of suggestion as those of type 1

Of course, if it is difficult to see how I can convey information about my feelings, it is in no way less difficult to see how I can convey information about my sensations all report-sentences are, in this respect, similar Now sensation reports (and propositions which *include* them) play a crucial part in the understanding and verification of sentences of type 1—the informative sentence par excellence [1] Is it the case that A could not understand sentences of type 1 unless he could understand certain connected sentences of type 3,

[1] I have in mind here the criticisms levelled against types 2 and 3 by those who try to show that either they have no sense, or they mean just the same sort of propositions (about physical properties) as type 1

uttered by another person whom we will call B? Suppose A is trying to verify the proposition 1 1. He himself sees a bright circle high up . do others see it? B, who is present, reports 'I see a bright circle high up,' and undoubtedly the hearing of these words makes A feel more confident that 1 1 is true Why?

The words B uses are more or less the same as A would use if he were asked to report what he sees And both are suggested by the words of 1 1, the definition of 'full moon' leads us by a necessary process to 'white circle' That A and B both utter these words at the time and place indicated in 1 1, leads A to suppose that this is really one of those occasions on which any normal person would report as 1 1 suggests

But of course it might not be B might be abnormal or might not be reporting correctly what he sees And if B is lying or abnormal or forgetful, then his report ought to be disregarded, and A might find that he was himself abnormal, and that most people (all normal people) would not report in favour of 1.1 He can therefore conduct many tests to see if B is lying—tests that are more familiar to worldly than to philosophic wisdom And he can ask other normal-looking people to report He might, however, retain the thought that he can never know whether or not anyone reports truly upon what he perceives

What does 'truly' mean here? B reports red truly, if he now sees red—what A means by 'red'? But whether A and B ever see the same colours when they make the same sense-reports must be admitted to be an inference which is not beyond doubt. A may feel no doubt whatever that B is speaking the truth, and is not being deceived, and yet feel great doubt as to whether he and B ever see just the same colours So that 'B reports truly' must have a more restricted meaning

'B reports red truly,' if he says 'red' when he is seeing

what he sees when everyone else reports 'red'—if he sticks to the use of 'red' which has an Established Ostensive Definition

In this sense of 'true report', it seems plain that in fact only B can know whether or not his report is true. And even if it were true, B's reports might still be misleading because, owing to some bodily change, he now sees red when other people—the vast majority—see some other colour In that case, A would be led into false confidence if he accepted B's report as a useful corroboration of what he himself saw

What does A really require of B's reports? For many purposes, simply that they shall be *a reliable guide* as to what B will report on other occasions, how B will act on this and other occasions in respect of what A perceives and B reports on, as to what the vast majority would report on this and other occasions, and as to how they will act And A may make simple tests which lead him to believe with very high rational probability, that B's report satisfies these requirements, without ever raising the question of its truth [1].

A will find this quite adequate for certain of his purposes for gaining information about the physical world And in fact we might well recall our account of what sentences of type 1 are about (see above § 2) e g 1 1 is about what any normal observer would perceive outdoors to-night, viz a large silver-white circle high up, etc, and also about reports (sounds and shapes which the observer might perceive) of any other normal people who might be present, and 1 1 asserts that there would be an agreement between the sounds and shapes of such reports, and those which the original observer himself would use if he were asked to describe what he perceives

In other words (*a*) physical-object propositions never

[1] In the case of 1 1, B must not afterwards tell his friends how he hoaxed A, nor must he refuse to act on the supposition that the moon is full, etc, etc

assert that an observer will be able to perceive that other people's reports are true ; (*b*) they never assert that a normal observer will have any reason to suppose that other people ever see colours (like his own or different), hear sounds, feel anger, desire pleasure , (*c*) physical object sentences never require us to understand sentences of type 1 , they refer to them simply as sounds and shapes , (*d*) they are never about the white circle that someone else sees, but about the physical objects that can be so easily produced by voice or pen, e g ' white circle ' , (*e*) physical object propositions might be believed with absolute certainty by a Solipsist

9 But besides information about the physical world, A wants information about other people's experiences This may not be of as primitive importance to him as the way other people behave—upon which his own life depends (It is not involved in propositions *a*, *b*, *c*, of § 5) (*a*) But information about other people's beliefs, illusions, emotions, and about the similarity or dissimilarity of their sensations with A's own—all these are vitally necessary in determining A's feelings towards his fellow-creatures, and A's behaviour towards them It seems doubtful whether A could survive unless he were capable of sympathetic anticipations based upon some notions about what other people experience (*b*) A cannot give an intelligible account of the *modus operandi* of sentences of type 1, without entertaining the hypothesis, expressible only by type 3, that other people have sensations, and learn to identify by a certain sign, all sense-data that exhibit the same quality or relation , that on every occasion upon which one normally-constituted persons sees the same quality, a vast number of others—the great majority—also perceive some quality—the same for each person on each occasion , that seeing signs, or hearing signs, often causes most people to have a feeling which they call a belief, or some other event (thought), and this inclines them to certain

actions rather than others. And the same is as true of type 2, in which feelings play a much bigger part For the essential fact about sentences of type 1, is that " they suggest what would be seen, heard, etc , at certain times and places, BY ANY NORMAL OBSERVER ", and this last is a sentence of a general kind, about what someone seems to see and hear and smell and taste and touch It is plainly a sentence of type 3

It might be argued, however, that there is a very great difference between the sentences —

(*a*) I seem to see a bright circle (*or* I feel angry), and (*b*) A seems to see a bright circle (where A is not myself) And whereas the former is one sort of meaning for me—it suggests what I now experience—the latter has quite a different sort of meaning for me It suggests to me that in certain locations I should observe certain things happening to that physical object which we call ' A ' or ' A's body ' And this meaning of (*b*) is the same for any normal observer If so, it is the same for A also, if he is normal If so, we must suppose that (*a*) also *can* be interpreted by me to mean something that any normal observer would perceive to be happening in the physical object I call ' my body ' and other people call by other names So that, on this theory

(*a*) means to me, *either* something about what I now seem to see (the white circle) *or* about my body and stimuli or both

(*b*) means to me or to anyone, something about A's body and its stimuli

This would seem to restrict the special importance of the sentences of type 3 to a very minimum For only sentences of type 3 in the First Person (or which could be replaced by First Person sentences without loss of meaning), and these only in one of their senses, or even in only part of one sense, really refer to what I seem to experience For any sentence that belongs to type 3, but which is verified solely by ' what

any normal observer may observe', means just the same sort of proposition as sentences of type 1

But plainly, sentences of type 1 have just the same sort of importance for A and B as they have for me—this is inevitably suggested by our common behaviour Am I to suppose that, in the earlier part of this paper, whenever I wrote of 'A', I must have been writing of myself? Have I no reason to suppose that words have *significance* for another person, that they arouse in him images and feelings, as well as adapt his body?

That this *asymmetry* is one of the things that are properly called 'Solipsism', it would be impossible to deny And Solipsism must not be regarded as an unfortunate imperfection in a theory of communication (We might as well say that *nothing* makes a poor meal) It is a failure to provide such a theory (Communication, as Mr T S Eliot says, is a word that begs a question)

However, it would, according to this theory, be impossible to *state* the doctrine of Solipsism For if it is never part of the meaning of any sentence to me, that another person has an experience of any kind, then the statement that seems to *deny* that anyone else has experiences must itself also be meaningless But a linguistic asymmetry will remain to show the void For on this view of language, the signs 'I', 'my', 'me', would have a unique importance that would be quite inexplicable This verbal asymmetry might properly be called Solipsism [1]

10 To avoid this asymmetry at all costs has been the

[1] Some such doctrine as this might perhaps be gathered from the *Tractatus Logico-Philosophicus* But Wittgenstein's analysis of sentences about *believing*, *thinking*, *saying*, seems well adapted to avoid the explicit statement of the asymmetry However, he states that the structure of language somehow *shows* the truth of Solipsism, although no meaningful sentence can say it e g " That the world is *my* world, shows itself in the fact that the limits of the language (the language which only I understand) mean the limits of *my* world " (5 62)

aim of more recent writers of the Vienna School. Their method has been not to show that I can understand sentences to refer to A's sensations and feelings, but to avoid saying that I have any sensations or feelings myself They try to discuss what signs mean, and how propositions are verified, without adopting my point of view, or anyone else's They write as a third person might do, of communications between themselves and others

In other words, they assert that all the sentences of type 3 mean propositions of precisely the same sort as sentences of type 1, that is, they mean only what any normal observer could verify So that " I seem to see a bright circle ", means merely that a certain body is undergoing a certain sort of disturbance, which may or may not be due to the stimulus of lunar rays And exactly the same sort of sense is the only sense that can properly be attached to " A seems to see a bright circle ". The asymmetry has disappeared before a more heroic surgery

The arguments that may lead from Solipsism to Physicalism can be examined in the writings of Professor Rudolf Carnap He insists that the reports, or protocols, that are necessary and sufficient for the verification of a physical hypothesis, *must be couched in certain terms* They must " exclude all statements obtained indirectly by induction or otherwise ", and they must be what would ordinarily be described as " a direct record of the scientist's experience " But he shows that if we really were to take these reports as a direct record of the reporter's experiences, then we should have to confine ourselves to the discussion of *our own reports*, and to the system of constructions and hypotheses that *we* build out of these—that is all

> " In general, every statement in any person's protocol language would have sense for that person alone, would be fundamentally outside the understanding of other persons, without sense for them. Hence every person

would have his own protocol-language. Even when the same words and sentences occur in various protocol languages, their sense would be different, they could not even be compared *Every protocol language could therefore be applied only solipsistically, there would be no inter-subjective protocol language*" [1]

Obviously, on such a view, Carnap would have the right only to speak of his own science and his own protocol language · he would not have any right to speak of 'every person' at all How does he avoid this solipsism ?

The method which Carnap at last adopted was that suggested by Dr Neurath, under the title of *Physikalismus* [2]

Physicalism is primarily a theory about language · the theory that all sentences which can be used to convey exact information from one person to another can be translated without loss or change of meaning into sentences whose non-formal signs all belong to the 'language of physical objects' It is a part of the theory that where a report by a given observer is used to help verify a hypothesis, this report must be capable of translation into purely physical terms Suppose the hypothesis to be verified were 'the moon is now full', and that evidence is asked from B and B replies "I see a white circle high up" How does the 'translation' proceed ? According to Carnap, the proposition

B reports that he sees a white circle high up (1)

is true when, and only when it is true that

B's body is now in the physical situation Z (2).

From (2) we may be able to infer, with the help of causal laws (i e the assumption that B's body is a 'normal one'), a further fact

[1] These quotations come from *The Unity of Science*, pp 42, 79, translated from *Erkenntnis*, Band II, pp 437, etc

[2] See especially "Soziologie im Physikalismus," *Erkenntnis*, B II, pp 393–431, and "Protokollsatze", *Erkenntnis*, B III, p 204, both by Neurath And "Psychologie in physikalischer Sprache", ibid, III, 107, and "Über Protokollsatze", ibid, III, 215, both by Carnap

There is in fact a white sphere in the sky (3)

But apparently the 'translation' is from (1) to (2) Since these two propositions mutually imply one another, they are regarded as conveying precisely the same information, and so to be one and the same proposition

In other words, B's report is simply a fact about his body—the fact that certain words were uttered in certain complicated conditions In this way, the fact that B 'reports his observation' is put forward as being a fact about the visible movements of his body or within his body, and not a fact about his experiences or his observations in any other sense at all

It is not, of course, merely that A cannot understand by B's words anything more than that B's body has been affected in a certain way That is not enough, for it still distinguishes between A's view of B, and B's view of himself—it is still to be a regarder of persons The point of the theory is that B's own words

"I am now seeing a white circle high up"

do not mean *to him* anything more than do the words about the condition of his body

11 It seems to me that there is everything to be said for a symmetrical theory, either for one that enables us to discuss anybody's immediate experiences, or for one that prohibits us to discuss anybody's But, as I have said, it seems to me doubtful whether we can explain the *modus operandi* of type 1 sentences without using sentences of type 3 in a sense that is peculiar to them, and denied to them by the doctrine of Physicalism Is it satisfactory to say that *all* that "The moon will be full to-night" suggests to any normal observer is that he would utter certain reports in certain circumstances?

Of course, if I were trying to verify 1 1, I might well utter reports, such as "I now seem to see a bright circle high up"

But why should I, or anyone else, report anything ? Because other people want to *use* reports in the verification of physical-object propositions ; and to do this, they must be made immediately aware of my words But, for the Physicalist, sentences about ' immediate awareness ' mean the same as sentences about bodily changes And what does a sentence about a bodily change mean ? Something that any normal observer would report And so on—reports for the sake of more reports

In his valuable exposition and criticism of the views of Dr Neurath, Professor L J Russell says —

> " I think you have to cut out everything which a strict behaviourism would cut out all ' direct experience', all ' private intentions ', ' observings ', all distinction between ' my experience ' and ' your experience ' There remain nothing but reports made by various reporters in various circumstances There reports are not to be taken as asserting that ' observers ' ' perceive ' or ' observe ' that such and such is the case They are simply taken as reports " (*Proceedings*, Aristotelian Soc , Supp vol xiii, p 190)

And how do we *use* reports in the verification of sentences of type 1 ? It is true, I believe, that I never need to know whether or not the reports of other observers correspond with the facts of their experience . I need only to believe that the reports are reliable But surely I cannot be said to verify 1 1 unless what I myself observe, including the reports of other observers, is the sort of thing that I regularly report in those terms (of type 3) which 1 1 entails ? Surely it is only because I can *know* (in one of the senses of that word) that my own observations support (or do not support) 1 1, that I can assign any rational probability to the proposition. And it seems to me that such an account of verification cannot be expressed without the help of sentences of type 3 , for Neurath's account of " A verifies p " does not show that A ever observes anything that supports p or supports not-p.

Every time he seems to be telling us about A's observations, we find that he is really telling us about A's reports on other people's reports and on his own But surely reports can verify a proposition *only to someone who observes them*

I believe that Physicalism is quite unable to explain the importance of sentences of type 1 (to say nothing of the sentences of type 2)—of the whole business of asserting, verifying, assenting This completes my account of the difference between types 1, 2, and 3 Type 3 have a unique sense, not to be conveyed in the language of physical objects

Note to Chapter III

Ostensive Definitions

We have seen (Chapter II) that it is quite possible to doubt whether anyone else uses any non-formal sign to stand for the same notion, idea, universal, as I do That we all talk about green, is no proof to me that anyone but myself has ever seen the colour that I call green So that A has apparently no obvious reason for supposing that B uses the sign ' p ' to stand for the ideas that come to A when he hears the words

And yet A may be sure that the sign ' p ' has the same *reference* for him as it has for B He may be sure that he and B *agree in their use* of these words But that does not here mean that they both use the words for the same idea . it simply means that they generally use the words *on the same occasions* How can A know this ? In real life he might have noticed that B used words on occasions when he either did or would have used the same words or very similar But if B and A are to be supposed to communicate exact information with great care, we must suppose that something like the following must have already taken place —

A group of observers, ABC, etc , have upon some occasion agreed to use a sign (say ' Q ') for a conspicuous feature of their common environment

Later they have often experimented to see whether, when any one member uses the sign ' Q ', all the others agree that this is one of the occasions for which they had agreed to use the sign In this way they have ' established ' an Ostensive Definition of the sign ' Q '. This sign is one, in the actual application of which ABC, etc , are in constant agreement

When, therefore, B says ' Q ', other members of the group take this as a sign that probably if their bodies were where B's is, they would themselves be confronted by something for which ' Q ' was the agreed name

In this way, a whole vocabulary is built up ABC, etc , may have a set of terms, ' Q/1 n,' such that each has an established Ostensive Definition within the group

The next stage is to use signs as a shorthand for these Ostensively Definable signs e g The sign ' tricolour ' is an abbreviation for the signs —

" Blue oblong upright
next, to the left of
White oblong upright
next, to the left of
Red oblong upright "

But this process raises no important issues here , we can say that ' tricolour ' refers ABC, etc , to those occasions on which they would properly use the signs which are its ' definition ' We cannot, of course, really say what the simple signs refer to ' blue ' refers to blue

Amongst the other objects which the group may identify and name are their own bodies and the processes that go on inside them, and the instruments that measure these processes If (*and only if*) they have done this, then they are able to co-operate in experiments *upon each other* And in this way they might come to the conclusion that in all probability —

It is only when the body of an observer is placed in a certain position with regard to some other object (e.g an electric light or any other instrument that emits or reflects light waves of a given length and frequency) that he utters the sign ' Q ' in a declarative, affirmative, manner

And still further —

Whenever the body of an observer is so brought against light rays, it is affected in a regular and definite manner— the optic nerves are agitated and this conducts the agitation to a part of the brain, and so on

The group will then speculate —

A given definite stimulus (whose existence is guaranteed by our joint observation of certain instrument-readings) produces in A's body a definite modification, and it is upon his bodily state that A reports when he utters ' Q ' that is, the bodily change is a necessary condition of his uttering this sign

It will also be the case that stimuli of certain sorts produce a strikingly similar disturbance in the bodies of any of the group , and this similarity is taken to account for the similarity in response for *any* member, in response to the same stimulus of light rays, says ' Q '

We may now see how it is that when B utters ' p ', this is a sign to A that he might have a certain sort of experience if his body were where B's now is, or at some other place indicated in the sentence

We must suppose that ' p ' is short for a set of signs ' Q/mn ', all of which belong to a group of signs, Q/1–n, for which A and B (and others) have fixed and established Ostensive Definitions and also correlations with instrumental readings [1] So that A may assume as a first approximation —

[1] That is really They have discovered that whenever they all agree on ' Q ' they all also agree on those signs which are expressed shorthand-fashion —

" The thermometer reads below 32° F "
" The camera shows a white circle on black ground "
" The barometer "
" The pulse-measure reads etc , etc "

(1) B says ' p '—that is, 'Q/mn '—only when his body is in the condition C/mn

(2) B's body is in this condition only when it is in contact with, or in a certain position in regard to, an external stimulus S/mn—a set of instrument readings

(3) If my body were where B's is now, or in some other definite position, then S/mn would act on my body in some way

(4) S/mn produces very similar effects in any body belonging to any one of ABCD, etc

(5) Were my body there, it would be in C/mn

(6) But I have been told that whenever my body is in this condition, I can be persuaded to affirm ' Q/mn '

(7) But I know I only say ' Q/mn ' when I experience the sensations for which this is the agreed and established sign

(8) That is, were my body there, I'd experience Q/mn

Notice that in this argument A is really discussing things as they appear or have appeared to him for the agreement of BCD, etc , with him on the application of ' Q/mn' is something which he has observed , and that each of these people say ' Q/mn ' only when S/mn is present is really also something that appears to him Nevertheless if he can obtain testimony in support of all these observations, A does not hesitate to believe in the real existence of an *external object* S/mn which (as he puts it) has the quality Q/mn—that is, has the property of causing Q/mn to appear to him But in this case the group must be a wide one all ' normal ' persons who belong to the language-group, and ' normal ' persons who *could be taught* the language For obviously a person who can learn to use ' red ' can also learn to use ' rouge ' and ' rot ' , and it will be sufficient for him if he is told that ' rouge ' and ' red ' both ' have the same meaning ' Clearly we can establish this equivalence in a straightforward way by Ostensive Definition or Description Equivalence of *formal* signs is a much more roundabout affair see below Chapter V

Chapter IV

THE THEORY OF CONTINGENT PROPOSITIONS

(Part II)

1 The main purpose of this chapter is to determine the way in which report-sentences have meaning, but besides this there are several other questions concerning contingent propositions that have to be faced. I shall begin by introducing a fourth type of sentence (§§ 2 and 3) then I discuss the great question Is it logically possible for me to be aware of another person's experiences? My answer is that it is logically possible but causally impossible (§§ 4–6) I then go on to discuss the way in which sentences of types 3*a* and 4 are relevant to the verification of the propositions of science (§§ 7, 8) and the ways in which we make use of sentences of types 3*b* and 2 (§ 9)

2 I have first of all to deal with the suggestion (Chapter III, § 9) that sentences of type 3 can be interpreted as meaning something about the bodily changes that are being suffered by the person (myself or another) who speaks Reflective commonsense easily recognizes that many changes in immediate experience are accompanied by further observable changes in the body of the experient Sometimes these are very striking, but I think we are quite ready to believe that, if only we knew the right place to look, and had perhaps some instruments or devices to help us, changes not at once apparent could be discovered [1] And in fact, many of the more striking inner changes are so closely associated in our experience with the outer expression, that to speak of the one is to suggest the other. So that commonly a sentence of

[1] See E G Boring, op cit, for an account of 'Double-Aspect' *practice* amongst psychologists of every school

type 3 *causally implies*, and *is causally implied by*, some physiological sentence of type 1 (e g " I have the tooth-ache," " My face is swollen ") And it very often happens, that where we have such causal implications, a new sense of the implying sentence arises, which actually includes as a part of what it asserts, what *was* causally implied e g " I am feeling gay " comes to mean, not only that I have a certain sort of immediate experience, but also that my body is particularly mobile, that I smile readily, etc , etc And similarly, where a sentence of type 1 has come to be closely associated with a sentence of type 3, the same type 1 sentence may come to *assert* the content of both, e g " A found himself face to face with B," may be used to assert, not only where their bodies were, but also what they each saw

This leads me to introduce another type of sentence —

(4) *Perception Sentences*

4 1 I am having a fine view of the match up here
4 2 A was listening to the band
4 3 He could smell the orange-blossom in the breeze
4 4 ' She tasted the dish with approval

The type, as before, is to be defined by reference to the sort of words and phrases that are peculiar to it (' seeing ' some sort of physical object or property , ' hearing,' as opposed to ' seeming to hear ', etc) But we may at once notice that they are often taken to mean a proposition that could be *more directly expressed* in a combination of sentences of type 1 and type 3, between which a causal implication holds The sentence 4 2, for example, is commonly understood to mean something about the position of A's body in relation to the band, and about his attentive attitude, as well as about what he would be seeming to hear [1]

[1] We cannot rule out the purely physical interpretation of sentences of type 4 and even of type 3 but the latter are so rarely understood in this way that they are commonly avoided in the vocabulary of the physical sciences Cf Chap III, § 8 For the meaning of ' more directly expressed ' see Chap VI, §§ 6–9

How do the sentences of types 3 and 4 come to convey information to other people? In my opinion, the use by A of a sentence of either type would at once suggest to me that A is immediately acquainted with the sort of experience (colour, smell, feeling), that leads me to make use of the words he utters, or other words closely connected with these in the syntax of the language. And I think that I more and more incline to believe that this is probably true, the more I am able to verify, by observation or testimony, those physiological propositions which imply causally the report that A utters, or which, in the case of type 4 sentences, is a part of the analysis of the sentence that A utters. e.g. A says, "I can now see the full moon." This leads me at once to suppose that A is now immediately aware of a bright circle high up—this, because of the syntactical connection between A's sentence and 'bright circle high up.' But the only way I can obtain *evidence* of the truth or falsity of this supposition is to see whether there is a full moon for him to see, whether his eyes are open and he is in a position to look at the sky, whether he is awake and his sight is normal. For all this is asserted in his sentence, and if all these are true, then *very probably he is* seeing a bright circle high up.

But if A says no more than a sentence of type 3, "I now seem to see a bright circle high up," then it is not by any means so definite in its causal connections. It suggests simply that he is looking up, and that there is some physical source of light above him. In actual fact, sentences of type 3*a* are not often used except —

(*a*) To indicate what the speaker believes are centrally-excited images. There is no direct method of rendering such statements probable to another person.

(*b*) In the psychological laboratory sensation-protocols may be used to replace sentences of type 4. The 'interpretation' always involves special knowledge not to be derived from the speakers' words by any causal implication.

(*c*) We sometimes talk about what we think and feel

and imagine, not with the idea that other people should gain useful information from our words, but simply under the impression that we are entertaining them or ourselves no verification needed

The special uses of type 3*b* will be discussed later

So that, after all, it is not the reports themselves that are so important, but the sentences (types 1 and 4) whose meanings cannot be expressed, in their most explicit form, without the help of sentences of type 3 Our beliefs about the objects that constitute the physical world (as this is conceived for the purposes of the physical sciences) rest largely on testimony, and much of this is in the form of sentences of type 4 Could I accept these beliefs if I doubted whether anyone else used sentences to stand for what he immediately experiences ?

The answer that I have given (Chapter III, § 8), is that the Solipsist could accept the physical world of the physical scientists, as readily as a Cartesian could accept the animal world of the biologists But it seems plain to me that, although the propositions of the physical sciences assert only the incidence of reports, and assert sentences of type 4 *only in a purely behaviouristic sense*, yet there are many beliefs about the physical world that cannot be expressed behaviouristically. A Solipsist would *feel* differently about the physical world, because he could not accept those beliefs that help to constitute the *Natural World* of everyday life The Natural World is first and foremost one that we all share in this belief determines our feelings towards inanimate matter, no less than towards the bodies of men and animals It alone can explain the feeling-importance of sentences of type 1 —sentences that express facts that are ' irreducible and stubborn ' to us all alike

3 I think many people at this stage might be inclined to abandon altogether the notion that a proposition is something that *can be shown* to be either true or false, probable

or improbable. They might then say that *my sensations are now like yours* is a proposition, but one which can never be verified or rendered probable But if we were to adopt this course could we pretend that sentences that made unverifiable statements really communicated anything to the audience ?

Another course would be to say that these beliefs about what other people experience are to be dismissed as completely unreasonable This may mean that they are simply feelings to which words have become attached if so, are the words there in virtue of their sense or in virtue of their sound ? Even if the words are there in virtue of their sense, however, this does not imply that the words are there to mean genuine propositions , for in poetry words affect the emotions in virtue of their sense, but often what they mean is not a proposition or a set of consistent propositions

I think that it is *possible* to take this ' poetic ' view of our beliefs in other people's experiences But it is not the view that I now hold, because I think it is possible to show that these beliefs are ' of ' something that it is *logically possible* I might verify, and which I can render probable by indirect means This I shall now try to show

When I hear another person, A, say that he is aware of a bright circle, or has a pain in his head, the words at once suggest to me something that it is *impossible* for me to introspect or to observe in any way There can be no doubt at all about the impossibility , but I want to decide the question whether it is logical, necessary, impossibility, like the impossibility of seeing a red uncoloured flag, or whether it is merely matter-of-fact impossibility, like the impossibility of seeing through the back of one's head This question is most important for my whole theory of communication For if the impossibility is logical, then a sentence of type 3 or 4, not about myself, can only mean a proposition about physical events—if it means anything But if the impossibility is only factual, then such sentences may mean empirical

propositions of a kind peculiar to these types, not directly verifiable by me, but which I can indirectly verify by physiological evidence The conclusion which I shall reach is that the impossibility in question is not logical but only causal But though I feel sure that this conclusion must be right, I do not feel at all sure of the arguments offered here, or anywhere else that I have seen, in its support. My own solution, which is very incomplete, owes a good deal to a paper of Professor Moritz Schlick, published in America about the time of his death It is offered in the hope that it may draw attention to one of the central problems of communication [1]

4 I observe that I feel pain when injury or misplacement occurs in my body when precisely similar changes take place in other similar bodies, I feel no pain at all The same may be observed in the case of sensations Imagine a long line of people peeping one by one into a microscope When my eye is at the glass I see a bright red smear on a pale illuminated ground But when A's eye, or B's eye, is there, I do not see this at all And more subtle observation still will show that changes in my *mood*, my emotions, depend upon changes in my body, and not immediately upon changes in other similar bodies

Now in this account we could apparently dispense with the words ' my body ' and ' A's body ', and replace them by ' the body M ' and ' the body A '—where ' M ' and ' A ' are shorthand for descriptions of two moving physical objects, observable by anyone who has normal senses, including A and me So that my observations lead me to the generalization

" I feel pain (or have any other experience) only when the body M is hurt (or otherwise affected)."

[1] See *The Philosophical Review*, July, 1936, for Schlick's paper

I suggest that this might be regarded as a true empirical, contingent, proposition I can imagine it not true · I can imagine a world in which it sometimes happens that when the eye of the body A comes to the microscope, I suddenly see the red smear on the bright ground when the fingers of A touch the radiator, I feel a tingle of warmth when the body A arrives in Florence or Timbuktu, I enjoy views of these places This may seem extravagant, but surely it is *logically* possible the causal laws by which what I experience depends upon the body M might surely have been otherwise

If this is logically possible, cannot I argue " The changes in the body M which are the necessary and sufficient conditions of my seeing a red patch (or feeling warmth, or pain) are strikingly similar to changes that often take place in the bodies A, B, C, etc It is therefore very probable that the ABC changes are in fact followed by red patches, pains, heats, etc but these experiences do not belong to me I cannot introspect them or remember them What prevents me from doing so is some apparently universal causal connection between my experiences and the fortunes of one body only—the body M "

If this account were accepted, then I think I could regard A's report " I am now seeing a red patch ", as an empirical proposition to be verified by me only indirectly The words suggest to me a red patch but I see no red patch However, I see that the body A (which uttered the report) is placed with its eye to the microscope When the body M is so placed, it says ' I see a red patch ', *because I see a red patch* Probably then there is a red patch which is not ' an experience of mine ', but of A's [1]

[1] But very slight changes in the structure or movements of my body result in enormous changes in what I see and feel, and *how* I feel It is very likely, therefore, that there are slight but very important differences between the bodies A and M—between any two bodies The argument to close similarity of experience is therefore not very strong, even where bodies seem very similar In the case of emotions, we do not known very

5 But here we are faced with a difficulty of interpretation. What can I mean by saying that there is a sensation of redness, but 'this is not an experience of mine'? And what could I mean by saying that it 'is an experience of mine', or that it is 'an experience of A's'?

There is, of course, an obvious answer to this question: The sensation of redness is an experience of the person whose body conditions it A person (on this view) just consists of all those experiences which are causally dependent upon one body Thus any experiences whose occurrence depends on the body M are mine, and I could in a very broad sense be held responsible for them whether I remember them now, whether I was aware of them at the time—that is beside the point they are mine because of their connection with the body M

This answer makes *me* 'the idea of the body M', as Spinoza would have said And it plainly makes it logically impossible for me to be aware of an experience of A's for 'an experience of A's' means 'an experience which depends on the body A' this cannot also be 'an experience of mine', for it cannot also depend in the same way upon the body M [1]

But I do not think that this is the only sense in which we use the words 'an experience of mine' and 'an experience of A's', and I think that another important sense is also relevant to the present issue For the present question is whether an experience which is causally dependent upon the

well what bodily changes determine them but we do know that observation of outward changes is not at all sufficient to argue to similarity of experiences See below, § 9

[1] See the article by Mr Gilbert Ryle in *Analysis*, October, 1936 Mr Ryle discusses the view, commonly held, that it is logically impossible for A to be aware of B's experiences Anyone who holds such a view, he points out, must use 'A' and 'B', not as mere names—for anything is possible to a particular which is merely denoted—but as shorthand for descriptions And he suggests that one of the relevant descriptions does define *A* and *B* by reference to their causal dependence upon certain bodies to suppose that A can be aware of B's experience is then a violation of the definition of 'A's' experience and 'B's' But (he says) *other* descriptions may also be represented by 'A' and 'B'

body A (and which is, in that sense, ' an experience of A's ') could be ' an experience of mine ' in the sense that it enabled me to verify a proposition whose truth interested me. Or, put in other words Could an experience, causally dependent on the body A, be connected with experiences causally dependent upon the body M, in such a way that the A-body-experience served to liquidate a questioning which was dependent on the body M ?

What is the sort of connection which must hold between various experiences, if one is to be a question, the other an answer to the question which really allays the questioning ? The obvious answer is, not that they must both be caused by changes in the same body, but that they must both ' belong to the same mind ' And of course if two experiences both ' belonged to my mind ' we should certainly say that they were both ' experiences of mine ' in a second sense—and similarly there is a second sense of ' an experience of A's ' So that the main question can now be expressed Could an experience causally dependent on the body A belong to my mind ?

But what does it mean for two experiences to belong to the same mind ? This is a problem into which I do not propose to plunge The only light I can see is that experiences so joined all seem to affect each other, and that as experiences in the remote past seem to modify present experiences, the causal relations obtaining within such minds are supposed to be unlike those obtaining between physical events The term ' mnemic causal relations ' was in vogue amongst philosophers some years ago the problem seems to be an urgent one [1] And even if we suppose it solved, and say that

[1] My own ideas are derived chiefly from C D Broad, *Mind and its Place in Nature*, B Russell, *The Analysis of Mind*, and C I Lewis, *Mind and the World Order* It is most important to notice that the contrast apparent in my discussion between ' minds ' and ' bodies ' is not to be taken as ultimate For propositions about bodies can, in my opinion, be re-expressed in terms of what is immediately experienceable In this I follow *The Analysis of Mind* see also Chapter VI, §§ 6, etc

all experiences in the same mind are united into a system by 'the relation R', then we are still faced with the great difficulty of distinguishing one such system from another For if, as I submit, it is logically possible that the experiences in such a mental system should not all of them be dependent upon the workings of the same body, by what means shall we identify such a system? If there were no regular (even if interrupted) connection between one mind and one body I do not know what method we should adopt I shall examine a less extreme case which may be sufficient for answering the main question

Let us suppose that it does *occasionally* happen that I am aware of an experience conditioned by the body A Suppose I see A's body approach the microscope, and then hear it say 'I can now see a red patch,' and suddenly I see the same sort of thing that I saw when the body M was placed before the microscope If this sort of thing had happened often enough before for me to notice the connection, I might say "A is now aware of a red patch and I know it" This would mean, "The mnemic group, the great majority of whose members are causally connected with the body M, now includes as an integrated member an experience of a red patch causally connected with the body A" In the case where the body A actually reports, 'I see a red patch,' we may suppose that this sensation 'belongs to both A and B' in the sense of belonging to the mnemic system most of whose constituents are causally connected with the body A, as well as belonging to 'my' mind

Now if experiences are connected into systems, and if the dependence of the several members upon bodily changes is ordinary causal dependence, then I submit that the situation described above is logically possible, although it never actually occurs But if it is logically possible, then when I hear A say "I am now seeing a red patch," I can argue that there probably is *an experience of a certain sort*

which is dependent upon A's body, and connected mnemically with a whole system of experiences so dependent, this experience is not, in fact, connected mnemically with my own experiences, but I believe it to exist because of analogies between the bodies A and M My own experiences are the ones I can *name* other people's experiences I can only describe. " This experience belongs to me " is contingent, although *in fact* I never can use ' This experience ' for anything that is not an experience of mine

6 If we accept this theory, what account should we give of a communication between A and B, in which A makes some matter-of-fact statement, ' p,' about physical objects ? When A hears B say ' p ', then he is led to entertain the idea

(*a*) That if he became aware of his own body at the location indicated in ' p ' it would react, report, etc , in much the same way as B's would do at the same location . and A would have there certain experiences suggested to him by ' p '

(*b*) That if certain natural laws about experiences were different, and if other conditions were fulfilled, then if he were aware of B's body at the location indicated in ' p ' A would also be aware of the experiences suggested to him by ' p '.

The second considerations are definitely excluded from the meaning of the sentences used in the physical sciences Scientific hypotheses argue that if certain conditions were fulfilled, them something would be perceptible to any normal observer, through his senses By the very definition of ' normal sense-observation ', or ' standard observation ', it is logically impossible for me to see or hear or touch A's feeling, or what A immediately perceives If in fact I were ever aware of A's experiences, this would not be a case of normal sense-perception But of course the process by which I become aware of my own sense-data or feelings is not that of normal sense-perception (I do not *hear* that I am

aware of a sound) And we do all of us continually have cognitions—and other sorts of reaction—that are excluded from sense-perception (What is 'normal' about sense-perception is simply that it is *standard*.)

Are we to say that the second part of the meaning of 'p' is quite unlike the meanings of physical science, in this respect that there are no known physically possible conditions under which it could be verified or refuted? Compare the celebrated proposition "There are mountains on the other side of the moon" It seems to me that both the expectation about the moon, and the expectation of sensations in the body B, involve the condition

"If certain alleged natural laws were different,"

and no one doubts that in the first case this is a proper condition Why should there be such grave doubts about the conditions attaching to the second expectation?

I can suggest two explanations First that we know next to nothing about the laws which govern the grouping together of sensations, feelings, memories, desires, recognitions, and so on. In the case of a flight to the moon, a scientist could say roughly in what ways nature would have to be different from what it is believed to be, if this journey were to be accomplished In the case of the awareness of B-sensations, all our terms are too vague, or knowledge is too slight, for any suggested modification to be made *But surely* whatever 'laws' govern these events, they cannot be regarded as anything but causal laws in the sense of 'observable regularities' And is it not *logically* possible that any observed regularity might have been otherwise?

Secondly (and this also follows from the vagueness of our terms) when we think of A being immediately aware of B's sensation, I think we must often be propounding to ourselves the flatly contradictory thesis that the collection of some or all of the sensations, feelings, etc, that depend on A's body, should include a sensation which does not depend on A's

body But the 'secondary consideration' defined above is not to be identified with this thesis at all It concerns merely the possibility that certain mnemic laws should connect sensations dependent upon *different* bodies And it does not attempt to deny that this connection probably is, and may one day be known to be, inconsistent with actually obtaining laws of nature It concerns only the logical possibility that a law of nature might never have obtained at all

7 The essentially *social* character of our beliefs *about the physical world* has been stated emphatically by the Pragmatists, and, more recently, by the followers of the late Professor G H Mead, and has been analysed by Professor Broad in his criticisms of idealism I shall here only mention the various *stages* by which, if we were capable of systematic doubt, we should have to verify such a proposition as I I

Stage 1 —A himself sees a bright circle high up, etc
Stage 2 —A observes that other reporters say "A bright circle high up, etc"

But A may ask for confirmation of these reports Were there *really* other people present, and what did they really say? This is *Stage* 3 The reports of instruments may be involved in any stage after the first It is clear that there is an infinity of possible stages of verification, the rules of which may be outlined as follows A has begun the verification of p, if he reports at *any* stage of verification The further from Stage 2, the less probability does the observation lend to p But an observation at any stage will only lend probability—not proof .

But here it becomes necessary to modify the scheme For, as it stands, it gives a peculiar importance to A's own experience of the circle overhead—an importance that cannot be justified For, after all, what 'p' really ought to lead A to expect, is that *any normal observer* would, in certain

conditions, make certain observations 'Any normal observer' may include A—provided he *is* a normal observer. But there is no logical ground for attaching more importance to A's observations, than to anyone else's Hence we may suppose that A considers his own report as one among many if A is trying to verify p he may collect evidence from BCD—and from himself also And if the evidence shows that BCD and many others are all agreed in favour of p, and that A himself is unable to report favourably, then A may be led to assert p, in spite of the fact that his own senses suggest not-p This happens, for example, when a short-sighted person asks a group of people "Does that sign really say 'To Babylon'? No, I thought not" So that we may regard Stage 1 as being only *temporarily* the first for the purposes of assessing the value of testimony, *where any testimony is actually collected*, Stage 1 must be incorporated in Stage 2 (Actually, of course, we seldom go so far as to collect testimony but that is because we often assume our bodies are in a normal condition)[1]

In their symposium on "Communication and Verification", both Professor L S Stebbing, and Professor L J Russell raised difficulties about the derivation of Group Reports from the reports of individual observers

A appeals to the testimony of ABCD, etc He considers that p is rendered probable if ABCD and others all report "A bright circle overhead" But can A ever state categorically·

> "It is the case that the group ABCD, etc, report so-and-so" (1)

Is he not obliged to state merely

[1] What happens where there is a clash of testimony will be discussed in Chap VIII, § 15 p is really a hypothesis connecting together possible reports of a certain kind of ABCD, etc If only some of the reporters provide the required sort of reports, we may either say that p is true and look for an explanation as to why some people 'reported wrongly', or we may decide that p is false and look for an explanation as to why the *others* 'reported wrongly'

" I (A) report that ABCD, etc , report so-and-so " ? (2) Clearly, our theory regards (1) as an ordinary case of a sentence about objects in the physical world, some facts about which can be discovered by any normal observer, whether it be ABC or D or another And we must say that this sentence means a proposition which anyone might assert and anyone understand What then are we to make of Professor Russell's conclusion (*op cit* , p 181) .—

> " We shall never in this way (Sc by regarding reports as *private*) get such a proposition as
>
> The group consisting of S^1 S^2 S^3 reports—
>
> since this would be a proposition of the form ' Such-and-such is the case ', and not a proposition of the form ' Sk reports such-and-such ' .
>
> " We cannot derive group reports from private reports "

Our explanation must, of course, be to agree with Neurath that a report is an event in the physical world which can be observed by any normal person—not excluding the person who makes the report We must hold that A can make or understand the sentence —

It is the case that ABCD, etc , report so-and-so (1)

This sentence has not the same reference as—

A reports that ABCD, etc , report so-and-so (2),

although it is true that A could not understand (1) unless it were true that —

In certain conditions A *could report* that ABCD, etc , report so-and-so

The attempt to confine A to the understanding of sentences which are about himself, is a mere confusion between analysis and significance (See above, Chapter III, § 6, note)

However, Neurath, in stating correctly that A's report takes the form

It is the case that so-and-so,

and not necessarily

A reports so-and-so,

seems to me to fall a victim to a worse confusion He shows that A can make reports that are not about himself, but he overlooks the fact that A cannot report at all unless he understands what he reports. And A's understanding a sentence (i e the significance of the sentence for A) is most certainly a fact about A and must be expressed in a report which *is about A* And it is a fact about A's immediate experience—his expectations This oversight leads Neurath to the astonishing conclusion that no discussion of 'significance' is necessary and that "sentences alleged to report 'direct experiences' are meaningless" (L J Russell, op cit). As I have shown there is no contradiction in supposing that A uses his sentence to 'report his direct experiences', and that such a sentence should create in B expectations of direct experiences of his own

8 Two further modifications of the scheme outlined above are necessary first because A may begin to verify p, even when he himself never reaches the location indicated in it—as when A verifies the proposition that a battle was fought at Waterloo on Sunday, 18th June, 1815, and secondly, because a person may verify p even when he is actually unacquainted with the Ostensive Definitions of some of the signs involved in 'p'—as when a blind man who cannot distinguish colours verifies the proposition that a red light is burning at l at t

A's method of verifying "A battle was fought at Waterloo in 1815" cannot be to observe the battle, since that is causally impossible It is true that the sentence does lead him to believe that if he had been at Waterloo in 1815 he would have seen and heard the battle [1] But because he cannot be

[1] It is, of course, nonsensical for A to expect that by any physical process he could now observe events that happened in 1815 It would be nonsensical for me to think I might wake up one morning in the nineteenth century

there then, it does not follow that this proposition must for ever remain an entirely open question for him Obviously it is still possible for A to make some observations which lend some probability to this proposition How is this done? Clearly by observing reports of reports of reports . . Now many of these reports will be not of human reports but of machines and other kinds of inanimate bodies Always the argument proceeds by causal implication—whether it is from an eye-witness's story to the truth of his story, or whether it is from a monument to the probable occasion of its erection Propositions about the past offer no peculiar difficulties if we once hold that A can expect that if he had been at l at t, he would have observed the sort of thing the reports suggest This I have regarded as causally impossible if A was not born then It is not logically impossible unless we regard it as part of the definition of A that he was born after the battle (See above, § 5, and Mr Ryle's discussion, op. cit)

A person C, who is blind from birth, can verify the proposition "The moon is full to-night" in many different ways He can, for instance, have an almanack read to him But I wish to point out that he can verify that part of the meaning of the sentence .

"There's a full moon to-night" (1)

which is represented by the sentence

"A large silver circle overhead at l at t" (2)

This he can do although the Ostensive Definition of 'silver'

but it is not logically absurd for me to believe that I might wake up in a world just like that of the Nineteenth Century—a world in which a battle was pending at Waterloo By definition, such a world would not be *past* nor could any genuine problem arise as to whether I was seeing *the* Battle of Waterloo or another exactly like it Compare the different view of Professor C I Lewis, *Mind and the World Order*, pp 148–153, and Miss Margaret Macdonald's 'Criticisms', *Proc Arist Soc*, 1933–4, pp 148–153 Compare, also, two articles in *The Problem of Time* (University of California, 1935), "The Schema of Time", by Professor V F Lenzen, and "Time as Datum and Construction", by Professor W R Dennes

is certainly one in which C cannot assist C must know that (1) involves as part of its meaning, " Normal Observers report ' (2) ' " And he must know the Ostensive Definition of all terms involved in " Normal Observers report ' (2) ' " Then he could verify this by the aid of touch, movement, and sound In this case (1) has significance for C, although not as much significance as it has for Normal Observers. For C can only suppose that ABD are reporting *some* experience of which it is causally impossible for him to be aware

Similarly, if C wishes to pursue the verification further into stage 3, he must receive reports of the form

" ABD report ' (2) ' "

and hence must be able to co-operate in the Ostensive Definitions of the non-formal signs involved in this expression

Clearly we can imagine (i e the rules allow) the case of a person who, for some reason, did not know the Ostensive Definitions of the terms involved in ' p ', but knew that the analysis of ' p ' included ' qrs ', who did not know the Ostensive Definitions of the terms involved in " ABD report ' qrs ' ", but knew that this also was included in the analysis of ' p ', who did not know the Ostensive Definitions involved in the analysis of " HIJ report ' ACD report " qrs " ' ", but knew *its* place in the analysis of ' p ', *and so on* But unless such a person did actually know the Ostensive Definitions involved in expressions at *some* stage of verification, then ' p ' would have no significance for him at all

9 It now remains to give an account of the use of sentences of type 3*b* such as " I now feel delighted with the moon " And if these can be explained, then so also can sentences of type 2, since, in so far as these are descriptive and not emotive, they convey to us information about what the speaker feels and what other people feel The emotive use of types 2 and 3*b* will be discussed in Chapter X

It seems plain that the *modus operandi* of sentences of type 3*b* is very like that of type 3*a* They both suggest that the speaker is now experiencing the sort of feeling or sensation that the hearer himself has when he is inclined to utter the words that the speaker now uses This is what they *suggest* But what they suggest can be rendered probable, only by the verification of those propositions about physiological processes and physical objects, which are causally associated with what the report suggests But there are special difficulties associated with emotional protocols The emotional changes that type 3 describe are not connected by any simple law with changes in outer stimuli , and the more obvious outward *expressions* of emotion may be inhibited or concealed or exaggerated by previously existing moods or emotions So that we have not, as we have in the case of the reports of type 3*a*, the regular correlations

My experience	my bodily changes	my sensation-reports ,
——	similar bodily changes in others	similar reports from others.

Three people faced with the same stimulus all behave differently and use different words to describe what they feel People who behave in similar ways, use different words to describe what they feel, and vice versa How do I know what A means when he says he is ' angry ' ? And how do I know that I am ' angry ' ? How do feeling-signs acquire a meaning, and how do we verify sentences in which they occur ?

As I have said above, the sentences of type 3 are *ambiguous* they are quite often used in what might be described as a purely protocol sense—to describe what one immediately experiences , but quite often they are used in a ' mixed ' sense, to assert not only a report, but also physiological propositions which (vaguely and uncertainly perhaps) imply the report and are implied by it, in a causal sense of ' imply ' I suppose it must be in this mixed sense that report-sentences

first become attached to bodily behaviour—both other people's and my own—and particularly to behaviour that includes the use of words, in a dynamic way, *to express feeling* And the very general and indefinite similarity between the way I behaved yesterday and the way other people are behaving to-day, leads me to suppose some similarity between the state I'm in when other people say I'm angry, and the state other people are in when they behave, and are described, in this way This provides us with certain highly general names for emotions and moods and dispositions—names which certainly cover a very wide range in my own experience and a very wide range in other people's behaviour Such names I have to use when I want to describe my feelings to others And when A says that he is angry or tired I can obtain some evidence upon his statement, for there are sure to be some physiological propositions, however general, which causally imply that he is having a certain sort of experience, which I myself describe as ' anger ' or ' tiredness '. But I do not think that we have any strong evidence, of the indirect sort I have been discussing, whether the feelings of another person really are very much like mine Certainly we cannot pretend to learn *with any accuracy* what are the feelings of a given person on a given occasion Here we all acknowledge that we are left to guesswork—but it is a guesswork that we all pursue and in which we all have great faith, if it is not accurate in detail, it is, we feel, reliable in a general way

But in fact we seldom attempt to give accurate information about our emotions it is a task as exacting for us as it is for our audience When we talk about our emotions it is usually in order to express them, to relieve, by a healthy flow of words, the emotional tension—and to arouse emotions of sympathy or antipathy in others And for this purpose —which is *not* a matter of communicating verifiable information at all—we commonly make use of language that is purely

emotive And if we find anyone to listen to our remarks, it is usually somebody who wants to be entertained, or to be aroused, and not somebody who really wants to be informed about the state of our souls The difficulties of describing feelings (as these arise in psychological inquiries and in poetry) are discussed in the opening paragraphs of Chapter X

10 In the present chapter, I have continually contrasted physical events and objects, on the one hand, with feelings and sensations on the other. Does this mean that I am contrasting two 'worlds'—the physical world, which includes animated bodies, and the 'realm of sense-data and feelings'? If so, what is the relation between them?

This question cannot be answered completely until I have discussed the whole problem of the *analysis of propositions* My conclusions in Chapter VI are that all propositions about physical objects are *most directly expressed* in sentences whose logical subjects are names (or gaps for names) of place-times, and which predicate of these subjects, sensible properties and relations That is, I there come to the conclusion that sentences that seem to express propositions about physical objects, are really indirect expressions for possible facts about things directly experiencible through the senses [1]

If this conclusion is valid, it will, of course, be quite improper to speak of a Realm of Sensa and a Physical World, as if these two could exist alongside each other, and even be in causal relation the one with the other This would be as absurd as to expect to see the trees *as well as the forest*

Nor (if this conclusion be valid) must we pretend that statements about things directly experiencible through the senses, must really be about physical objects If a man in the 10th Regiment gets married, this fact cannot be expressed in a sentence which simply predicates something of the

[1] Chaps III and IV should be read in association with Chap VI, §§ 6–9

10th Regiment For it is not good sense to say that the 10th itself marries

The statement *There is a bright red shape here now* is the sort of statement that is involved in the analysis of (and so is deducible from) such a statement as *There is a red light at s, at t* [1] But while the latter is about the physical world, the former is not Of course both may be *true* Hence we may quite properly say that it is *a fact* that there is a red shape here now, and that it is also *a fact* that there is a red light at s, at t But in this case, we do not use the word ' fact ' univocally

The relation between a physical fact and a *constituent* sense-fact, cannot, of course, be causal It is *not* a causal consequence of the fact that there is a red light at s, at t, that a given normal observer, at a given position, would be able to report " There is a bright red shape here now " This is a confusion of types we might as well say that the fact that there are a certain number of trees in a certain arrangement is the cause of the existence of the forest, or, conversely, that the existence of the forest is the cause of the existence of its constituent trees

On the other hand, we can speak (rather loosely perhaps) of a causal relation of a class X and an individual y, who is not a member of the class X, even if he is in every way eligible to be one e g " This tree is sheltered by that wood " Similarly we can speak (as I have done hitherto) of a physical fact as cause of a sense-fact, provided the sense-fact is not included in the analysis of the physical fact in question Thus it may be a causal consequence of a certain bodily condition, that *redness* is immediately experienced by a person A But this simply means When the sensible appearances, commonly described as ' the body A in the condition c ' are observable, so also is a red patch (And in fact, no one can observe the redness but A himself)

[1] (But not vice versa)

Chapter V

THE ANATOMY OF PROPOSITIONAL SIGNS

1 In previous chapters I have regarded propositional signs as unities, and have asked how they work upon their audiences I now want to examine the internal structure of such expressions, and the different terms and constituents to be found as parts of them , and I want to discuss the relation between sentence-structure and the structure of the referents of such sentences

I suppose that the very simplest sort of expression which could be used to create expectations (i e for communication) would be some movement or sound which merely draws the attention of an audience to some object or event *in the contemporary situation* Such an expression might have no definitive or analytical meaning at all—no ' necessary ' connections with other signs at all And it might even have no *conventional* reference at all for it might serve to draw the attention of somebody to something even if it were a ' sign ' that had never been used before and would never be used again Of course such expressions will be tremendously ambiguous but if the referent be sufficiently important and obvious (e g an approaching tiger) it may be used for successful communication Such an expression could not be ' misapplied ' since it has no rules to break And it could not indicate a false proposition For the sign does not offer any hypothesis ' There ! ' does not *in itself* predicate any sort of property of the here-now it does not say that what is here-now is like other things It is therefore quite different from ' Fire ! ' which does indicate a certain *sort* of situation, does *classify* the situation, and may do so untruly

But, of course, such expressions have no reference outside

the continuous context of their utterance In this they are like certain words we actually use If my companion says, ' There ! ' I must look about me now—as he says it—and not several hours later For this sign has no *constant* meaning, and the only meaning (reference) it can have, is that which the speaker gives it here and now And without some element of convention—first a conventional reference, and secondly a conventional definition and syntax—no delayed communication is possible

Signs for Universals

2 And of course we do not in fact use new symbols for every new thing or event we wish to signalize Where an object a^2 is *like* an object a^1, we use the sign (say ' a ') to serve for both And if a third thing, a^3, turns up, also like a^1, then ' a ' must serve for this also And so on So that ' a ' (a ' *Sign-type* ') becomes a simple name for anything which resembles a certain class of objects in some respect in which all are similar [1] So that, to a person who has had some *previous* experience of the use of an expression ' a ' in continuous communication—a person who had, in W E Johnson's phrase, ' been introduced to a '—the sign ' a ' will have a reference even *in delayed discourse* , ' a ' may be used to refer to something which was, or which will be, perceptible It can suggest referents *of a certain sort* not perceptible now, but to be looked for later , not perceptible

[1] The distinction between Sign-type and Sign-tokens is explained fully in C S Peirce's articles in the *Monist*, 1906, etc See also F P Ramsey, *Foundations of Mathematics*, p 283, etc In the sentence " The driver turned the wheel of the car ", the same word (the) occurs three times so that in one sense there are eight words in the sentence in another sense there are only six The ambiguity is avoided by saying that there are six word-types in the sentence, and eight word-tokens—three of the same type But we must not suppose that the tokens of a given type can be defined simply by their resemblance to each other their connection is in some respects purely conventional For tokens may be written or spoken and they may be written in many different ways and sizes, spoken in many different pitches and emphases

here, but to be sought elsewhere. This suggestion depends upon a learned reaction in the audience (say in A) to *a certain sort of sign* And the learned reaction, is the expectation, in certain circumstances, of *a certain sort of object* In this case we can say that ' a ' is a name for a *universal*—for an abstract property And its predication of the present situation or any other, may be true or false It is true if this situation does resemble in a certain way all the other situations for which it has been *customary* to use signs of the same *type* · false if it does not resemble these signs in this definite way.

The reference of such a sign as ' red ', ' round ', ' smooth ', may profitably be studied as a bodily adaptation produced in A, by hearing or seeing tokens of such types, towards certain classes of objects How narrow or how wide the class of objects towards which a given sign (say of the type ' a ') adapts A, reflects the determinateness of the universal signified by ' a ' The class must, of course, be in some way *limited*, otherwise ' a ' does not adapt A in any special way towards anything—' a ' *says nothing at all* And it may be very narrowly restricted indeed, as in the case of a highly determinate personal description of a man or woman But no universal-sign, however determinate, is necessarily confined to one referent every one is a reference to an indefinitely numerous class of possible objects For an object satisfies an expectation *created by a name for a universal*, not in virtue of its metaphysical or numerical identity, but in virtue of its character—its likeness or unlikeness to other objects For the bodily adaptation is *a certain sort* of state which (in accordance, presumably, with some unknown causal law) reacts with external situations *of a certain sort*, to produce a bodily result *of a certain sort*—that is, belief or disbelief in the proposition which the expression was originally used to enunciate In this *causal exchange*, any external object *of a certain sort* will have upon A's body the particular sort of effect we call belief or disbelief

This, I think, must be what Mr Russell meant by saying that " Generality and particularity are a matter of degree " (*Analysis of Mind*, p. 209), and what the authors of *The Meaning of Meaning* meant by their comment " absolute particulars and absolute universal sought therefore to be out of court and beneath discussion " (p 62, *note*) They wish to treat of meaning and communication in purely *causal* terms · to regard all communication as causal interaction between bodies . and all causal interaction may be said to take place according to laws which connect the universal characters of the agents

Signs for Particulars

3 It seems to me, however, that these statements of Russell and Ogden and Richards are apt to mislead For there is no doubt that we do often use language to refer to a particular thing or event (perhaps exhibiting a certain character), and that the communication fails if any other thing is identified by the audience—even though the other thing may be *like* the object intended as referent. Thus if B says to A ' The red-headed man in room θ is called Mr Jones,' and A then addresses someone answering to the description, he may not, after all, be addressing Mr Jones How can we distinguish one particular thing (or group of things) from any other ?

This cannot be done merely by means of signs for universals For such signs evoke an expectation (a learned reaction) for *any* particulars of a certain sort , and it is always possible that there should be many particulars of any definite sort. Particulars are referred to, by merely arbitrary names *attached to them alone* by the speaker He calls a particular brown table ' this ' and a particular rug ' that ', and another object ' you ' and a third ' he ', and so on These do NOT evoke learned responses of expectation—an expectation for anything of a certain sort For ' There it is ' is used with a different reference every time B (or anyone else) utters it

How then is it ever understood by A ? I think the answer is that it is understood *only* if it refers to some particular in the context of speech and understanding In continuous communication it refers to some particular thing : the thing B is pointing at, the thing he shows interest in now, the thing which B agrees upon, when A points at it The *only* test for " Is this what ' that ' refers to ? " is B's agreement· And, of course, any sign admits misinterpretation , for the connection between sign and reaction is a psychological one and cannot be guaranteed

Sentences

4 The discussion now requires some account of the union of words to form sentences In a wide sense, a *sentence* is a sign or set of signs which is regularly used by members of a language-group to communicate with each other, and which, in its own written or spoken-and-acted context, is *sufficient* for that purpose In a narrower sense, a sentence is a set of signs that would be sufficient for a communication if it were understood by someone who was quite ignorant of the locus and circumstances of its utterance The distinction between the wider and the narrower senses does not raise vital problems " Dear me ! " or " Yes, quite ", may be a sentence in a conversation, but not in the narrower sense

A *statement* is an informative sentence (Commands, persuasions, etc , are other sorts of sentences) A statement must be sufficient to arouse an expectation as to what is going to happen, or would happen in certain conditions, *at certain times and places* So that every statement has a logical subject (or subjects) as well as predicates The ' relation ' that is alleged by a statement to hold between the subjects (place-times) and the predicates (relations and qualities) is a purely *formal* one and is discussed in § 13 below. But, of course, all kinds of ' abbreviations ' are in use,

and the subject-word is often omitted : ' Fire ! ' is a sentence and clearly predicates burning of something *now, nearby* We may readily believe that these ' abbreviations ' are temporarily prior to any syntactical distinction of subject and predicate [1] The important points are that any statement can be re-expressed (and not less directly expressed, as I shall show in Chapter VI) by a sign that is internally complex And *no sign has reference except in a sentence, or as a sentence* [2]

This explains how we are able to make novel sentences to refer to novel possible facts , new particular-names are combined with universal-signs, and new combinations of universal-signs are made Each novel combination is a novel *fact* and this fact *is* the sentence (What I mean by *combination* is discussed below, § 13) There is therefore an almost unlimited supply of possible combinations obtainable from one finite sets of words to represent possible facts

But of course not *any* set of words is a statement Certain combinations are excluded by the syntax of the language , and formal signs alone can never communicate a reference What relation there may be between such syntactical rules and the *structure of facts* will be debated in Chapter VIII

Descriptions

5 So far I have been discussing names for universals or for particular occurrents And names may surely be regarded as the simplest signs, both psychologically and logically , their use seems to be a necessary pre-requisite of all more complex signs Although so many of the signs we use are descriptive, an analysis of such descriptions must

[1] And signs for universals and also pronouns and demonstratives have a use *as sentences*—in circumstances in which either the particular, or the character of the particular, was too obvious to need signifying (" Red ! " " A Policeman ! " " The Queen ! " " You ! ")

[2] " The reference of the sign ' x ' " is simply a shorthand for " the reference that ' x ' has in a sentence "

bring us to names " There is then, in every explication of significance, a residual element in which we reach either a substantive-name or an adjective-name which can no longer be defined in this form of analysis " (W E. Johnson, *Logic*, 1, p 83)

An INDEFINITE DESCRIPTION, when asserted either as a predicate or as a subject-term, is quite plainly *a general statement*, i e a statement about *anything* of a certain sort, about any particular or any universal that possesses certain specified properties

e g The colour of the house is *somewhere between red and blue*
A long line of trees protects the eastern shore.

The discussion of general propositions is resumed later

A DEFINITE DESCRIPTION also refers to anything of a certain sort, but *implies* that there is in fact only one thing *of that sort* I shall here confine myself to definite descriptions of particulars and shall argue that *in delayed discourse* all our signs for particulars are descriptive and that there are limits to the range of satisfactory definite descriptions.[1]

Consider the statements —

The King of France is bald
The country round here is sterile
The next five years must decide
The red-haired man in the far corner is drunk

As Mr Russell has shown in his celebrated Theory of Descriptions, statements of this form may be false upon more than one count for the descriptive phrase itself makes a statement which (it is logically possible) might be false And in fact the first is plainly a false statement because

[1] I shall try to show below that all statements about universals are more directly expressed in sentences whose logical subjects are signs for particulars or are gaps which could sensibly be filled only by such signs

no one bears kingly rule over the French—no King of France exists [1]

The theory serves to distinguish sharply between names and descriptions For if we take 'this' as a simple name for an occurrent, it is surely nonsensical to say "This does not exist," and therefore quite senseless to say "This exists" But we cannot doubt the propriety of both, "The King of France does not exist" ("There is no King of France"), and "The King of France exists" ("There is a King of France") The second is plainly a part of what is asserted in "The King of France is bald"

But the 'King of France' is a *Definite* Description it not only asserts the existence of a certain sort of object, but also denies the existence of more than one object *of that sort* Such a description is used in order to refer an audience to one and only one thing, not immediately given, to distinguish one alleged object from all other *actually existing* objects by telling us some quality or relation which *in fact* it alone possesses "The King of France is bald" asserts that someone rules France, that that person is bald, and that no one else rules France "One and only one man *in fact* rules France" this is asserted because it is not logically impossible that more than one person should do so "The Roman Emperor in A D 396 was Honorius" is misleading (i e it is partly false), because in fact Arcadius was also a Roman Emperor at that same time And in fact, while any description *may* serve to identify one and only one particular, no description (with some exceptions) *must* do so and any description that is accompanied by the statement (not necessarily true) that in fact only one particular exists of the sort described, *may be false upon that count* We may thus

[1] Whereas, of course, "We have been discussing the King of France" might be true even though no King of France existed Russell called the asserted description the 'Primary Occurrence' of a descriptive phrase, and the non-asserted, the 'Secondary Occurrence' See *Principia Mathematica*, I, pp 68–9, and F P Ramsey, *Foundations of Mathematics*, Paper IV

speak of the ' verification ' of a definite description : such a description is verified if it is found to be true in all that it asserts (explicitly or implicitly), including the assertion of uniqueness [1]

Particulars, Continuant, and Occurrent

6 I have contrasted names for universals with names for particulars, and I have said that the latter do not stimulate a person who understands the language to a *learned* response, because they refer to different *sorts* of things every time they are used This, I think, is a fundamental, though unusual, sense of ' name ' Such words as ' this ', and ' that ' (as applied to particulars), ' you ' and ' I ', *approximate to* purely denotative signs , that is, to signs that refer an audience to something without classifying or describing it in any way whatever A pure denotation can be attached only to something that is here now, in the context of utterance it can be understood only by someone—present in that context—to whom its reference can be *demonstrated* We can refer to things remote in place and time only by description—that is, by giving them predicates, classifying them It follows that most of the signs we usually call ' names ' are not names in my present sense, but shorthand verbal substitutes for descriptions I may, for instance, use the sign ' 27 ' to refer people to last year's Christmas dinner , but I cannot use this sign as a pure denotation, because I cannot *demonstrate* the object for which I intend to use it So that I can use the sign only as a substitute for a descriptive phrase (' last year's Christmas dinner ') In a similar way the signs ' Napoleon ', ' Cæsar ', ' Babylon ', refer to things long vanished , ' New York,' ' Peking,' ' Pentonville,' refer to things remote But these signs do not denote—they describe And by analysis

[1] I think ' the present wife of A ' is so defined that it is nonsensical to speak of two people answering to this description

we ought to be able to substitute for any such signs some sort of description in many cases such descriptions would be very complicated, and there is every reason to suppose that the same word 'Napoleon' is shorthand now for one description and now for a very different description

What do we name—in this narrow and unusual sense of 'name'? What is the function of demonstrative words in informative sentences?

> This is a picture I am fond of
> That is my friend over there

These sentences are used to describe something—actual objects which appear to the speaker and which may very well appear to a present audience They refer us, somewhat indirectly, to sensible appearances coloured shapes, movements, sounds, pressures, and so on But, of course, they are used to make empirical assertions, and hence they may be false in the descriptions they offer 'That' is there undoubtedly, but is it really his friend? And it does not matter how *simple* the statement may be, whatever is predicated of a subject denoted, is contingent and may be false So that even "That red shape has begun to move," does not necessarily denote a red shape and proceed to make an empirical statement about it What it does is to denote *that* (which might or might not be red), and make about it the *two* empirical statements "That is red that has begun to move"

In my opinion, what we denote are places and times where 'something is happening', this is often done in a roundabout way by the use of demonstrative *adjectives*, 'this picture,' 'that man,' 'that red shape' But in all these cases, by a formal analysis we can easily show that what the sentence is about may or may not be a picture or man, but is certainly a place where (within

a period of time) certain characteristics (of a picture, of a man), are *alleged* to be observable.

It follows from this view that all empirical propositions are about *propertied place-times* (or 'loci', as I shall call them), and if we could re-express them by absolutely direct symbols, then the logical subjects of all such sentences would be either names for loci or *gaps* into which only such names could properly be inserted (See § 10)

The view is that the fundamental particulars are *occurrents* An occurrent is an actually discriminated aspect of events, of experience It is *the fact* that such and such a quality or relation occurs at such a place at such a time Hence every occurrent is diverse from every other, although it may not be dissimilar from all others Two flashes, two sounds, two collisions, might have all the same qualities and relations, but if they are two they must occupy different loci Whatever can be denoted is at a place at a time—it is an occurrent

According to this view, all propositions about *continuant* particulars can be re-expressed in sentences whose logical subjects are names for loci or gaps for such names, - that is to say, we can re-express all we have to say about continuing things, by making statements about occurrents Statements about S Paul's Cathedral, Napoleon, Babylon, refer us to *a whole series* of *possible* occurrents—that is, to what we should observe if we were to go to certain places at certain times Now certainly the times must all be present or *future*, I cannot verify records of the past except in the future And all statements about physical objects (as I have suggested in the two previous chapters) are highly complicated and involve the observation of a great many different occurrents Hence no proposition about a continuant can possibly refer *only* to what is present, it must also refer to possible future occurrents e g 'That is the telephone' refers us to what we see now, and also to what we should touch and hear if we were to go to certain places—in the future Only

propositions about *occurrents that are actually presented* can be verified in the present only [1]

How are we to distinguish one occurrent from another? Two questions are involved here

(*a*) By what categories and classes do we distinguish one aspect of events from others?

(*b*) What are the limits of the present? What are the limits of a volume that can be denoted?

In my opinion, the answers to all these questions must be psychological We are most of us able to distinguish what is red from what is green, what is round from what is elliptical But these abilities are quite accidental and some are capable of finer distinctions than others Our sense-organs (principally) provide us with apparatus for distinguishing different aspects in experience our interests determine how we make use of them It is these that determine what are 'different facts' a green flash is an occurrent for anyone who is looking for coloured flashes, because normal observers *can* react to it in a discriminating fashion

Similarly, we have limited powers of distinguishing one spatial position from another, powers of observing large areas which are limited by our tendency to 'lose' the parts we observed first before we cover the whole area, powers of 'holding in mind' what has happened very recently The problems of *divisibility* and of the *specious present* are involved and are both of them psychological problems If once we recognize that the perception of motion would not be possible if we were unable to perceive more than infinitesimal intervals of time, then the problem, 'For how long does a thing seem to be present?' 'For how long can I remember the name of an occurrent?' must be regarded as empirical

[1] All empirical propositions are expressed in finite verbs—having some *tense* The non-temporal form of the verb *to be* is used to assert 'necessary properties', but, as I shall try to show in Chapter VII, such assertions cannot be understood in a straightforward way at all they convey information only about word-usages And word-usages *do* change See also the important discussion of facts in Chapter VIII, § 14 *et seq*

And without doubt the answer depends in part upon the sort of purpose we have in our observation Similarly we must acknowledge that what is a unit of area or volume, depends always upon our powers of synthesis and division, and upon our interests in making use of them.

7 I have argued that such a word as 'Harry' or 'Napoleon' can only be regarded as a shorthand for one or more descriptive phrases And plainly in such cases the description must be *definite*, for there is alleged to be only one Harry—or rather it is only to one person that Harry's friends wish to refer by this sign

Now there is a great difference, in respect of *verifiability*, between the definite descriptions of delayed discourse and those of continuous communication

(*a*) Suppose the words, "The red-haired man in the far corner is drunk," to be uttered at a party A normal hearer cannot only see for himself whether there is anyone in the far corner with red hair, and, if so, whether he is drunk, but also *whether there is more than one* red-haired person in the far corner The inquiry as to whether the implication of uniqueness is or is not true is limited to a small space and a short duration This limitation is accomplished by an implicit reference to the *here-now*, the locus of the utterance 'The far corner' describes a place by implicit reference to *here*, and the whole thing pre-supposes *now* and 'round-about-now' We may summarize as follows —

> This description, in the context of utterance, enables someone who hears it spoken, to see that there is only one particular of which the properties specified are true, or to see that the description is false in this respect

(*b*) But 'here' and 'now', and the implications of 'here' and 'now', have no meaning in delayed discourse unless they retain some *relation to the context of utterance* Where

no such relation exists, these words themselves are no better than *gaps* in the sentence, and any sentence in which they occur must be about *any* time or *any* place of certain specified sorts, i e where properties of certain sorts are observable In delayed discourse, e g "The year before last was very rainy" does *not* refer us to one and only one year unless we can relate the date of the utterance to the date of understanding Now any property, however general, *may* happen to be true of only one particular, and any description *may* enable an audience, however far removed in place and time, to discover some one particular of which the specified property is true, but no description would enable an audience to make sure that there are not other particulars of which these properties hold, *unless* the description included some space-time determination For otherwise there is no end to the inquiry for additional instances So that, unless the description in delayed discourse does enable an audience to relate the locus of utterance with the locus of understanding, it is one which *can never be verified* in full

Of course the attempt to render the description fully verifiable is commonly made by introducing *descriptions* of loci

e g The object at position s at time t

The north side of Trafalgar Square at 3 0 on 20th January, 1920

These place and time determinations are not names It is possible to argue that the sign '20th January, 1920', is *not properly applied* to a given time, or that 'Lat 27, Long 32' is not properly applied to a given place They are signs that refer us to occurrents of certain very complicated sorts (e g loci at which certain metre readings are observable), they are not signs that refer us to *this* place or *that* place But our search to prove that we have found the one and only occurrent that answers to a certain

description can never be accomplished unless it is limited by some stated or assumed relation to actual nameable occurrents here and now *in the context of understanding* Such a relation is offered by dates and place determinations only if we assume some limitation upon the universe of discourse, i e some relation to our present situation

What exactly does this assumption on the part of the reader amount to ? (1) That the writer of ' The north side of Trafalgar Square ' was in London when he wrote or in England, or in some country in which Trafalgar Square, London, is well known , i e that he wrote at some one of a number of places, which (it is theoretically possible) I could definitely describe in terms of its relation (direction and distance) from where I now am as I read the words. (2) That he wrote at some period of time, measured from the ' now ' of reading his words—' present day,' ' quite recently,' ' not very many years ago,' etc If these assumptions are made, then he and I are united in some *limited* universe, and I can look round that universe for the unique object at which his words point And the words *may* be found to point at something which (it is theoretically possible) I could describe definitely by its direction and distance from where I now am If there is no Trafalgar Square *at the place described so*, or if there is more than one, then the description asserts what is not true It is plain, however, that no description in Delayed Discourse can ensure any such limitation of context, any such connection between writer and reader , that words may have the connection in the case of some readers and lack it in the case of others—it all depends upon the situation of the reader Where there is no connection, it is impossible, by any finite investigation, to be sure that we have found the one-and-only so-and-so , the description is always *corrigible* in respect of the assertion of uniqueness But a proposition that is corrigible need not be *doubtful* , whether in Delayed Discourse, or in Continuous

Discourse, any assertion of a physical property is in any case always corrigible on many different counts

8 We can give a Definite Description of a Universal, either by reference to a particular (in which case it can be definite only in Continuous Discourse) or *perhaps* by reference to names of universals Names of Universals *do* have reference in Delayed Discourse , but it is not easy to imagine a Definite Description of a universal which includes no reference to a particular

e g The shades between red and purple

But perhaps this means—' in the spectrum,' which introduces an indefinite description of a particular

cf The colour opposite to green

However, unambiguous reference to a universal can always be made in Delayed or Continuous Discourse, by means of a name red, loud, hot, etc As I shall show below, even such sentences as

Red is an offensive colour

are really about *any red thing*, and so are general, and not non-general So that it seems the only non-general statements are those which are about particulars, and in which the particulars are named and here I use ' named ' in my narrow sense, and not in the wider and more usual sense

General Statements

9 All Descriptions are statements about things or universals of a certain sort—about *any* particular, or *any* universal whatever, that answers to the description Such statements (*universal*, *singular*, or *particular*), are ' general ' statements And all statements in genuinely discontinuous discourse are understandable only as General Statements,

however they may be expressed Such statements are really incomplete, they do *not* denote what they are about, although they do tell us what they are saying about the absent subject For example, the three sentences

This is red,
Something is red,
This is not blue,

may all refer to the same fact · that is to say, the second and third may both refer incompletely to the fact to which the first sentence refers completely But we have here examples of different sorts of ' incompleteness ' The second fails to denote particulars, this is marked by the quantifier The last fails to include a sign for a universal, this is marked by ' not ', the same meaning could be expressed " This is some colour other than red "—" This is some colour but not red " The same incompleteness infects all determinable statements " This is red " means " This is some determinate shade of red " [1]

Almost all literature consists of delayed discourse, and also a large part of science, records, case-books, laboratory journals, clinical journals And my conclusion is that all delayed discourse tells us about *any particular of a certain sort* and not about *this* or *that* particular This feature, however, is often masked by the use of certain literary devices, of which two important examples are W E. Johnson's Definite Indefinite and Indefinite Definite (*Logic*, 1, Chapter vi) The gospeller writes

' A certain man had two sons '

and continues as though he really were referring to one unique person But clearly the expression ' A certain man ' is ' sufficient ' only to distinguish the father from the two sons, the servants, the harlots, the swine, and the fatted calf,

[1] See Mr John Wisdom's paper in the Symposium " Is Analysis a useful method in Philosophy ? ", *Proceedings of the Aristotelian Society*, Supp vol xiii See also § 11 below

not to distinguish from him all other particulars we may ever meet. When the story is ended, all we know of the father is that he is ' A certain man ' (*any man*) of a certain sort (who has two sons, one prodigal, etc, etc) So that all we know is general , it is information about a particular of a certain kind This is the Definite Indefinite Similar considerations apply to Johnson's Indefinite Definite (' and *the younger* son said unto his father '), to proper nouns, pronouns are used in delayed discourse cf Descartes ' Take for example *this piece of wax* ' But he is, of course, obliged to describe it, and the reference conveyed across the centuries is ' Take *anything* that is of this sort fresh from a beehive, sweet like honey, smelling of wild flowers, hard, cold, resonant, a certain shape and size '

10. It follows from this view that we must make a sharp distinction between the grammatical subject of a sentence and the logical subject of the possible state of affairs that the sentence refers to For example

The Prodigal Son repented

is not, strictly speaking, about a certain particular, definitely described as ' The Prodigal Son ' , it is about *anything* answering to a certain description Now ' anything ' is not itself a name or a description It simply does a formal duty —serves a purely linguistic purpose *It is there to mark a feature of the expression*—not a feature of the proposition indicated by the expression It is what I call *a formal-word* (The word ' red ', on the other hand, does refer , it occurs in sentences such as

' That pillarbox is red '

in order to indicate some element in a fact It is a non-formal sign) So that the sentence

The Prodigal Son repented

is about anything of a certain sort That is to say, this

sentence is incomplete, it omits to refer to a certain important feature of the fact; and the feature it omits to refer to *is what the proposition is about*—'the subject of the proposition' So that, in the expression

The Prodigal Son repented,

the grammatical subject is not the logical subject, and the logical subject is really not named in the sentence at all It is 'understood', as grammarians say, it is 'hiated' as Mr Wisdom now says

But these arguments assume some criterion by which we can distinguish objects into different 'types' so that we can pick out which object referred to in an expression is of the lowest type, this will be the logical subject of that expression, whatever happens to be the grammatical subject

e g All men are fallible beings
Fallible beings include all men

Both these sentences mean that the class of men is included in the class of fallible beings, both mean a possible fact *about men* Men are of the lowest type mentioned in the expressions, and hence are the logical subject of both

Similarly, all expressions which include only signs for universals (together with formal signs) are really incomplete expressions for facts about particulars

e g Red is an offensive colour

It seems clear to me that this must mean the same as

If anything is red, then it has an offensive colour

Here again the absolute logical subject is a formal word and merely marks the incompleteness of the expression So that all 'propositions about characters, or universals' are general propositions, in all such expressions the object of lowest type is not explicitly indicated at all, in a more explicit sentence it would have to be marked by a formal sign or 'hiatus' It follows that all informative sentences mean (completely or incompletely) possible facts about particulars,

signs for particulars are the absolute logical subjects of all such expressions We may describe the sign for the object of lowest type explicitly mentioned in an expression, as the ' relative logical subject ' of that expression , and the sign —or hiatus—for the *occurrents*, if any, is an ' absolute logical subject ' [1]

Determinables

11 Of the universals we have been discussing, it is commonly held that some are determinables, and others are determinates Even an absolutely determinate character might logically be repeated anywhere, and is no less universal than ' colour ' or ' loud ' It is often thought (I suppose) that an absolutely determinate characteristic can be identified only by a definite description making reference to a unique particular

" The colour of that shape now "

[1] See below (Chapter VI, §§ 6–9) for a discussion of Directional Analysis It is there argued that all exact informative propositions are most directly expressed in sentences whose logical subjects are names (or hiatuses for names) of place-times, qualified by sensible properties This really implies that there are terms (signs for such loci) that must be logical subjects of any propositions in which they occur Cf the long discussion in F P Ramsey s paper, " Universals " (*Foundations of Mathematics*, iv) Ramsey tries to show (1) That no ' incomplete symbol ' is such a term , for we can always distinguish its ' primary occurrence ' (as something asserted in a proposition) from its ' secondary occurrence ' (not asserted), a distinction which is ' fundamentally the same ' as that between the occurrence of a predicate as something asserted of a subject, and its other occurrences In other words, any incomplete symbol can be used either as a subject, or as something virtually equivalent to a predicate (2) That people have commonly thought that some terms can only be used as subjects, and never as predicates, just because they failed to notice this fact about incomplete symbols (3) That perhaps this ill-founded feeling is the *only* reason for the view that some terms can only be used as subjects The last point is made only very tentatively It seems to me (1) Obviously some subject-terms are not ' incomplete symbols ' (i e not class names, definite descriptions, etc) , for any form of indirect expression presupposes direct expression The question must therefore arise Are there subject-terms *in direct expressions* that cannot be used as predicates, cannot be regarded as determining a class ? (2) That signs for place-times are such absolute subjects , this (I think) is what Kant meant by his Transcendental Æsthetic, and what has commonly been meant by Nominalism How far the *inevitable* features of language really give rise to metaphysical problems is discussed below in Chapter VIII

But since such a colour can be repeated, there seems no necessary reason why a sign should not be attached to it every time it occurs—that is, a *name* of a universal.

A name for a determinable (such as 'red', 'loud'), raises an adaptation towards things that are different in some respects a is coloured if it is red and b is coloured if it is green We know the proper reference of a name for a determinable, if we know exactly what similarities between objects are *necessary* for the proper predication of the determinable, and exactly what differences are *compatible* with the proper predication "Our knowledge of such similarities and differences is never exhaustive, and therefore our knowledge of the meaning of a universal is never complete" (Russell, *Analysis of Mind*, p 228) And a person may use the sign properly within a limited context without having any such complete understanding

What distinguishes sub-determinates under the same determinables would seem to be their peculiar *differences* 'red' and 'green' are comparable in a way in which 'green' and 'circular' are not comparable, and being compared, they are seen to be incompatible[1] Mr W E Johnson writes of determinables 'generating' their sub-determinates

> "'less than 4' generates '3' and '2' and '1', in the sense that the understanding of the meaning of the former carries with it the notion of the latter" (*Logic*, 1, p 177)

It seems to me that this can only mean that 'colour' simply refers us to *this, that, or the other* absolutely determinate shade of colour, it is universally agreed, he says (ibid, p 185),

> "that the characters of things which we can only characterize more or less indeterminately, are, in actual fact, absolutely determinate"

[1] Cf Hume's suggestion that one might form an image of a colour one had never seen, by a description of the way in which it compared—that is, differed—from other colours one had seen

This suggests that " x is red " is a sentence which inexplicitly refers us to the fact that x is red (1) or x is red (2) or . x is red (n) This disjunction offers many great difficulties is it, for example, contingent that " This is red " never means a conjunction such as " x is red (1) and x is red (2) " ? And it follows from this view that, while I may *see* that x is red, I cannot similarly *see* that it is not red I may learn indirectly that " x is not red " , but this, of course, is an incomplete expression I may *see* that x is green and report this fact incompletely in the expression " x is not red "

Formal Signs

12 So far I have discussed briefly two sorts of terms in propositions subjects and predicates But I have already suggested that certain words in sentences have a purely formal or linguistic function to perform The ' quantifiers ', ' all ', and ' some ', and ' any ', and ' every ', and ' each ' are there to show us something about the *sign*, i e that the sign is not a complete one, that it has a gap in it And where we have complex propositions, we have other words which also do not make references

> *Either* Socrates was wise *or* Plato was deceived
> Cæsar was ambitious, *but* Brutus was self-righteous
> Cæsar came *and* saw *and* conquered
> *If* Cassius had won, *then* Antony would have died
> " *Not* here, O Apollo,
> Are haunts meet for thee "

It is characteristic of all these signs that they have not themselves any reference " This is an or " is nonsensical " This is red " is not nonsensical Nor can we find any other sentence which will convey the same reference as any of the above examples, and which contains *no formal words at all* (We could certainly convey the same reference in a sentence which introduced *different* formal words) So that they do

not refer, but they affect the verification of the whole expression that includes them [1]

I shall say that they *indicate the form* of the reference made by the whole expressions in which they occur Thus—

Not here, O Apollo, are haunts meet for thee

does not add a new element to the reference of

Here, O Apollo, are haunts meet for thee,

but it does alter the reference of the whole expression. Similarly

I will bring an apple or an orange

and I will bring an apple and an orange

indicate the same referents, in *either* case, the truth or falsity of the whole proposition depends upon the truth or falsity of

I will bring an apple
I will bring an orange

But if I arrive with only one fruit, the first proposition is true but the second is false, and if I bring two, the second is true and so is the first (if we assume a or b does not exclude a and b) [2]

Order

13 In a somwhat similar way, another feature of sentences has a formal meaning, that is the time-order of spoken words or the geographical position of written

[1] Cf Wittgenstein, *Tractatus*, 40312 'My fundamental thought is that the 'logical constants' do not represent'

[2] We can readily discover that 'red' and 'rouge', 'pomme' and 'apple' indicate the same referents by Ostensive Definition or Description But no direct correspondence can be shown between *formal* signs belonging to different languages But we can, of course, show similarities between the structures of different languages, and between the peculiar functions of formal signs in determining such structure this depends upon establishing an equivalence between whole sentences, or self-sufficient expressions And this is done by reference to the *similarities in the behaviour responses* (on the part of people who understand) to sentences from each language (e g, 'Allez!'—'N llez pas!' and 'Go!'—'Don t go!') Cf Chapter VIII, §§

words If we change the arrangement of written words, we may have an expression which has no reference at all, or an expression with a different reference

John loves Joan
loves John Joan
Joan loves John

It seems to me that the fundamental ' order ' is the time-order of spoken words All written languages seem to have some convention which determines the time-order in which the signs are to be read or understood So that what is really meaningful, referential, is not a number of signs, but the fact that these signs are arranged in such a way as to be read in such a time-order It is often said that the ' unique direction of time ' thus gives every several sign an absolutely *definite* time-relation to every other sign in the expression , and this time-relation indicates a definite structural or formal relation between the terms indicated by the several signs [1] Whether Time has a unique direction or not, it is at least vitally important to realize that the relation between the signs is *not identical with* the relation alleged to hold between the constituents or parts or elements of the reference The relation between the signs is itself in no sense a formal relation It is a time-relation or a space-relation, and it

[1] Consider the written sign

John loves Joan
But Joan does not love John

Then the spatial relation of the several signs to each other is not in itself enough to give each sign a definite unique relation with every other sign We must have a *convention* whereby only certain spatial relations are meaningful and these conventions are quite complicated and, of course, differ greatly from one language to another (compare Latin script, Hebrew, and Chinese) But (to consider Latin script) which relation are we to say is the significant one to the left of ' or ' to the right of ' ? On the other hand, temporal order arranges all the signs in one single chain in which the earlier are distinguished unmistakably from the later (the earlier are past, remembered, when the later are present) in a way which makes the distinction between signs on the left and signs on the right appear altogether arbitrary But I understand that Professor H M Sheffer hopes to show that Time-Order is *not* necessary for representing logical structures

merely indicates the so-called formal relation The Time-Order of words does not refer us to any special *constituent* of the reference the constituents of

John loves Joan

are just the same as of

Joan loves John

The time-order indicates *a sort of relation* between the components and constituents of the reference But clearly it is not a genuine material relation, like ' loves ' or ' hates ' or ' follows ' or ' is first on the right from ' The sort of relations that unite John and Joan and loves, are sometimes called structural relations, or formal relations, or *internal* relations, as opposed to the ' proper (external) relations ' like *loves* itself, and *succeeds* Now the *non-formal* elements of a reference—the universal components and the particular constituents—are also ' internal properties ' of the reference in the sense that the reference would not be the reference it is, if any of these were abolished and replaced by others (A fact about Peter loving Joan is not the same fact as a fact about John loving Joan) But the relations between John, Joan, and loving are not *material* relations , they unite components and constituents, and not (like loving) particulars only They are *also* ' internal ' in the sense that the reference (possible fact) that *John loves Joan* would not be the reference it is *unless* the particulars (John, Joan), and the universal (the relation of love) were themselves related in a certain way , John as the *subject*, Joan as the *object*, of the relation love [1]

[1] We cannot understand either language, or the rest of the world, if we talk merely about *objects* (including *words*) We must discuss also their union in facts—whether facts about words and their arrangement in time or place (i e ' expressions ') or facts about chairs and tables and their inter-relations Cf Wittgenstein, op cit , 1 to 2 18 *et al* It seems to me that 2 15 *seq* suggests that the picture represents that the elements of the fact represented are combined in the same way (by the *same* relation) as the several signs in the expression This is, of course, absurd the relation between the signs merely *represents* an (internal) relation between the elements of the possible fact This is made clearer in 2 18 *seq*

Now we can also say *of the expression*—

" John loves Joan "

that it would not be the expression it is, unless it had the three signs ' John ', ' Joan ', and ' loves ', and unless they were arranged in the spatial order ' John ' to left, ' loves ' centre, and ' Joan ' to right—or the temporal order ' John ' first, ' loves ' next, and ' Joan ' last *This is only another way of saying* that the expression is a fact about objects in a certain order of time, or a certain spatial pattern, so that the temporal order, or spatial pattern, is a non-formal or ' proper ' component *of the fact that constitutes this expression* But it may also be called *an internal property of the expression*: for the expression would not be itself unless this order were observed, just as it would not be itself if ' Peter ' were to replace ' John ' It follows then, that the signs

' John ' ' loves ' ' Joan '

are genuine constituents of the fact that ' John ' is on the left of ' loves ' and ' Joan ', and ' loves ' in the middle, *and also* certain spatial relations are genuine components of this same fact So they can all be called internal properties of the expression which (by definition) *is this fact* And all these internal properties are used by us to indicate internal properties of the possible fact, or reference, of the expression The several non-formal words refer us to the several component universals, and to the several constituent particulars, the spatial or temporal order of the words indicates the structural relations which unite the components and constituents in the reference [1]

[1] The discussion included in §§ 12 and 13 is resumed in Chapter VIII, § 10 *et seq*

Chapter VI

THE ANALYSIS OF PROPOSITIONS

1 The discussion in the last chapter led me to consider the relation between expressions and the references they make—the possible facts that they represent And it has already become clear that in certain ways the internal properties of the expression may mislead us as to the internal properties of the reference, and that the same reference may be made by different expressions with different degrees of success Expressions may be more or less complete, more or less explicit, more or less direct two expressions may thus vary greatly in how much of a reference they convey, and in how well they convey it And a person A, on hearing another person B say ' p ', may understand him only very vaguely and be entirely unable to say exactly and in detail what ' p ' conveys to him, yet he may at least begin to understand ' p ' and may begin to verify it And in plain fact we all of us constantly use expressions which we believe to be true, but which we do not understand *very well* But of course it is possible to try to find new expressions with the same reference as ' p ', but which are more explicit or more direct, or both, and in this way *to explain what ' p ' means* This process has come to be known as *Analysis*, we look for a new expression ' p′ ' which makes the same reference as ' p ', but which is (for some reason) a more clear expression than ' p ' Then ' p′ ' is an expression which tells us more about p, than ' p ' does, the reason for preferring ' p′ ' to ' p ' is a reason that depends upon the character of the reference that both make, it is not merely linguistic or stylistic

> "We cannot clarify our thoughts by thinking about thinking, nor by thinking about logic We have to think *about* what we *were* thinking about The philosopher considers a *given expression*, and analyses it in order to find *another expression* which says *more* clearly what the original sentence said *less* clearly This investigation is not linguistic We must first *know* what facts are the case before we can fruitfully employ analysis for clarifying our thoughts about the world" (L S Stebbing, *Logical Positivism and Analysis*, p 36)

I postpone to the next chapter a discussion as to what exactly we are doing when we say that 'p' is an analysis of p, of *the way in which the expressions used by the analyst convey some sort of reference to the reader* I am now anxious simply to show as clearly as I can *what it is* that expressions such as

"The moon will be full to-night"

convey to anyone who hears or reads them We all admit that such an expression often makes a *true* reference, but what, in detail, is this reference that is so often true? It is to answer questions of this very sort that the technique of analysis has been invented I propose here to show *various ways* in which

signs which have reference
sentences which mean contingent propositions
expressions that display (possible) facts

may be *more or less successful* in their work, and corresponding ways in which they can be improved upon [1]

Mr John Wisdom discusses three sorts of analysis of facts, in each process we begin with a sentence 'p' and find a new sentence 'p′' which is an analysis of the possible fact referred to by both 'p' and 'p′' and an 'ostentation'

[1] Cf Wittgenstein, op cit, 4 0031 on Russell's work

of the sentence ' p ' Two of these analyses he calls ' same-level ' analyses , formal and material , the third is ' new-level ' analysis and is called Philosophical, or (by Miss Stebbing) Directional, Analysis [1]

2 *Material Analysis* —A sentence such as " A is the child of B " uses the word ' child ' which is an abbreviation for two alternative relationships—son or daughter So that " A is the son or daughter of B " makes the same reference as " A is the child of B " but it makes it more clearly, or more *explicitly* Similarly, " This is a picture of a chimera " is a sentence which says less explicitly what is said by the sentence, " This is a picture of a mythological animal with the head of a lion and the body of a goat " The characteristic of this sort of clarification is that it enables us to see how many several referents *of the same type* are indicated by a given expression [2] Perhaps the new sentence always contains more separate significant features than the original one By such analyses we learn more about the several references whose truth is necessary for establishing the truth of the reference as a whole , that is, we learn to distinguish the several truth-grounds of the proposition signified by the original expression Thus *A is the child of B* would be true *if A were the daughter of B* It is easy to see that A often hears B use expressions without really understanding *all* the several references that B's words ought properly to convey—without entertaining all the conditional expectations

[1] i e ' p" (I suppose) *shows* us ' more clearly ' what ' p ' refers to Other writers speak of the analysis not of facts but of expressions or sentences the essential point seems to me that the new sentence should represent by its internal properties more of the internal properties (whether formal or non-formal) *of the possible fact* to which the original sentence refers See especially L S Stebbing, *Logical Positivism and Analysis* (Philosophical Lecture to the B A , 1933, O U P) , " Communication and Verification " (*Proc Arist Soc* , Supp xiii) , John Wisdom, " Is Analysis a Useful Method in Philosophy ? " (*Proc Arist Soc* , Supp xiii) , F P Ramsey, *Foundation of Mathematics*, p 283, and " Last Papers " F

[2] See § 6 below

that B's words ought properly to arouse in him. It appears then that 'understanding' is not at all a simple or unified process there are degrees of understanding, and it often happens that A does understand the sentence 'p' (*unclearly*) without at all being able to give a material analysis of the reference made by 'p' [1]

3 *Formal Analysis*—But the business of a sentence is not only to set forth certain objects (universals and particulars), but also to show how they are (formally) related in a unified reference, or possible fact, or proposition It very often happens that expressions fail to make explicit the structure of the reference they make Thus, as we have seen,

The King of France is bald

may be false because there is no King of France In other words, what looks like a single statement about a certain person, turns out to be two statements about *some person*, some *man* Again, however, there might be no such thing as a man Hence the expression may be said to make three statements, all of which are asserted to be true *of some particular* There is something, and this is a man, he is King of France, and he is bald In this expression we introduce new formal words (instead of an actual *gap*) to show that the expression is incomplete (we have no name for *the* particular thing in question), and conjunctions to show that three separate statements are being made about this *something* But even here we have not a fully explicit sentence For 'The King of France' makes a reference which would not be true if there were many Kings of France Hence we must add certain *negative* statements, and so introduce new formal complexity

> There is—(something), which is a man, and rules France and is bald, and it is not the case that there is —— (something else) which is a man and also rules France.

[1] See L S Stebbing, *Logical Positivism and Analysis*, p 29, *et al*

Similarly, " All men are mortal " is not so explicit as the conjunctive statement . " Something is a man and is mortal and it is not the case that something else is a man and is not mortal " It will be noticed that no form of analysis can make an *incomplete* sentence complete If we hear that " A is in love with someone," it is not the philosopher but (as Mr Wisdom says) *the gossip* who can replace this by " A is in love with B " It then remains for the philosopher to explain that ' someone ' is not a second love of A's, but merely a ' gap ' left for B to fill So that generality cannot be *removed* by analysis implicit generality, on the other hand, may be *revealed* by analysis [1]

Once again, A's understanding of B's sentence ' p ' may not enable him to give a formal analysis of ' p '—to say exactly what is the structure of the complicated reference made by ' p ' But A's understanding is not clear unless he is able to do so

It will be seen that a material analysis *is always also a formal analysis* , for the material analysis introduces new conjunctions or disjunctions or implications, and so results in a sentence with a more complicated grammatical structure

e g A is the child of B equals A is the son of B
or A is the daughter of B

B is the son-in-law of C equals Someone is the daughter of C
and is the wife of B

Note also that a material analysis must, I think, increase the multiplicity of the expression, but a purely formal analysis *need* not do so , for a formal analysis may actually *cut out* constructions which are redundant or misleading " Existence is a property of dogs " equals " Something is canine " (cf Wisdom, op cit) Miss Stebbing (op cit ,

[1] Cf Wittgenstein's theory of generality as conjunction or disjunction the philosopher can never be expected to supply these terms he can only protect us from regarding a ' hiatus ' as a genuine term

p 29), seems to *define* what she calls ' the analytic definition of symbolic expressions ' by reference to an increase in the multiplicity of the expression it would seem that this sort of analysis corresponds to Mr Wisdom's ' same-level ' analysis, whether material or formal or both

4 *Philosophical Analysis* —I have already suggested that a sentence about The Moon, really tells A something about what he would observe within a certain time and at certain places, if certain conditions were to be fulfilled In other words, a sentence which has The Moon as relative logical subject, means the same as a sentence which has loci as relative logical subject and affirms, of these loci, certain observable properties The difference between the two sentences might be described *as a difference in scale* [1] The sentence about The Moon may be fully explicit, it may clearly signify, by a name or a hiatus, every referent of a certain type, and the proper formal relations (or structure) of such referents, but the referents it signifies may themselves be classes of referents of a different type A sentence ' p' ' is *a philosophical analysis* of the fact referred to by the sentence ' p ', if the elements of the fact which ' p' ' separately signifies are *more ultimate* than the elements of the same fact which ' p ' separately signifies [2]

[1] John Wisdom, op cit, p 69

[2] We are (of course) discussing the various sorts of expression that may be used to refer *to the same* possible fact Thus we do not suggest that " A is the child of B " refers to one fact, and " A is the son of B or A is the daughter of B " refers to another fact Both refer to the same fact, the latter *more explicitly* than the former

Similarly " This is red " and " Something is red " are two different ways of referring *to the same fact* So that we do not talk of incomplete (or general) facts—only of incomplete or general sentences Similarly " Ramsay Macdonald is not Prime Minister " refers to the same fact as " Chamberlain is Prime Minister ", but it refers to it less completely, more ' generally We do not speak of ' negative facts ' but of negative expressions (Cf *The Meaning of Meaning*, p 291–4) And here again we speak of " The wood is very dense " and ' The trees in this area are very close to each other as referring to the same fact, the one more directly than the other so that we do not talk about facts about the wood and

E g " The wood is very dense " signifies a fact which is philosophically analysed in the sentence " The trees in this area are very close to each other "

Such analysis is rightly called philosophical many of the Old Philosophers were obsessed with the idea that all our knowledge about the universe could be shown to be a knowledge about certain ultimate and simple elements Thus Anaximenes suggested (in effect) that all possible facts about the physical world could be analysed into sentences which included only signs for spatio-temporal positions and for air-atoms of uniform density all facts about mutation could be expressed in sentences which included only signs for air-particles and their changes of arrangement Many philosophers since have had their views about the nature of the simplest elements in the world, and there are to-day competing theories as to *the direction* which Directional (or Philosophical) Analysis must take Clearly, Mr Wisdom's ' more ultimate ' elements raise a host of questions

5 We then have two methods by which to discover *what exactly* a given sentence of informative language really conveys We may, by same-level analysis, try to discover and to represent by distinct features of an expression ' p' ', every several referent of the same type as those separately designated in ' p ', and the relations between these elements We may, by directional analysis, try to find out the character and structural inter-relations of the referents indirectly referred to in ' p ', and to frame an expression which refers to each by distinct features I shall discuss these two processes in turn

Mr Johnson offers, as an example of analysis, the definition of a sound by reference to three distinct characteristics

quite different facts about the trees for the ' fact about the wood ' turns out to be only a fact about trees expressed in a sentence that includes ' wood ' In this way we avoid fallacious reduplications See Mr Wisdom, op cit, of which this note is little more than a precis

pitch, volume, and timbre The definition will *conjunct* these three universals. Another example he offers, is the analytic definition of Courageous "not flinching from danger," where a more complicated logical structure is introduced It seems clear that in this process all definite description may be abolished and nothing but *names* remain This process must, of course, be distinguished sharply from the processes of partition and resolution When we define a sound by reference to pitch, volume, and timbre, we do not state of what notes it is a harmony still less do we state its parts, in the sense in which we might state the parts of a table

> "The value of this illustration is that it conclusively disposes of the assumption that a plurality of predications characterizing an object depends at all upon its partition or resolution that is, upon regarding the object either as a whole consisting of parts or as a compound resolvable into components" (Johnson, *Logic*, 1, p 112)

That is, our analysis is not a directional analysis we cannot regard a sound as a class of three members pitch, timbre, and volume Our new referents were inexplicitly referred to in the original description of the sound, just as 'not flinching from danger' was inexplicitly referred to in 'courage' The new referents are of the same type or level as the original ones

But how do we know whether the newly designated referents are of the same type? The answer that is suggested by the Theory of Types, is that a and b are of the same type if all predicates that can meaningfully be applied to one, can be meaningfully applied to the other Thus "Some soldiers are lazy" may mean the same as "Some men who are trained to fight in companies are lazy", and the analysis is not a directional one, because the subjects of both sentences are meaningful arguments for *all* the same functions On the other hand, "Some regiments are overstaffed" may be a sentence which means a fact about men, soldiers, people

But this fact cannot be that " Some soldiers are overstaffed " —that is nonsense Hence an analysis in terms of ' some soldiers ' would not be a same-level, but a philosophical analysis

How can we be sure that a sentence ' p' ' is *fully* explicit ? It is obviously not enough to reduce all to *names* Many names are analysable Thus " All men are mortal " might be analysed " All rational animals are mortal " What sort of words can be regarded as unanalysable ? Mr Johnson suggests that analysis must come to a stop with words that are " so directly and universally understood that it would be mere intellectual dishonesty to ask for further definition " (Ib , p 106) This is not very helpful What sort of words are most readily understood ? Professor Whitehead has suggested that *semi-complex* words are the most easily understood— that Descartes' ' things simplest and easiest to know ' is a trap

What we want is a sentence, each separate non-formal sign of which refers us to only *one* truth possibility of the subject explicitly mentioned in the sentence

This is a man

might be false if this were not rational or if it were not animal But could we say of

He is tall

that it has only one ground of truth or falsity ? If so, it would, I suppose, be a fully explicit sentence, and ' tall ', the sort of sign that is to be expected in fully explicit sentences

Such a sign might, I suppose, be called a simple sign, in the sense that it would have no analytic definition It must, of course, have an Ostensive Definition In Continuous Discourse I can define ' tall ', ' yellow ', ' hot ', ' loud ', and so forth " This seems yellow " will be a proposition which is definitive and not arguable " This is a clock " is not definitive [1] But I do not know of any *positive* test to

[1] See above, Chapter II, § 5

show that a given sign has no analysis, and affirms only one truth-possibility of its subject

Suppose a sentence 'p' ' consisted of formal signs and of non-formal signs which had no analytic definition could we say that such a sentence is perfectly explicit ? Is there only *one* fully explicit analysis of a given informative sentence ? It seems to me that there are alternative *formal* signs for representing the same structures these will provide us with alternative signs But the non-formal signs must surely be the same in any fully explicit analyses of a given sign *unless the sign is ambiguous* If we confine ourselves to unambiguous signs, or to a single sense of a sign, then the non-formal elements in any fully explicit analysis of that sign must be the same In other words, a sign such as

" This is a bull ",

refers ambiguously to two or more possible facts If we confine ourselves to the analysis of only one of these facts, we shall have only one set of non-formal terms and one set of equivalent sets of formal terms, that must constitute a fully explicit analysis of this sense of the sentence to be analysed (Of course there will be *disjunctions* and there may be synonyms And clearly there are many *not* fully explicit sentences which refer to the same fact at the same level) We can not of course, say that 'p' ' *has* the same structure as the referent it indicates For the sentence certainly *has not* the same structure as the fact The question is whether the sentence *represents* the structure of the fact explicitly If it does, it must of course refer us to the full multiplicity of the fact And this, it would seem, it could not do unless it were a sentence which *directly* displayed a fact—that is, a sentence in which the relative logical subjects are of the absolutely minimal logical type and this it could not be unless ' p ' (the definiendum) happened to be a sentence which directly expressed the same fact (For the analysis is not a directional, but a same-level analysis) Why not ? Because we do *not*

want to say that ' p' ' has the same multiplicity as ' A fact ' directly conveyed by ' p ' if ' p ' also *indirectly* conveys ' another fact ' Clearly ' p ' does not convey ' an indirect fact ' and also indirectly convey ' another fact ' ' Indirect facts ' are obvious linguistic fictions The question then is How can we tell whether an *indirect* sentence ' p' ' is fully explicit at a given level ? [1]

6 The aim of Directional Analysis is to find a sentence 'p^{n-1}' which signifies directly everything that is signified indirectly in *a given sentence* ' p^n ', and also to find a sentence ' p^o ' which signifies directly all the elements that are signified directly or indirectly by *any sentence* that has the same reference as ' p^o ' For example, we want to find a sentence about men, which signifies directly what is signified indirectly by a given sentence about groups, regiments, societies, nations, tribes, and kindreds , and if the sentence about men itself signifies elements indirectly, we want *to push forward the analysis still further*, until we have a sentence which makes the same reference as that about groups (regiments, nations) and the same as that about men, and which signifies nothing at all *indirectly* It does not yet appear what sort of elements it will directly signify

By such a process we *reduce* objects of higher type to objects of lower type, and may perhaps hope to reduce all to objects of the lowest type—if there is any lowest type This reduction is explained by Mr Wisdom

> " If x is reducible to y then (i) to say something of x is to say something, though not the *same* thing, of y, (ii) it is not true that to say something of y is always to say something of x, (iii) to say the same thing of y as was said of x is to speak not falsely but nonsensically E g , if we reduce a chair to a set of sense-data, then to say that I sat on the chair is to say something about the

[1] See § 9 below

sense-data but not, thank goodness, that I sat on them" (op cit, pp 77–8)

The question to be decided is Must there be a last stage, an ultimate Directional Analysis of a given informative sentence? I think we need not suppose that there is a last stage to directional analysis, if we suppose that 'p^n' refers to one fact, and 'p^{n-1}' to *a different fact* If this were so, there would be no reason to suppose that there is a *series of facts* with a last term

$$p^n, p^{n-1}, p^{n-2} \qquad p^o$$

It is because we must hold that 'p^n' and 'p^{n-1}', etc, all refer *to the same fact* (but in different ways) that we are inclined to suppose there must be a genuine possible *series of sentences* with a last term For unless there be a last term, none of these sentences refers to any fact at all 'p^n' refers to 'the indirect fact p^n' that is to say it is an indirect sentence (analysable by philosophical analysis) and must therefore *refer indirectly* to a fact which (it is logically possible) might be referred to by some sentence ('p^o') *directly* So that the very notion of indirect reference presupposes the logical possibility of direct reference—that is, of a last term in the series of directional analyses Mr Wisdom says:—

> " we should have a series of sentences, S^n, S^{n-1}, S^{n-2}, displaying more and more directly a fact F Such a series would have a last term For any sentence S^r in the series displays (r) a fact (r) , and there must come a sense of 'displays a fact' which is not defined in terms of another" (Op cit, p 85)

And in fact, the *ultimate* analysis of this kind is held to be in terms of sense-data Mr Wisdom follows the suggestions made by Moore and Russell and others [1]

[1] My own analysis suggests that what any informative proposition is *about* (and what a direct expression is directly about) is the experiencible properties of absolute particulars—that is, surely, of place-times We exchange information about the properties of loci, either of this or that locus, or of any locus of a certain kind "Information is about particulars"

I think the argument could be re-stated freely in this way The sentence *about the wood*, and the sentence *about the trees*, are most certainly not about different facts they both mean the same possible state of affairs And the ' trees '-sentence certainly seems to be a more *detailed* one than the ' wood '-sentence it tells us in more detail what both the sentences mean But *all* that they both mean must surely be ' at the command ' of anyone who understands *either* of them this naturally leads us to think that we could find or could invent an expression that showed *in full detail all* that these sentences mean less explicitly—supposing for the moment (what is plausible) that the ' trees '-sentence does not do so For if we could not even invent a terminology to form this ultimate stage of analysis, could we be said to understand the two sentences we have made ? If we could not express in detail all that they mean, can we think it ? This attempt to show the nature of directional analysis, I shall now examine as carefully as I can

7 Compare, first of all, the two sentences we have discussed so often (*a*) " The moon will be full to-night ", and (*b*) " I seem to see a bright circle high up " , the second a sentence of type 3*a*, and the first, of type 1 Then we notice at once that the first is not so *certain* as the second, or, rather, the second is not so *corrigible* as the first It is for this reason, presumably, that we *may* sometimes insist that the people for whose testimony we ask should confine themselves to what they *seemed to perceive*, and not offer us their inferences from this And it is perhaps possible to

simply means that it is about loci, characterized in many different ways (To predicate Q of a red object, is to assert of a locus or set of loci that it is red and that it is Q) If anyone tries to argue that some propositions are about redness but *not* about red things , that some propositions are about particulars but not about places and times , that some propositions are about particulars *not* differentiated by their loci , then I can only acknowledge a radical difference in our use of language See Chapter V, §§ 6, 7, and Chapter VIII, §§ 10 *et seq*

think of expressions arranged in *a corrigibility-series* we should begin with expressions that were highly *inferential*, and end with the ' direct record of experience ', or protocol [1] The series would not be defined by reference to psychological inclination to doubt or to accept such expressions, but by their possibilities of correction—their possibilities of being true or false—as these are determined by linguistic rules

In the second place, the truth of the ' moon '-sentence plainly *implies* the truth of the ' circle '-sentence, but not vice-versa, and this is necessary implication, not causal Only a very complicated *set* (both disjunctive and conjunctive) of type 3*a* sentences (of which this about the circle would be one), could necessarily imply the truth of the ' moon '-sentence

Thirdly, we might approach the differences between these expressions in another way The signs in the ' circle '-sentence can all be ostensively defined but there are signs in the ' moon '-sentence which cannot be so defined (See above, Chapter II, §§ 5 and 6) But such signs (' moon ', for example) would ordinarily be regarded as definable in other words, and these other words might have ostensive definitions If not, then the process of definition might perhaps be carried on until we have defined all our words in terms of ostensively definable words But there is no doubt at all that we can perfectly well *understand* words such as ' moon ', without being able to offer such definitions we may know what such words mean, and never make mistakes in our use of them

Both sentences are alike in this they refer to what any normal observer might perceive, though they do not both

[1] This suggestion was made to me by Mr Wisdom On the question whether such protocols are really statements of fact or definitive, see the 1938 Symposium of the Aristotelian Society, to which Mr Braithwaite, Mr Bertrand Russell, and Dr F Waismann contributed My own view is given in Chapter V, § 2

refer to this in the same way Sentence (*a*) seems to be addressed to any normal observer, and to assert that he will be able to report to-night " I seem to see a bright circle high up ", and many other things as well, including " I seem to hear other observers reporting in the same words " *and that his report will be true* That is clearly only another way of saying that sentence (*a*) is used to assert that any normal observer will *seem to see* a bright circle, and *seem to perceive* many things besides And such a sentence is verified by A if he himself seems to perceive these things—not if he discovers that B or C or D seem to perceive them And (*b*) is the expression of an introspective judgment *which any normal observer might make* about his own perceptions And what else could any sentence mean, but something about what people might perceive, or experience in other ways ? But whereas sentence (*a*) suggests that any normal observer would report truly *an indefinite number* of different experiences, what (*b*) says seems to be simple, unitary *An indefinite number* of reports of the same sort as (*b*) would be required to prove (for example) the actual three-dimensional reality of any physical object

8 The meaning of sentences of type 1 consists in some adaptation of my behaviour, some change in my receptiveness, some thoughts of what I might experience at such and such a locus This is an adaptation towards possible features of actual fully concrete experience it is itself *my abstraction*, and its being is *in me* The actual experience will verify or refute the meaning this is not in me, and must when it arrives contain features which I shall never notice at all But what the words of the sentence of type 1 mean are those features of future experience, towards which, if they occur, I shall make a *selective* response This response is made *according to a rule*—a sign has reference if it imposes some systematic limitation upon thought and conduct if it is

totally vague and imposes no such limitation, then it is meaningless The rule is an *ideal*, a final cause, which is in some way present and operative in the mind and body of the understanding person (This surely is the basis of the distinction between abstract and concrete, between the *proposition* and the *events* which render it true or false) In other words, A cannot be said to understand a sentence p, unless rules, connecting the names for physical properties with sensible properties, are present in his mind and body (In other words, again—unless A understands the ostensive descriptions of the terms involved) And this, I think, is part of what is meant by saying that a phenomenalistic analysis of type 1 sentences is *possible* for if this connection between type 1 sign and sensible appearance is there, then separate signs for each sensible element could, in principle, be given

But more than this can be said we make actual use of sentences of type 3, and therefore there are rules which connect sentences of the two types These rules are seen when we require or examine testimony, and when we try to convince others by testimony, it is they that determine the entailments I have discussed above It is surely logically possible that a vocabulary should be adopted or adapted, by means of which the whole content of type 1 sentences could be re-expressed

This, however, requires modification the verification of type 1 sentences is never complete in theory That is to say, the rules always allow for further evidence to be considered upon any matter of physical fact The rule therefore merely determines series of relevant evidence, and their interrelations The rule is a prescription which should enable us to write down, in ordered sequences, *some* of the members of some of the series, and to indicate the general character of the other series and their members In this the rule shows itself as essentially logical and mathematical it is precisely

of the same sort as the rules for the use of such signs as " 1, 2, 3 ", " 0, 01, ·001 ", etc

But the actual possibility of a total ultimate analysis of this sort has not been demonstrated that depends upon whether the *ideal* of language, which governs our use of type 1 sentences, is present in a way *open to introspection* Can we, by introspection, decide how we are trying to apply our signs for physical properties ? We habitually try to use words in certain ways but can we discover, in detail, what those ways are ? Can we say what those features of events are which properly lead us to assert p is true ?

To this question I think the answer is that we sometimes can and often can not, but of course we cannot set any *a priori* limits to introspection, and progress may be expected I am so accustomed to rapid decisions about the size, shape, distance, velocity, and direction of physical objects, that I find it very difficult indeed to decide what are the several stages of the processes , hence correspondingly difficult to formulate the rules which connect the sentences about the body with the sentences about sensible appearances which I know, in a general way, to express part of the evidence for the body's existence It may very well be, as Mr Wisdom hazards, that the *piecemeal* correlation of *some* type 3 sentences with their proper type 1 sentence is all that we shall ever achieve And it may very well be all that we should ever need to attempt

This implies that sentences of type 1 are not necessarily indirect in a psychological sense for the relation of a physical sign to sensible appearances is often psychologically primitive and immediate—this, at any rate, seems the safest guess Sentences of type 3*a* seem to be cautious and sophisticated understatements which result from the discovery of one's own limitations But once we have both types at our command, the direct psychological relation of sentences of the two types to the same situations *ipso facto*

creates a purely verbal or syntactical relation which could, in principle, be formulated [1] These connections (sign to object, sign to sign) are rules which are commonly applied they are both customs and precepts or ideals As they are customs, the thought of ' Union Jack ' leads to the thought of ' red, white, and blue ' as they are ideals, the thought of 7 times 27 makes me hunt for the *proper* answer—the hunting is itself a habit But the rules show that type 1 sentences are *logically* indirect for if we could re-express the whole content of a type 1 sentence in sentences of type 3, then the latter would be a fuller, more explicit, expression than the former

9 How would the various sentences be analysed ? My answer has already been suggested the propositions normally meant by types 2 and 4 would be analysed in phenomenalistic terms those normally meant by type 1, into sensationalist terms (But sentences of type 1 very often causally imply sentences of the other types, and may even be understood to *entail* them these connections are not considered in the physical sciences) As used for certain scientific purposes, type 1 sentences may simply mean those observations *of Stage II or subsequent stages* (See above, Chapter IV, § 7) In this case they mean simply that normal observers—myself included only if I am one—will report in such and such terms This is a proposition about human behaviour, and includes statements of the form

In certain conditions, A said ' There seems to me to be so-and-so '

[1] But just as I may play chess without thinking of the rules—and may move pieces wrongly as a result—so I commonly speak English without thinking of the rules , and even in cases where I first learn the reference of a sign, not from an ostensive description, but from a verbal definition, I very soon come to apply the sign with no thought of the simpler signs that define it

All such statements are themselves of type 1 [1]

But of course the whole of this can, in theory, be re-expressed in terms that directly describe what colours, sounds, etc, I should perceive if I were at such a place at such a time This will include many conjunctions and many disjunctions, and many indefinite series

Type 4 sentences ("A *sees* a bright circle high up") seem to be the counterpart, in ordinary conversation, of the scientific sentences of type 1 ("A says 'A bright circle high up'") Their analysis would show first of all a division into two types "A seems to see so-and-so" and "A's body is in such-and-such a condition" Between these a causal implication holds But of course the second group can, in their turn, be analysed into sensation-terms The whole then describes directly those 'inner experiences' and 'bodily changes' which are connected in our belief and in what A experiences [2]

My conclusions indicate the sort of sign that should be expected in an ultimate stage of directional analysis But the problem of when a sign is fully explicit (either a direct

[1] Cf Carnap "All statements whether of the protocol, or of the scientific system of hypotheses related to the protocol, can be translated into the physical language" (*Unity of Science*, p 93) I do not, of course, agree that the physical language is the only intersubjective one

Of course, the sentence 'The moon will be full to-night' does not tell us *what* normal observers will do the reporting—this could only be expressed in quite different propositions, *about certain people*, and it could not be said at all unless and until some verification had actually been attempted Similarly, as I said in Chap II, § 10, a sentence of the sort does not implicitly include the name of the observer who is to observe all the reports Cf Neurath (op cit) "For a complete protocol sentence it is *essential* that the name of a person appears in it 'Now Joy' or 'Now red circle or 'On the table lies a red cube' (cf Carnap) are not complete protocol sentences According to our theory there must at least be "Otto now sees red circle', 'Otto now sees a red cube lying on the table'" This seems to me misleading But I agree that 'There will seem to be a bright circle high up" always means that there will seem *to somebody* to be such a circle In the case of type 1 sentences, the 'somebody' is anybody normal

[2] Cf the analysis of "A understands p" This sentence is most commonly used to assert both that 'p has significance for A, and that it has reference for him The first is of type 3 and the second of type 1, and between these there is a causal connection, and I can *know* this in the case of my own experience only

sign or an indirect one) is not solved So that we can only say of a sign that it is ' as explicit as we can make it ' this we can say when we know of no analytical definition that we have not applied to the definiendum

These conclusions do not, therefore, try to build a ' realm of sensa which are neither ' physical ' nor ' mental ' The sensum is not a *tertium quid* between ' mind ' and ' matter ' For *all* statements about the physical world can be shown to be about sensa and their characters and their interrelations [1] The facts about physical objects are not additional to the facts about sensa To suppose this, would be to suppose that there are ' indirect facts ', and not merely ' sentences which indirectly express facts ' But the important question is at once suggested Does this account involve us in the paradoxical view that there could be no world of physical objects unless that world included ' minds ' ? That the world has existed without any life at all, and that it may one day do so again, are hypotheses for which there is said to be much evidence Such hypotheses cannot, of course, be directly verified, for the obvious reason that only minds can verify A world without minds would certainly be without abstractions, without meanings, thoughts, references Whether it would be a world without possibilities, qualities and relations, will be discussed before the end of Chapter VIII But of course the proper description of any possible state of affairs must predicate qualities and relations The question about the non-mental world is In terms of *what* relations and qualities ought it to be described ? And this cannot be answered without a much more careful and thorough analysis of *perception* than I can give in this book Such an analysis ought to enable us to decide upon what causal factors the various features of the directly perceived object depend This will form the basis of a probable theory about the organization of real events in a world supposed to

[1] See especially Chapter IV, § 10 above

lack the peculiar organization of minds The sentences that express such hypotheses would, if they were verifiable at all and not contentless, tell us something that we could probably observe at certain times and places This 'something' would be the *evidence* upon which would be based the causal inference as to what cannot in fact be observed, that is, the *evidence* for events unlike any that we experience and not organized into mnemic groups in which introspections occur

10 My conclusions about the sort of analysis that would be reached would seem to suggest certain conclusions about the *use* of this sort of analysis It seems to me quite mistaken to suppose that it is the business of the philosopher, or of anybody else, to try to express in protocol-language, all that we mean by "The moon will be full to-night" Such a process is certainly not required indiscriminately for all those many sentences of ordinary discourse and of the sciences which we use so successfully for so many different purposes Analysis—directional or same-level—is not a matter of *routine*, it is essentially *remedial*

(*a*) To decide exactly what in a given sentence is inferential and what is not to offer 'operational definitions' of scientific and other terms—this may help us to apply our terms more faithfully and more knowledgeably and (more often, perhaps) to frame and use *better* terms This should offer us a method of solving genuine problems that arise in the empirical investigation of a new field it should enable us to extricate ourselves from the pitfalls of a vocabulary designed for less exacting purposes But here our progress is seldom, if ever, more than piecemeal "We are like sailors," says Neurath, "who must repair their ship in the open sea, without ever being able to lay her up in dock and build her again from the best materials Only metaphysics can disappear without trace The imprecise

terms are always somehow the materials of the ship If imprecision is diminished in one place it can easily re-appear strengthened in another " (op cit [1])

(*b*) " Only metaphysics can disappear without trace " It seems clear to me that many so-called metaphysical problems are problems that arise in reflection rather than in investigation of an empirical kind, and which owe their origin to ancient confusions about the nature of language—confusions that arise almost inevitably from the real nature of language and which have become embodied in the actual structure of languages And I think that, by offering at least *prescriptions for the analysis* of certain key-sentences, we can show certain truths about languages which will help to cause some such problems to ' disappear without trace ' In this book, for example, I have tried to show what sort of analysis we should have to offer for " A asserts p ", " A understands p ", " A verifies p ", and other key-sentences Whether or not there are genuine metaphysical problems not amenable to this method, will be raised in the next chapters

This remedial use of analysis involves not only the discovery of a rule that is operative, but also the formulation of *new rules* The three kinds of analysis discussed in this chapter tend in fact to be used as aids to the process which Professor Stebbing has called ' Postulational Analysis '—which is not often confined to *discovery*, but usually culminates in the invention and recommendation of new uses This will be discussed in the next chapter (§ 4)

This completes my discussion of the use of language for the conveying of information This discussion has been conducted by language have I myself been using language to convey information ? When I conclude that science is based upon sense-experience, is this useful information that might be true ? If we understand what the word ' science ' refers to, do we not know, without any observation or

[1] Cf F P Ramsey, *Foundations of Mathematics*, p 268, etc

experiment, that it *must* be based on sense-experience? On this topic many views have been put forward Some would interpret what I have been writing as truths (if true at all) that cannot either be verified or refuted from experience, but which make their appeal to Reason or Intuition My statements, it might be said, are not a part of any of the sciences they belong to Philosophy This raises at once the problem of the alleged use of words to convey propositions that cannot be false, and which therefore cannot be 'true' in the sense of 'true' proper to contingent propositions Are there any propositions *necessarily true* (and others *necessarily false*) which can be conveyed in language? This is the topic of the next two chapters

Chapter VII

NECESSARY PROPOSITIONS

1 In the preceding chapters I have attempted to provide a *criterion* for the *meaningfulness* of informative expressions An expression conveys information if it gives rise to suggestions about possible future experiences in certain possible circumstances An expression of this sort is such that it may be found to mean a probably true proposition or it may be found to mean a probably false one So that we have been discussing sentences that mean contingent propositions And the *test* for *truth* lies always in the immediate experiences of the person who tries to verify the proposition So that we have been discussing signs for *a posteriori* propositions There has been discovered nothing in the signs themselves that could indicate their truth or falsity [1] But a theory of Communication would not be complete without a discussion of an alleged use of language to convey propositions which would commonly be described as of a different sort, that is *a priori* and *necessary*

Consider, as examples of so-called Necessary *a priori* propositions

All white swans are white
All white swans are birds
No white swans are black

It has often been maintained that these propositions, once all their terms are clearly understood, can be seen to be true without making any experiments or observations at all,

[1] Cf " It is raining " and " It is true that it is raining " and " It is a fact that it is raining " all make exactly the same reference—though their emphasis or emotive meaning may not be the same Clearly also, an appeal to authority does not " *The Times* says it is raining " or " The Meteorological Office announces rain " do not show that it is raining Only observation can do this See below, p 168

and can be known to be true of all possible white swans, even those that have never yet been hatched So that the sentences printed above are supposed to convey information of some sort *about white swans* and about the real world that contains white swans, and *yet do not* arouse expectations which (it is logically possible) might be fulfilled in experience or might not [1]

The examples I have chosen may seem not very important But the whole problem of *a priori* necessary propositions is, of course, very important indeed, since metaphysics, much of epistemology, mathematics, logic, the foundations of science and of ethics, have all been supposed to consist of necessary *a priori* propositions—of propositions that, when clearly and distinctly understood, are seen to be 'self-evident' or to follow by self-evident connections from propositions which are themselves self-evident And the very word *knowledge* (scientia, ratio, ἐπιστήμη, νόησις) has been pre-empted for systems of self-evident propositions

2 Such propositions are of four kinds first, definitions themselves second those which can be seen by a mere examination of the expressions which convey them to be tautologies—they can be contradicted only in a self-contradiction (All white swans are white), those which can be discovered to be tautologies only by analytical definition of some or all of the terms involved (All white swans are birds) and last, those which—as it is supposed—cannot be shown to be tautological at all The second two might be called respectively explicit and implicit tautologies, and the fourth, synthetic *a priori* propositions Definitions are discussed below concerning the other three kinds, the first important remark to be made is that these universal propositions are not supposed to be necessary in any categorical sense at all they are necessary only if interpreted hypothetically

[1] See above, Chapter II, § 8

This is a most vital modification which has long been understood by philosophers (e g By Descartes)

Thus "All white swans are white" is a necessary proposition, if it is understood

If x is a white swan then it is white

No one would maintain that it is a necessary proposition that

If there are any white swans (and there *are* some white swans) then they are white

For "There are some white swans" is quite plainly not *a priori* and not necessary Therefore throughout, all 'Necessary Propositions' must be understood as hypothetical What information do we gain 'about all possible worlds' from the expression

"If there are any white swans, they are white"?

It might be objected that no one ever seriously maintained that an explicit tautology gives us information about the objects which are its terms, or about the world which contains them For an explicit tautology depends for its truth upon the Law of Identity, which is a Law of Thought rather than a Law of Nature And if this is true of explicit tautologies, it must be true also of implicit tautologies, since these 'truths' can be expressed in such a way that they are also explicit tautologies Thus "All white swans are birds" simply means what is expressed by "All large white birds, living mostly in fresh water, etc, are birds" And to deny this would be to make an explicit contradiction But it seems to me that a true Rationalist ought to hold that even explicit tautologies tell us something about the world It is a fact—I think they might say—that a white swan is white, that all A is A, that if a thing has a certain characteristic, then it is not without it—that a proposition cannot be both true and false And if this is a fact about all possible worlds,

it is a fact about the actual world, and hence also about white swans [1]

3 But it is to be noticed that the test for the truth of a tautology is altogether simpler and more rigid than the test for the truth of any synthetic *a priori* proposition An implicit tautology has first of all to be ' clearly and distinctly understood ' *But this means no more than that we should be able to find some analytic definition of the terms involved* which, when substituted for the original expression, provides us with an *explicit tautology* This understanding is therefore nothing more than an application of *linguistic rules* Now linguistic rules may be difficult to formulate and complicated to handle, but whether a certain definition is or is not applicable to a given term is a question that admits of objective discussion by specialists—that is, by those who have the greatest familiarity with the terms in question (Physicists must help us to define ' energy ', and biologists must help us to define ' swans ', and strategists must help us to define ' flank attack ' and so on) Secondly, must we accept the principle of Non-Contradiction ? Perhaps in some sense we must But at least we have *one single law for all tautologies*

On the other hand, the test for synthetic *a priori* propositions is not altogether satisfactory ' Understanding ' such propositions does not culminate in the discovery of an explicit tautology, and so we have really no assurance that ' understanding ' has gone far enough So that we might reject an alleged *a priori* truth and wonder afterwards if our

[1] Cf Wittgenstein, *Tract Log Phil*, 6 111. where such a view is *opposed* " Theories which make a proposition of logic appear substantial are always false One could, e g , believe that the words ' true ' and false ' signify two properties among other properties, and then it would appear as a remarkable fact that every proposition possesses one of these properties This now by no means appears self-evident, no more so than the proposition ' All roses are either yellow or red ' would sound even if it were true Indeed our proposition now gets quite the character of a proposition of natural science, and this is a certain symptom of its being understood "

rejection was premature And, conversely, we might imagine that our understanding revealed to us that there was a necessary connection between two terms, and wonder afterwards why we thought so, and whether it was not merely imagination or feeling at work As Descartes himself admitted, there is some difficulty in telling which truths are clear and distinct

It was for some such reasons as these, I suppose, that Leibniz put forward the view that all valid necessary truths are analytic and not synthetic at all The only valid synthetic propositions are known (to us) *a posteriori* The only test for clarity and distinctness which he would accept was ' reducibility to an explicit tautology ' The only self-evident or primary principles which he would acknowledge were identical propositions

To this thesis—that all Necessary Propositions that are really valid can be expressed by explicit tautologies—I should wish to add two others Second That necessary propositions give us information, not about the objects designated by their terms, but about language—about the signs that are used to express the necessary propositions So that they give us no information at all about all possible worlds, nor (apart from language) about the actual world they give us information about our use of *words* Third That necessary propositions are not merely informative but regulative or legislative They command or recommend a certain usage of words—they have a dynamic, as well as an infomative, use

4 I do not see how one could *prove* that all alleged synthetic *a priori* propositions are really implicit tautologies and, on the other hand, I do not see how one could *prove* that any apparently synthetic *a priori* proposition is not really analytic For the relevant analysis of a given term or sentence may—as I have tried to show in the last chapter—be a very difficult

one to formulate and very complex in structure But as no sign would be of any use in information if it were altogether ambiguous or obscure, so we can hope, with expert help, to define at least some terms used in exact discourse For this purpose, same-level, new-level, or 'postulational', analysis may be required

I suppose, however, that nearly all philosophers have refused to accept Leibniz's hard-and-fast distinction between 'truths of fact', which are one and all contingent, and 'truths of reason', which are all either identical propositions or deducible from them Most philosophers have insisted that they can discover, by the exercise of reason, certain genuine *information* which is true of all that exists or possibly could exist (And of course Leibniz himself built up a whole system of such propositions) It would be neither wise nor necessary for me to assert that they are all mistaken it would seem to be my most prudent course to abandon here and now the discussion of the fourth kind of necessary proposition So that what I now have to say of necessary propositions must be understood to refer only to definitions and to explicit and implicit tautologies The frontier between the third and fourth classes must remain unmarked and therefore a source of frequent 'incidents' these must be endured with forbearing

I now resume the discussion on this understanding The use of 'postulational' analysis has to be explained There are many alleged synthetic *a priori* propositions which are supposed to be not self-evident but 'demonstrable'[1] That is, they require for their certification, reference to a whole group of primary principles and to rules of inference These *primary principles* may or may not have been formulated the *rules of inference* are generally assumed to be too obvious to need formulation And a formulation may or may not

[1] Cf *Post Analyt*, I, Chaps I and II On 'postulational' or 'symbolic analysis, see Miss Stebbing, op cit, p 30, and *Proc Arist Soc*, N S vol xxxiii

be correct "Postulational analysis is the kind of analysis used in the construction of a deductive system" (Professor Stebbing) Euclid, for example, tried to discover by analysing the meaning of certain alleged synthetic *a priori* truths of of geometry, *from what 'first principles' they could be deduced* —using methods of inference, principles of consistency, which were perhaps so completely *familiar* that it never occurred to him to set them down in writing at all He was successful in his analysis, in so far as his theorems really do follow from his *postulates*, *axioms*, and *definitions*, in accordance with one uniform set of rules of inference He would himself have added, I dare say, that he was successful also, in so far as his definitions were in accordance with the proper usages of his day, and (perhaps) in so far as his axioms and postulates and methods of inference really are self-evident

How are we to show that, e g

> The sum of the three interior angles of a triangle is equal to two right angles

is an analytical proposition ?

The method must be essentially the same as that adopted for any necessary proposition which—though supposed to be self-evident—is not what Leibniz called 'an identical proposition'—that is, not an explicit tautology A 'self-evident' proposition is itself demonstrated when it is shown to be expressible by a sentence which is explicitly tautological, by the application of definitions to the terms involved in the original sentence —the *definiendum* This we do on the assumption that we can gather from the definiendum alone or from its context, *which generally accepted definitions are applicable* or relevant to these terms in this expression

The problem then is to find relevant and generally accepted definitions of all the terms in the definiendum In this way we may hope to frame a new expression which has the same meaning and which is explicitly tautologous In doing so,

we shall—at least for our own convenience—be obliged to write down a number of definitions from which our synthetic (' demonstrable ') principle follows But before we reach this stage we shall certainly have to formulate simple ' necessary propositions '—propositions which would ordinarily be called ' self-evident ', and which we can show —by further analysis—to be implicit tautologies [1]

5 One or two further observations must be made

(*a*) As we shall see, it is not always the case that a definition supplies us with a set of words to substitute, in any expression, for a given single word But a definition ought to show us how to make any expression in which the definiendum occurs, *more explicit*

(*b*) A tautology need not be of the form " p or not-p " There are any number of equivalent forms This will be seen to follow from the function of the logical constants—or purely formal words—used in informative speech

(*c*) There are various ways in which we can construct a system of definitions and primary principles from which a given body of propositions can be deduced Euclid, for example, asks us to assume both definitions and also axioms and postulates The method which would seem to be *suggested* by the theories of Leibniz would be to assume merely a set of definitions, by application of which all the theorems can

[1] Now it is in this way that we may consider the work of Euclid He tries to formulate the ' primary principles ' (axioms and postulates) from which a vast body of geometrical propositions (which were held to be demonstrable) could actually be demonstrated To these he added explicit definitions of some of the terms involved in the ' primary principles ' He assumed that these definitions were the relevant generally accepted definitions for the terms involved in the ' demonstrable ' geometrical propositions But, as Leibniz would have said, Euclid did not carry his work of analysis far enough For *he did not show that his ' primary principles ' followed analytically from the definitions of the terms involved* Thus Leibniz would have sought new definitions such that, by substituting them for certain terms in the primary principles, these appeared as identical propositions *we should, of course, have to ' assume the definitions These, however, are simply rules of language*

be shown to be tautologies This then dispenses with the ' primary principles ' which are ' identical propositions ' for these are really *demonstrable from the definitions*

(*d*) The very notion of a principle that is ' demonstrable ' requires elucidation For Euclid a proposition was demonstrable if it could be deduced logically from a set of accepted postulates But I want to replace ' accepted postulates ' by tautologies—that is, by a set of propositions that are ' demonstrable ' by the application of a given set of *definitions* This defines ' demonstrable in a given system ' ' Absolutely demonstrable ' could only mean—' from a set of relevant and generally accepted definitions ' Just as Euclid held that no set of self-evident propositions could be inconsistent with any other, so we may fondly hope that in one language no set of relevant and generally accepted definitions will clash with other similar sets

(*e*) Euclid's postulates and theorems are not self-evidently true of any actually existing lines or shapes But it remains a feature of Euclidean Geometry that it is simpler and more convenient for use in informative propositions Hence, although all Euclid's principles may be shown to be tautologous, yet there may well be good reason for prefering Euclid's tautologies to those of Riemann or Lobatcheffsky

6 It appears then that the validity of a theorem is established ' without any recourse to experiment ', and could be established by a person who did not known what the signs defined (e g ' circle,' ' straight line ') are used to indicate And we can readily imagine a code in which the definitions are all in terms that have no use at all in informative language—have no ostensive descriptions or definitions It will still be possible to say of a given expression composed out of these signs whether or not it can be validly deduced from the primitive propositions or postulates And in fact the necessary connections between postulates

and theorems will be most easily seen if they are expressed in signs which do not, by their reference to things experienced, divert us from those connections

So that all necessary propositions supply us with information, not about the objects (if any) designated by their terms, but about the definitions of the terms themselves And ' All white swans are birds ' is *authoritative* in something like the sense in which we might say that Plato's use of the word εἶδος is authoritative we feel *justified* in using this word in any way that can be matched from the dialogues And if ' All white swans are birds ' be accepted as *necessary*, then this tells us something about the way in which we are and are not justified in using the words ' swan ' and ' bird ' In a similar way the ' laws of logic ' or the postulates of logical thought (and also theorems deducible from these) tell us how we ought to combine the logical constants with non-formal words, to make new expressions that have reference I now want to examine in more detail the two sorts of necessary propositions those that illustrate the combination of signs that have reference individually (' man ', ' moon ', ' red ') and secondly those that illustrate the combination of formal with non-formal signs I begin with the latter [1]

7 In demonstrating logical theorems we cannot say " And is a — " But we can give a *definition-in-use* of such words just as we might offer a definition-in-use of ' parent ' by saying

A is the parent of B if A bore B or A begot B ,

so also we can give such a definition of a purely formal word

[1] The terms *prescript*, *descript*, *code-form*, *foundational code*, and others used in the following discussion, I owe to Professor H M Sheffer of Harvard University and I also owe to him some of the principles here set forth But I cannot be at all sure that I have properly understood what he said in his lectures and discussions, and I cannot lay upon him any responsibility whatever for what I say

" p *and* q " means the same as " NOT (NOT-p or NOT-q) "
" p *or* q " means the same as " NOT (not-p and not-q) "
" a is a *factor* of c " if " a times x equals c "

These *rules* or definitions give rise to the following remarks

(*a*) The explanation of how to combine the formal and the non-formal words into new meaningful expressions must make use of some non-formal signs But (within certain limits which will be explained later) it does not matter *what* non-formal signs we use We might write

" To-day is Monday and it is fine " means the same as " NOT {not (To-day is Monday) or not (it is fine)} "

But it is obviously more sensible to make use of signs (p, q, r, etc) which do not actually have any reference, but which are merely there to indicate that any significant non-formal sign might be placed at this position in the whole expression And we use different signs to indicate that different non-formal signs may be placed at these different positions (But not, usually, that the two or three signs *must* be different) In this way we concentrate attention upon the words which have previously known functions—the signs ' not ' and ' and ' and ' or ' we concentrate attention upon the *constants* not on the *variables*

(*b*) But the rule " p or q equals q or p " is not after all merely about ' or ' It is equally *about the order of signs* (temporal or spatio-temporal) Obviously a change in order may give us an expression with a different meaning or with no meaning at all [1] The order shows us the structure of the referents because it is conventionally used to indicate it, not (of course) because it actually reproduces for us the structure of the referents (See above, Chapter V, § 13)

(*c*) The rules about ' and ' and ' not ' and so on, seem to be of *varying importance* Thus

p or q or r = r or q or p

[1] See Wittgenstein op cit , 4 122 to 4 126

seems to be less ' fundamental ' than

$$p \text{ or } q = q \text{ or } p$$

because we feel that the former is only a special application of the latter This ' application ' is not such a simple process as is often imagined *What right* have we to suppose that if

$$p \text{ or } q = q \text{ or } p$$
$$\text{then } p \text{ or } q \text{ or } r = r \text{ or } q \text{ or } p \text{ ?}$$

I think the answer must be, that we make the deduction by some other rule of language still more general, (Such as that ' p or q ' can always be used instead of ' p ' to give a new expression which also is significant) But, clearly, it is conceivable that we might construct a set of primitive definitions and postulates in Euclid's manner, from which, by the help of rules of inference, we can deduce all the valid rules (necessary propositions) which show the use of a given set of signs This we may do for the logical constants—' and ', ' not ', ' or ', ' if—, then— ', ' neither—nor— ', in just the same way as was done for ' line ', ' point ', ' angle ', ' circle', etc that is, by postulational analysis A code for the logical constants might be called a Foundational Code—a code for logic in the narrow sense Then the basic ' assumptions ' are really the *definitions* of the signs used, and the demonstrable propositions or ' theorems ' can be shown to be tautologous by the consistent application of these definitions

(*d*) The ' definitions-in-use ' of these terms are always circular Just as we can *define* ' or ' in terms of ' not ' and ' and ', so also we can *define* ' and ' in terms of ' not ' and ' or ' And which definitions we make into our *primary principles* will be a matter for arbitrary choice (or rather for æsthetic determination)

(*e*) The sets of rules which govern the use of the logical constants also govern the use of the non-formal signs which these connect And the whole set tells us part of

what we mean by ' an expression in the system ' and part of what we mean by ' nonsense ' An expression in the system has *reference* but *a necessary condition* for its having reference is that it should *not* be made up of non-formal signs and formal signs in an arrangement *excluded by* the laws of foundational logic

(*f*) What the rules exclude is Contradiction The rules are simply a method of avoiding contradiction in the framing of expressions Contradiction may be implicit or explicit One use of analysis is to reveal implicit contradiction

' Red and not-red '

suggests two referents but does not refer to either we could not say that the discovery of red would verify this reference, nor that the discovery of blue would verify it It may therefore be called meaningless

(*g*) Why is it that the logical constants used in informative discourse are so defined that, if used properly, contradiction is avoided ? Why is it that the Law of Non-contradiction is (as it seems to be) fundamental for all informative language ? We might say that " p and not-p " is a sort of maximal case of *ambiguity* But that leaves us with the question Why must " p and not-p " leave us hesitating between p and not-p ? Why not *both* ? Why are they incompatible ? Are we to say that a contradiction cannot (as it happens) be found anywhere in nature ? Or that, even if it could occur, we could not *think* about it ? Or is it merely that anything may happen, but we describe it in consistent language ? This question will be discussed in Chapter VIII

8 A code for Foundational Logic should consist of (1) a basis—the simple signs in terms of which the primitive postulates are to be expressed , (2) the primitive (or ' definitive ') postulates , (3) the rules in accordance with

which deductions are to be made from these, and (4) the theorems

Mr Sheffer calls the postulates and theorems " Descripts ", and the principles of inference, the " Prescripts " I am not inclined to think that the difference between the descripts and the prescripts is fundamental It might be argued that the descripts are expressed in the language of the code-basis, but the prescripts must always be expressed in some other language I should say rather that the *whole* code tells us about the proper use of the basic signs and of all signs definable in terms of these What the code says should be understandable If the *whole* thing is said in the language which the code is about, then that language must of course be known before the codification is read If the language is a brand new one, then we must *begin* to talk about it in another language [1]

It is always a sensible question whether such a code is accurate and adequate That is Have we here a set of rules which enable us to decide how to use all the logical constants, and is the use they determine the proper one—i e the current one, or the use which is held (by some body of experts) to be the ' proper ' one ?

For example, it might be said with some plausibility of the Code of *Principia Mathematica*, Vol I, § A, that it *does* show us how to use ' or ' although it has no such sign in its basis For we can quite easily see that the two common senses of ' or ' are such that

$$p \text{ or } (1)\ q = p \vee q$$
$$p \text{ or } (2)\ q = p \vee q \sim(p\ q)$$

On the other hand it has been urged that this code gives no

[1] But see below on the exact use of the signs which are ordinarily said ' to express necessary propositions ' Cf Wittgenstein, op cit, 5 452, etc, and W V Quine's review of R Carnap' " Logische Syntax der Sprache " in *Phil Review*, xliv, p 394 (July, 1935) " Carnap shows, Wittgenstein notwithstanding, that there is no vicious circularity in this syntactical analysis of a language within the language, nor indeed, in the description, by a sentence of syntax, of its own syntactical make-up "

adequate account of the word ' implies ', and that the sign " $p \supset q$ ", which was to be read ' implies ', has an altogether different use from any which is commonly given to ' implies '

Similarly it is an arguable question whether or not the authors of *Principia Mathematica* have provided us with a set of postulates from which can be deduced all the ' laws ' of arithmetic Since the ' laws ' of arithmetic are all necessary propositions about certain numerical signs and operational signs, it is evident that a code for (e g) the cardinal numerals is a possibility Similarly it is possible to construct a code for the rational numbers, and for imaginary numbers The ingenuity of Peano, Frege and their followers lies in showing that *all* these arithmetical codes are sub-codes of their Foundational Codes (That is, can be deduced as theorems in the Foundational Code of which the signs ' $\sim$ ' and ' $\vee$ ' are the basis) They have *succeeded* in demonstrating this, if all the necessary propositions which govern the use of the signs ' one ', ' two ', etc , as these are used in informative propositions, can be defined in terms of " p ", " q ", etc , and ' $\sim$ ' and ' $\vee$ ' [1]

[1] See Lewis and Langford, *Symbolic Logic*, 1932, p 330–1 Relational Logic, as recently developed, is interested in ' languages ' which are entirely novel and which have no ' proper use at all until the code legislates such a use for them These are called Code-Forms by Professor Sheffer A code-form may be Post-Foundational that is, it may presuppose the logical constants and the method of inference as used (e g) by Euclid , the postulates then give rules for the use of novel non-formal terms Then there is no possible question as to whether the rules give to the basic signs their ' proper ' meaning—their ' proper ' linguistic character But we can ask Is this code consistently and logically shaped ? If it is, then it may be possible to interpret the language to find a set of non-formal signs in current use which, when substituted consistently for the basic signs of the code-form, give the proper rules for these signs Such an interpretation is made, therefore, by the comparison of sign-patterns I do not make experiments with lines and points to see whether a given code-form can be interpreted as a code for plane geometry rather I study the proper use of ' line ' and ' point ' Note also that it is possible to construct *foundational* code-forms which do not presuppose the descripts and prescripts governing the use of ' not ', ' or ', etc If these were *not* interpretable as codes or sub-codes for the proper use of the logical constants, they would raise a great problem Are there ' alternative, non-Aristotelian logics ' ? This will be discussed in Chapter VIII It seems to me that, however ' abstract ' logic becomes, it does not cease to be a study of *the structures of languages* This, I think, would be contested

These questions are debatable, because such codes all attempt to analyse the rules which govern signs that have current use A sign has current use if it can be used in propositions of ordinary discourse—in this case, discourse of an informative kind In formulating a code for such signs, we may always appeal beyond definitions previously formulated, to the usage of actual informative discourse For previous formulations may be obsolete and may never have been accurate But the test of accuracy and of adequacy lies always in a comparison between the rules contained in the code, and the way in which these signs are used with approval in actual communications [1]

9 The rules that are formulated as the ' assumptions ' or postulates of a code for formal signs may be applied in the analysis of informative propositions, as well as of necessary ones (See Chapter VI) Material analysis (as I have said) always involves formal analysis, and so always involves the application of the formal rules But besides this it always involves the application of rules for the proper use of signs that have reference in isolation signs such as ' red ', ' internal combustion engine ' Once again, it is possible to analyse the way in which a set of such signs is actually used, in order to frame a set of rules from which it will be possible to deduce all the proper usages of a given set of signs Such a code will be post-foundational and non-formal This postulational analysis is actually attempted

by Professor Sheffer, who might be inclined to say that his code-forms need not be interpreted as structures of signs at all, but as structures of *any sort of facts* This raises the problem of the relation between the structure of language and the structure of fact See Chapter VIII below

[1] It is true, of course, that logisticians commonly take as their basis signs that do not come from current language at all But their aim may nevertheless be to make a language in terms of which a set of words in actual use can be accurately defined This aim may not be explicitly stated The matter is complicated, however, because the codifier may wish to reform the use of certain terms or to recommend their total abandonment This effort cannot be inaccurate—but may be inopportune

only for certain languages used in exact sciences, such as dynamics but codes for economics or the various branches of law would certainly be useful Spinoza attempted such a code for the language of metaphysics, in his *Ethica ordine geometrica demonstrata* Here again we can properly ask, on examining the code Is it accurate and is it adequate ? And the test lies in a comparison with the language as it is actually used with approval

10 I have put forward the view that explicit and implicit tautologies are special *applications* of primitive definitions and rules of language And the important distinction between definitions and other rules of language is that only the latter are ' demonstrable ', that is tautological Such rules can be formulated in many different ways principles which in one code or system are implicit tautologies may in another system be taken as *primitive* So that we can say of all the necessary propositions that we have been discussing in this chapter They are all definitions or tautologies, they are all about the way in which words have meaning It follows that they must be essentially of the same type as

' man ' means the same as ' rational animal '
' p ' means the same as ' p' '

I will begin with this last, and try to show exactly *what statement about the meaning of words* is conveyed by these words, and what exactly is the function of the signs in the expression

It seems to me that such a statement ' about the meaning of words ' is capable of three important interpretations (*a*) " p equals p' " may be understood to mean that the signs ' p ' and ' p' ' are both used to make the same reference This is a matter of fact and might be false There is nothing about the sign ' p ' or the sign ' p' ' that inevitably connects either of them with the referent p their connection is a

purely conventional one The explanation why they are used in this way will concern the references acquired in a certain group of people, by the individual constituents of the signs ' p ' and ' p' ' and it will concern what indication is attached by the group to the time-orders of these constituents When we have such an explanation, we can say The members of the group would be inconsistent if they did not attach the same reference to these two signs ' p ' and ' p' ' According to this first interpretation, then, " p equals p' " tells us about the language-habits of a certain group of people, and about a relation between words and things But we properly cannot say *to what* the two signs ' p ' and ' p' ' are related or rather we can only say it by using ' p ' or ' p' ' or some other sign that happens to be a third equivalent of these two

' p ' and ' p' ' both refer to p—or to p'

For while we can reproduce the signs that we are talking about, we cannot reproduce the fact to which they both alike refer So that ' what " p " means ' cannot be said—or rather it can be said by means of ' p ' or any other suitable sign, *but it cannot be reproduced*

(*b*) But perhaps when we write " p equals p' ", we often do not mean to say anything about how people actually use words to relate to facts and possibilities we may simply wish to say something about the way in which people *ought* to use words in reference to things Such statements, of course, are not falsified if people do not always use them in this way So that the second interpretation of the sentence is, " p and p' ought to be used to refer to the same proposition " This is a sort of regulative and analytical definition of the words in ' p ' It seems to me that it is the *imperative* aspect of such a statement that constitutes *the necessity of necessary propositions* and these propositions may be expressed in words especially chosen for their emotive power ' It is necessarily true that p,' ' In all possible worlds it is true

that p,' and so on A similar *urgency* often attaches to the propositions of morals and ethics and æsthetics, and will be discussed in a later chapter

(*c*) But, as I have suggested in Chapter I, the propositions we are now discussing have another striking characteristic besides being *necessary*, they are *a priori* By understanding the sentences that express them, and without making any observations (except of these sentences themselves) a reasonable person can see whether they are valid or invalid propositions It seems to me that the *a priori* character that belongs to implicit and explicit tautologies belongs only to a third interpretation—that the second interpretation involves certain kinds of observation that are not ' of the sentences themselves ' and that are not required for the certification of the third interpretation This involves a further restriction of meaning the second interpretation of " p equals p' " relates each of the signs to the same referent But if such a relation holds the signs must also be *directly related*, by an intraverbal or syntactical relation And I think it is just this fact that we commonly mean to express by " p equals p' " For if each refers to the same situation, then any expression in which either of them occurs will make the same reference if the other is substituted for it So that ' pq ' and ' p'q ' make the same reference, and so do ' pr ' and ' p'r ' and *therefore* the two expressions ' p ' and ' p' ' are *interchangeable* And " p equals p' " may be used simply to assert this *syntactical property* of the two expressions in a given language

11 I shall now discuss this third interpretation of analysis —the minimal, syntactical, necessary, and *a priori* interpretation

(*a*) This minimal statement is all that we *can* make when we are discussing the syntax of signs of whose references we are ignorant or of signs that have no interpretation allotted to them, but which belong simply to a code-form or of

purely formal signs whose rules are expressed by the help of variables

(*b*) The sign " p equals p′ " *shows us* something about the language in which it is expressed, and it is what it *shows us* that is comprised in the syntactical interpretation This ' showing ' arises from the peculiar function of the signs ' p ' and ' p′ ' They ought really to be written in inverted commas, since they do not occur in the sentence as signs *for p* at all Each occurs as a sign for a sign-type—the type of which it happens to be a token I might have expressed the same proposition about the two sign-types by writing

" Sign-type No 1 and sign-type No 2 are interchangeable "

If so I should have to explain these numbers I might draw tokens on the blackboard and point to them but in Delayed Discourse I could not do this But I can illustrate If I were writing about a house I should probably want to include a plan of it—as an illustration And the illustration-method is, of course, that followed in giving rules of language We might write " In all expressions in which either occurs, the sign illustrated in Fig 1 and the sign illustrated in Fig 2 are properly interchangeable " But instead of that we insert the illustration in the text and use it (*instead* of ' Sign No 1 ' and ' Sign No 2 ') as *both a sign for the sign-type and an illustration of it* To indicate that the sign here has this quite unusual reference, I *may* place it in inverted commas

A simpler example Amongst the objects in the world which I may want to write about are dappled objects (horses, clouds) and also tokens of the word-type by which these are designated To refer to the former I may (*a*) point at an example or (*b*) use a purely conventional, accidental tag or label To refer to the latter I take the extraordinary step of producing a member of the class, on paper or by voice So far, this is just like pointing at a dappled pony But this example is itself used as the sign for the whole class to which

it belongs Notice that this is really more than an *illustration* —it is an *instance*

I am inclined to think that in this extraordinary procedure lies the whole *virtue* of confining our *pen-and-paper* linguistic (or 'philosophical') discussions to the discussion of the interrelations of signs themselves For so long as we write about signs we can adopt this ingenious method of referring to the objects under discussion If I write about the fixed stars, I have to give a long and very intricate description in order that my readers may be able to identify the referents in question If I write that the word 'red' is used as a sign for objects of a certain sort, I have to give a general description of what sort these objects are But if I write about the connection between the sign 'red' and the sign 'colour', I can use, as signs for these objects, *actual examples of them* This is an enormous advantage, but it seems to me to be *nothing more than an accidental and relative one* Thus we have little difficulty in discussing the *weights* of *bodies*, although 'a body weighing one pound' is something that cannot conveniently be attached to a sheet of notepaper And again, in continuous discourse I can illustrate what I use the word 'man' or 'mountain' to stand for I *can* point at them And again, just as a biologist who introduces a rabbit into his laboratory cannot be sure that his class will understand that what is said of the 'specimen' is also being said of all rabbits, so that this rabbit is itself a sign (*not* a conventional sign or word) so the logician cannot be sure that all his readers will understand to what his sign 'red' refers (viz to the sign-type) Although 'red' occurs as an illustration, and even as an *example*, it is still a *sign* for something other than itself (A sign-token is not to be identified with the type to which it belongs!) Hence the sign *may* be misunderstood And again, we cannot be *sure* that what the reader sees when the book comes into his hands, will be what any normal person would report as 'a token of such and such a sign-type'

Even if the printer copies the manuscript correctly, we cannot be *sure* that it will remain indefinitely as the printer made it Such relative advantages can be paralleled from other spheres the painter can give directions with the help of colours reproduced on his pages and the builder can draw shapes and designs They too cannot be sure that time will not efface their lines and fade their colours [1]

(*c*) Only the syntactical interpretation is really *a priori* for it is *only* what is comprised in this interpretation that is *shown* us by the signs themselves—that is, by the words " p equals p′ " As I shall try to show in more detail below (§ 13), such statements can really show us something about the *intraverbal rules* by illustrating for us the sort of combinations that are allowed, and by illustrating for us the signs that are under discussion But such expressions as " p equals p′ " cannot directly show us anything about the structure of facts for which the signs ' p ' and ' p′ ' stand we cannot, by examination of these illustrations, see that they have reference at all We can learn this only from Ostensive Definitions these are *necessary but not a priori* For it cannot be done by words alone, and it cannot be done by pen and paper [2]

(*d*) So that if " p equals p′ " is regarded as both necessary and *a priori*, then it must be interpreted in the third way

[1] How often do philosophers write of ' the whiteness of this page ' but their books might be printed on pink paper !

[2] We may regard the use of ' p ' as an ostensive description of a sign-type, just as " This is a table " But this description suffers from the defect that what is written on a page may not reach the reader in its proper form This risk is minimized in real ostensive descriptions, in continuous communications I deny that we *cannot* talk about what signs refer to I can say " the sign ' kettle ' is used for *this* ' , and I can write " The sign ' kettle ' is used for a metal vessel with a lid and a spout " But the important thing is to distinguish such discussions from purely syntactical ones It has been objected that " p equals p′ " is really a pseudo-statement ' p means the same as p′,' it is said, could not be asserted unless I knew what ' p ' meant but could I know what ' p ' means without knowing that it means the same as ' p′ ' ? Of course the truth is that I may well know that ' p ' and ' p′ ' are interchangeable, without knowing whether either of them have any reference at all and I might know the reference of ' p ' without knowing that ' p′ is its equivalent

upon this interpretation, the words mean that the two signs (preferably in inverted commas) are interchangeable the one for the other in any expression in which either of them occurs and where ' p' ' is an analysis of ' p ', directional, formal or material, this fact can be deduced from " p equals p' ", by a knowledge of other rules about the interrelations of these two signs and other signs, together with what " p equals p' " *shows us* Any rule *shows* its connection with other rules, because it reproduces for us the signs that also occur in the other rules we can *see* the connection between ' p' ' and " pq implies r ", in the rule " p equals p' "

12 I now want to decide the question whether we can show that *all* valid necessary propositions (of the kind I am discussing) are really quasi-syntactical sentences expressing purely syntactical facts or rules [1]

I have decided that for the purposes of this discussion all necessary propositions about objects are either tautologies or definitive rules (cf §§ 4 and 10 above) Clearly definitive rules are of the same kind as *p equals p'* they are quasi-syntactical sentences which tell us how signs are interrelated *man equals rational animal , p or q equals q or p* They are generally accepted, relevant definitions They are not tautologies, since there are no *generally accepted relevant* definitions from which we can deduce these definitions (But a system

[1] I wish to exclude from consideration apparently necessary propositions which can be analysed into genuine contingent propositions about objects There are, I suspect, many of these They really do tell us something about the objects designated by their signs and this information may be true or false, and is not in any sense necessary e g The assertion of the approximate velocity of light On the other hand " Light has a finite velocity " cannot, we feel, be contingent it must be necessarily true or necessarily false That is, it tells us something about the definition of ' light ' As first propounded, perhaps it proposed a new definition for ' light ' Thus ' the discovery of the finite velocity of light ' may refer to the discovery of the fact that light travelled at *so many* miles per second, (which is factual) or to the proposal to change the definition of ' light '— which is not factual at all, but a syntactical proposal

is conceivable and may be constructible, which will entail these as theorems) They include

(1) Rules about non-formal signs (definitions, type-rules)
(2) Rules about logical constants (definitions-in-use, equations)
(3) Rules about order-of-words, punctuation
(4) Rules about how deductions are to be made (prescripts)

e g Replacement wherever you have a definition

$$p \supset q = \sim p \vee q \quad \text{Df}$$

it is possible to replace definiendum by the definition

The most important of these is *Consistency* once adopted, a rule must be followed

These are all clearly syntactical or quasi-syntactical

We must now consider tautologies We prove a necessary proposition to be valid, by applying to it the definitive rules, and showing that it can be expressed as an explicit tautology So that the necessary proposition

All white swans are birds

tells us that if we analyse the meanings of *these words illustrated*, we shall have a sentence of a certain logical form—a tautology ($p = p$, $\sim p \vee p$, $\sim (p \ \sim p)$, If abc then a) But this information *is about the rules* which define the terms involved It is quasi-syntactical information So that the view that all necessary propositions that are not actually definitions, are tautologies, amounts to the view that *all* necessary *a priori* propositions whatever (except the kind we are not here discussing) give us information about the proper way to combine words *are in fact rules of syntax*

This is clearly stated by Lewis and Langford (op cit 211)

> " The *source* of this necessary truth, be it observed, is in *definitions*, arbitrarily assigned Thus the tautology of any law of logic is merely a special case of the general principle that what is true by definition cannot conceivably be false it merely explicates, or follows from, a meaning which has been assigned, and requires nothing

in particular about the universe or the facts of nature Thus any logical principle (and, in fact, any other truth which can be certified by logic alone) is tautological in the sense that it is an analytical proposition The only truth which logic requires, or can state, is that which is contained in our own conceptual meanings—what our language or our symbolism represents Or, to put it otherwise there are no laws of logic, in the sense that there are laws of physics or biology , there are only certain analytical propositions, explicative of ' logical ' meanings, and these serve as the ' principles ' which thought or inference which involves these meanings must, in consistency, adhere to "

Compare also Wittgenstein, op cit , 6 112, on Theorems of Logic

" The correct explanation of logical propositions must give them a peculiar position among all propositions

" It is a characteristic mark of logical propositions that one can perceive in the symbol alone that they are true , and this fact contains in itself the whole philosophy of logic And so also it is one of the most important facts that the truth or falsity of non-logical propositions can *not* be recognized from the proposition alone "

13 The view that I have put forward explains how definitive rules *show us* how signs ought to be combined, and that tautologies *show us* signs and give us a clue to the proper way of combining them (In much the same way as $s = \frac{1}{2}ft^2$ gives us a clue to the numerical value of f) The ' showing ' is done quite literally by the use of sign-illustrations or examples

Thus

(1) (2)
All white swans are white

shows us that what a sentence asserts it does assert and must not deny for a sign of the same type as ' White ' (2) is a spatial part of ' White swans ' Again " All white swans

are birds" puts before us two signs 'white swans' and 'birds' We *observe* that the sign 'swans' is the same as that which, by a definitive rule, is equated with the sign 'bird, large, living in fresh-water' So that the appearance of the sign 'white swans' suggests the sign

'White bird, large, living in fresh water'

which is substitutable for it in any expression We then *see* that we have a tautology—that "All white swans are birds" does follow from the rules about the two signs 'white swans' and 'birds' Hence that *it* is itself also a rule of language about these signs But it is clear that these 'necessary propositions' can be seen to be true from the signs used to express them, *because those signs happen to be examples of the things they signify* If I were to use illustrations *hors texte* and append numbers, I might express "All white swans are white" as follows

WHITE SWANS	WHITE
FIG 1	FIG 2

"The sign in Fig 2 is properly substitutable for the sign in Fig 1 but not vice-versa, because the former is a part of the latter"

We *cannot 'perceive in the symbol alone'* that this statement is true any more than we can perceive in the symbol alone that it is true that

Glamorgan is a part of Wales

But we can see the tautology to be true by examining the sign and the illustration And the whole point of expressing the tautology in the form

All white swans are white,

or 'White' is included in the definition of 'white swans', is that we use our illustrations as signs—our signs as illustrations It is for this reason that "one can perceive in the symbol alone that they are true" We supply Ostensive Descriptions (of a fallible sort) *in Delayed Communication.*

And of course, in continuous discourse, we can *show* that "this is included in that", for we can point to this and point to that. For just as all contingent informative propositions are verified by observation, so also we verify statements about the structure of language by examining the pictures that they offer us ("One can *perceive* in the symbol alone"). But we cannot verify "This is included in that" by examining symbols, because this is a genuine-object sentence, and is about *this* and *that* not about the words 'this' and 'that'.[1]

Now *the informative content* of "All white swans are birds" is a reference to sign-types and to the way they are generally combined by a certain group. Its truth or falsity is therefore determined by facts about syntax. (Its *necessity* lies in its urgency, its imperative mood.) It is not true, however, to say that we can verify the information merely by examining *the sign-tokens offered us immediately*: we need to know rules (e.g. the definition of the word 'swan') by means of which to test this alleged rule (i.e. we need to *understand* the syntax of these signs). But it is true to say

(1) that the verification of the informative content of this proposition *begins* with the observation of the token used to express the proposition,

(2) that the verification could be confined to observing the use of sign-types by people of a given language-group.[2]

[1] Needless to say we cannot learn by examining *any* symbols as such, whether or not the propositions that the symbols refer to are true or not. We learn that All white swans are white by examining the picture. The signs, *qua* signs, cannot tell us whether this is valid. Nor can the sign "It is true that so-and-so," tell us any more than 'so-and-so', which may be false. In a similar way 'A has verified so-and-so' tells us simply that 'There is evidence for so-and-so', which is only that some of the statements made by 'so-and-so' are true—which may be false.

[2] I doubt whether rules of language could be discovered simply from writings: a knowledge of the importance attached by people to the writings would (I think) be necessary for distinguishing between uses that are *approved* and uses which (even though quite common) are not approved. So that our knowledge even of syntax is seen ultimately to be a knowledge of human behaviour—which is *focused upon* sign-uses. See above, Chapter II, § 8.

So that the *truth* of " All white swans are birds " means ultimately the truth of certain *information* about the way in which certain people combine ' white swan ' and ' bird ' The statement is made emotively, imperatively—persuading a listener *to keep to the traditional usage* But this persuasion cannot be true or false, although it can be fortunate or unfortunate [1]

14 Necessary propositions are not opposed to ' impossible propositions ', but to nonsense the contradictory of a valid necessary proposition, and any other sort of invalid necessary proposition, is nonsense A combination of signs is nonsensical if it involves any inconsistent application of rules of language ' To be talking nonsense,' to fail (perhaps) to communicate, to come (perhaps) under public censure—these are the only *sanctions* of the Laws of Speech So that, if ' a ' be the name of a place, then " a is red and blue " is nonsense, because ' red ' implies ' not blue ' The sentence does not refer to a state of affairs that is impossible it refers to nothing Nor can we say that it is ' impossible ' that ' red ' and ' blue ' should represent a state of affairs "clearly this is not at all impossible We might have used any sign-type differently, and ' blue ' might have stood for a shape or a size or a smell

Nonsense would not be very interesting if it were always as obvious as ' red and blue ' But it is now a familiar fact that the rules of languages used in ordinary discourse often mislead us into talking nonsense without knowing it A set of words may be implicitly nonsensical, so that only a prolonged analysis will show that it is not good sense The abuse of language is as complicated and difficult a topic as the use of language—or far more so, since (as the Greeks said) evil is infinite Each language has its own pitfalls which

[1] The views expressed here about the special function of signs used in necessary propositions were published in an article of mine in *Analysis*, April, 1936

may give rise to empty arguments and meaningless questions. Hence it sometimes happens that some of the important 'truths' and 'inquiries' of one language cannot be translated into other languages Dr Neurath compares Einstein and Heidegger, both of whom put forward theories that are very hard to understand

> "We find it very queer, and—perhaps—unacceptable, that Einstein is somehow expressible through the medium of Bantu, but not Heidegger Has German then been misused?" ("Uber Protokolsatze," *Erkenntnis*, III, p 204, etc)

Professor Carnap has made a special study of certain metaphysical questions which he has tried to derive from nonsensical expressions—questions which are, therefore, 'Scheinprobleme in der Philosophie' It seems to me perfectly clear that the expression

All men are rational animals

is intrinsically misleading, and that what it says is more clearly expressed in sentences about 'man' and 'rational animals' I also agree with Carnap that the expression

> 'Man' and 'rational animal' are properly used to refer to the same class of object

is a *quasi-syntactical sentence* in the sense which he has adopted for this term For (in general) if

'p' and 'p'' both refer to the same proposition

then it is also true that

'p' and 'p'' are interchangeable

I also agree that it is this second proposition (my third sense of "p equals p'") that is syntactical and certifiable by a study of syntax alone But I do not regard these two propositions as equivalent for me they are both legitimate, but different, senses of the sign "p equals p'" It seems to me obvious

> (1) That we can, if we like, write about the relation between signs and the objects they refer to

(2) That in such a discussion we learn about the structure of facts from the structure of language

(3) That such a discussion is essential to a complete account of Communication and is a part of the Theory or Philosophy of Knowledge

So that I reject Carnap's statement

> " The disguise of the material mode of speech conceals the fact that the so-called problems of philosophical foundations are nothing more than questions of the logic of science concerning the sentences and sentential connections of the language of science, and also the further fact that the questions of the logic of science are formal —that is to say, syntactical—questions " (*Logical Syntax of Language*, p 288) [1]

15 If we were to identify syntax with epistemology, we should find certain paradoxical consequences

(*a*) We shall have no grounds whatever for distinguishing sentences which (directly or indirectly) arouse expectations which may or may not be fulfilled, from sentences which have no reference at all For " ' p ' has reference " is not a statement merely about signs

(*b*) We shall have no grounds whatever for saying, of two mutually inconsistent groups of propositions, that one and only one can be true For truth, like reference, depends upon a relation between signs and something else

(*a*) We can only give an account of ' Information ' as a system of propositions based upon what people directly observe—the direct record of the scientists' experience, as Carnap once wrote This account concerns the way in which signs refer to objects, and is not syntactical in the sense we have been using Within the limits of syntax, we

[1] Philosophy is most usually a pen-and-paper affair So that we cannot *show* that any genuine-object sentence means a true proposition to this limitation, all delayed discourse is subject But we can, in the way I have described, *show on paper* that certain propositions about the interrelations of signs are true And this is the province of syntax, and all syntactical sentences can be shown to be veridical or not, by pen-and-paper methods

can note the connection between sentences and between the signs that are *basic* for those sentences we cannot show any connection (*via* established ostensive descriptions and definitions) with what any normal person may observe But it might easily happen that, within one community, there should be different groups of people, some of which were able to establish ostensive definitions in which others were quite unable to join Then the preference of the logician for some signs rather than for others, could not be justified upon any *syntactical* grounds—in syntax alone we cannot define what we mean by 'informative language' And if we were to deny the possibility of discussing the way in which signs have significance for people, we should be unable to give *any* rational account of the difference between the language of the scientist, the language of the madman, the language of the mystic, or the language of the nonsense-metaphysician And this seems to be the view taken by Professor Carnap in his latest book [1]

Similarly (*b*) within one language we can distinguish by syntax various groups of propositions that are consistent with one another, and inconsistent with others But within the limits of syntax we shall not be able to explain what could be meant by calling one such consistent group 'true' and others 'false' What *logical* principle could enable us to pick out any one set? Dr Neurath says bluntly "It is a historical fact that, on the whole, a man sticks more obstinately to his own protocol sentences than to anyone else's," but our preference for "the system over which we preside" is not a *logical* one—it could not be reasonably defended, except

[1] See Rudolf Carnap, *Logical Syntax of Language*, 1937, and Carnap's "Erwiderung auf E Ziesel u K Dunker," in *Erkenntnis*, B III, p 186 Cf a review of the original German edition by Max Black in *Philosophy*, Jan, 1936 Carnap now 'finds it impossible to distinguish between science and metaphysics on the basis of strictly formal criteria For one language, *qua* calculus, is as 'good as any other "Logical criteria alone do not suffice to allow for differences in the epistemological status of propositions

upon some personal ground (*Erkenntnis*, B III, p 204, etc) And Professor Carnap seems to say that this choice can be decided only upon emotional grounds but " in der Logik gibt es keine Moral " We must be content to find that *the same sentence* may mean a true proposition in one group and a false one in another

For these reasons it seems clear to me that, in order to define ' informative language ' and ' science ', we cannot confine ourselves to mere syntax This, of course, does not in any way impeach the validity of purely syntactical propositions (nor, therefore, of the ' minimal ' interpretation of " p equals p' ") but it does deny the thesis that the Philosophy of Science is wholly comprised in the study of syntax

16 The account of ' science ' and ' informative language ' given above (Chapters III and IV) was *not* wholly in syntactical propositions , but it is important to notice that it does not exclude these possibilities For (*a*) we could imagine a community of a hundred persons, half of whom could agree in the establishing of ostensive definitions of terms that the other half could not by any means be made to use or to understand , and we can even imagine that each half has its own language, both groups using the same words but quite unable to understand each other In such a case, could we not say that each group had its own notion of information and of science, and that these terms were incurably equivocal ?

It seems to me that this apparent plurality need never be finally accepted For each group may hope to offer an *explanation* of their failure to co-operate with the others in the building up of a language They can try to find some physiological differences between the normal members of their own group, and the normal members of the other group , and in this way each may try to complete its own science by information (expressed in terms that they can themselves

understand) *about the other group* in doing so, they will be showing that the assertions of the other groups may after all be regarded as an *addition*, rather then as a *rival*, to their own For a place will be found in their system for *what the other group experience*, in much the same way as we find a place for what mystics experience, or what animals experience

Of course no such explanation may be forthcoming but no group is ever justified in accepting a plurality of systems as *logically unavoidable* For they should never cease to look for an explanation of the difference—that is the Kantian maxim And the essential point is that it is always *logically possible* that Group A might have the same sort of experiences as Group B , so that they can always look for evidence of the character of those experiences, and hope that some evidence will turn up No one can deny that the actual existence of agreement is accidental but its *possibility* is *a priori*

And again (*b*) my account of informative language does not exclude the possibility that within a group of a hundred persons who *have* in the past co-operated in the establishment of ostensive definitions, disagreement should occur over the use of the terms so defined Half the group might report ' red here now ' and the other half, ' green here now ' Have we then the germs of two rival systems of ' truth ' ? Again it seems to me that we are not *obliged* to accept such a plurality, and even that the maxims of science oblige us not to accept it Either half may investigate the possibilities

—that the others have forgotten the right word ,
—that the others are not seeing the same colour as those who disagree with them, because their bodies are in an abnormal state ,
—that the others are lying

Here, again, the fundamental thing is that it is logically possible that some evidence may be forthcoming that will enable *each* half to complete or to modify its own findings

by reference to the findings of the others We are never obliged to say that a given proposition, exactly expressed, is both true and false differences of *any kind* (including differences in linguistic behaviour) can *logically* be described and explained in one scientific system , the actual achievement of such a system depends upon lucky accidents [1]

We may, then, describe science as *the system* of propositions, exactly expressed, which are based in a certain definite way upon reports of what is immediately perceived by normal people Such a system must include an account (in ' public ' terms) of what no *normal* person ever does observe the rapture of the mystic and the rambling of the madman Needless to say, we do not go on to characterize the propositions of science as *true* We are defining ' science ', and have not needed to make experiments in order to do so we are therefore not entitled to assert (in one phrase) all the propositions of the scientists It is sufficient if we have shown that a proposition of science is proved true only *if* it has referred us to things that have in fact been observed , that no proposition can be incorporated into the system if it is inconsistent with others already incorporated (unless the others are dropped) , and that we are never finally obliged to accept any inconsistency

Now the syntactical element in this description raises a problem which cannot be given an answer in syntactical terms Why *must* an expression be consistent if it is to have reference to experience ? Does the linguistic rule that a proposition must be either true or false tell us anything about

[1] In no case could a ' moral ' (*sc* ' emotional) choice between different sets of propositions be a reasonable procedure for in case (*a*) no member of one group can choose any set but that peculiar to his own group he cannot assert any other propositions because he cannot understand them And in case (*b*) a member of one group cannot elect to assert the propositions of another group because he can himself offer evidence that is incompatible with those propositions A man can only *believe* what he can understand , and he can always make some sort of observational test of propositions that he understands—something to lend probability or to diminish probability

non-linguistic facts ? And, more generally, do the structures of languages show us anything about the structures of facts ? Why should one linguistic rule be adopted rather than another ? Could *any* set of signs be used to make a reference ? Wittgenstein wrote that the way to reveal nonsense to a speaker would be " to demonstrate to him that he had given no meaning to certain signs in his propositions " (*Tract*, 6 53) This suggests that *any sign* might have a meaning Cf Schlick " Whenever we speak of logical impossibility we are referring to a discrepancy between the definition of our terms and the way we use them " He gives as an example " The child was naked but wore a long white nightgown " (' Naked ' *might have meant* ' bareheaded ') " The only case in which verification is logically impossible is the case where you have *made* it impossible by not setting any rules for its verification " (op cit)

I want to discover *a reason why* we cannot use our signs inconsistently and also convey verifiable information , and a reason why we do not define man as an immortal animal, or a heavy body as one which turns litmus paper red I want to trace the connection between laws of language and laws (and facts) of nature

Chapter VIII

STRUCTURE OF LANGUAGE AND STRUCTURE OF FACT

1 The Logician who becomes interested in language is inclined to speak of it as a calculus or a code or a grammar, and to ask questions about its *rules* He is not interested in how a certain person does in fact use words, but in what the words ought to mean, or properly mean He does not ask whether we can in fact doubt so-and-so, but whether it is *logically incorrigible* The psychologist must admit that these are genuine questions, but he may claim that it belongs to him to explain not only the language-habits of this or that person, but also why it is that a whole language-group approve of certain uses and disapprove of others In other words the psychologist may claim to answer the important question "Why do these words mean this rather than that? Why do we adopt certain rules of language rather than others?"

Is this a psychological question? It is a question that is inevitably suggested to the logician, but which he cannot answer except by reference to other rules—which raise the same question again The logician commonly dismisses this *why* as outside his field

In the following paragraphs I shall attempt to show what sort of answer should be given to questions of this kind And the answer depends chiefly on what sort of rule of language is in question if it is about the proper use of words that *have reference*, such as 'body', 'circle', 'plane', 'velocity', then the answer will interest the special scientist, who treats of bodies, circles, etc, as well as the psychologist and the philogist, who treat of words and our use of them But if

the question concerns the proper use of purely *formal* signs, such as ' not ', ' and ', ' or ', ' implies ', then the answer will not tell us about any particular objects (for these signs have no reference), but it must, if it is to be a satisfactory answer, tell us the general *modus operandi* of language used to convey information of any kind This will interest the psychologist, for it is an account of a most important kind of human behaviour , but it will also interest the philosopher, who may see here the explanation of some of his problems

I shall therefore try to show (*a*) how non-formal rules of languages are founded upon empirical generalizations about special fields of human experience , (*b*) that the facts that underlie our rules for formal signs are facts about thought and language, and not about the necessary properties of reality as such I hope it will be seen from my arguments, that the psychological *genetics* of language cannot supersede the logical *analysis* of language, but that the latter invariably suggests questions that are psychological It is in my view, a most important part of the logician's business to see that the answers given by the psychologist are wide enough to account for the most general and abstract elements in the structure of language [1]

2 *Definitions are based on Empirical Propositions* — Rules of language, as I have explained them in Chapter VII, are certainly related in the closest way to empirical generalizations and, in fact, the same sentence-type may sometimes serve to indicate the one, and at other times the other I want now to examine in more detail, by means of an example, the relation between the two types of proposition

Example —Suppose that investigators have discovered the presence, as an impurity in some other substance, of a

[1] Mr Bertrand Russell s latest account of the use of the logical constants is an excellent example of a too-narrow psychological explanation of formal rules See below, § 15

hitherto unknown metal By a series of tests, those of the original ' signs of an impurity ' which are found constantly conjoined, become the properties of a metal X by these alone the presence of the metal is to be discovered, and its name ' X ' is a shorthand substitute for a description in terms of these properties Suppose that at length the metal is isolated and its melting-point discovered Here is certainly a great discovery the melting point of metal X is x degrees C It is no invention efforts are made to corroborate or refute the alleged discovery Finally it is universally accepted as being a *true* empirical generalization that metal X (i e whatever has the properties previously identified) melts at x degrees C But of course the new property is forthwith incorporated *into the definition of x*, and very soon assumes primary importance there And in fact *the supreme test* as to whether or not a given substance is the metal X is the finding of its melting-point So that while it is certainly an empirical generalization to assert some *new* property of X— " The metal X makes very good pots and pans,"—what are we to say of " The metal X melts at x degrees C "? This simply means " That which melts at x degrees C and has certain other properties, melts at x degrees C ' The great discovery has become a simple tautology

My contention is that wherever a scientist regards the connection between a set of phenomena (the melting point and the other properties) as absolutely certain, and infers from the presence of certain members to the presence of all the others, and speaks of them as connected *by natural law*, and uses one term to refer to the whole set, then we have passed from empirical generalization to tautology I am anxious in this chapter to do justice to the full *a priori* character of certain of the natural sciences, to the deductive character of physics, mechanics, and much of chemistry and theoretical economics To say that we can deduce one proposition from another is to say something about necessary

laws—that is, on my view, to say something about linguistic rules, that is, definitions, and rules that connect defined terms And it is surely plain that scientists and technicians do in fact regard the connection between a metal's melting point and its other essential properties as a necessary one, and do use words in such a way that it is contradictory nonsense to speak of the metal X having a melting point of x – n degrees C

Yet even so it would still sound odd to say that it is *a rule of language* that a certain metal has a given melting point. The objection would be made that if we were to decide to use words differently, and to make it a rule of language that 'the metal X' melts at x – n degrees C, this would not alter the *fact* that x degrees is the right melting point, and any other is wrong

I think the answer to this objection is that we must trace carefully the connection between our *rules* and the *discovery* of the melting point For rules about the proper use of non-formal signs are normally *founded upon* empirical generalizations The question "Why do we adopt *these* rules, these definitions?" is one which the philologist alone cannot answer For the answer must refer us to antecedently accepted generalizations

3 Clearly an empirical generalization cannot actually *entail* a regulative definition a definition is a *direction* which is based upon facts about word-usage But while facts about the world as we know it make it *convenient* to adopt certain usages, they by no means exclude the adoption of inconvenient usages But a definition is *founded upon* empirical generalization in this sense The definition of X is expanded to include 'melting at x degrees C', because it is believed that there will be discovered countless instances of substances which have the other properties for which 'X' stood, and which also melt at x degrees C and that there will not be

discovered any that have these other properties and a different melting point Or, at least, that if anomalous cases occur these will be so few as not seriously to inconvenience the classification they will have to be called something else instead of ' X ' For example, ' white blackbirds ' are hatched from time to time, but we do not feel obliged to alter the definition of ' a blackbird ' The white birds are very like blackbirds, but of a different colour The exceptions are so few that they give us less work than the revision of the definition would do

These results may be applied to any natural law—as opposed to a *theory* whose revision is still contemplated They may be summarized in symbolic form

(*a*) A natural law, though it may be expressed in such a sentence as

All S is P

is not really a factual statement at all, and is not a statement about the classes S and P [1]

(*b*) A natural law is really a regulative definition it is about the use of the signs ' S ' and ' P ', and says

> ' P ' may be substituted for ' S ' in any expression in which the latter is used to make a statement, without changing the Truth Value of the statement

So that the law says If x is properly called ' S ', then it is properly called ' P ' also so that if it is *not* properly called ' P ' it is not properly ' S ' either If therefore we find a y which at first sight seems to be properly called ' S ', but which is not properly called ' P ', then we are to conclude that y is not really to be called ' S ' either, since

S $\sim$P is nonsensical

The facts of the world do not in themselves seem to

[1] Wittgenstein, *Tract* 6 3 " Outside logic all is accident " 6 3211 " Here, as always, the a priori certain proves to be something purely logical " 6 37 " A necessity for one thing to happen because another has happened does not exist There is only' *ogical* necessity '

determine any classification at all the world seems to be differentiated only by some human volition, instinct, plan Thus when primitive man seeks food, the animal and vegetable world suddenly appears as figured against a ground of rocks and stones and salt-water and within the animated world, great gulfs appear dividing off this and that tree from the useless twigs and leaves which man cannot masticate or digest In this way some trees and animals first receive names there is the red-berry tree and the black-berry tree, and the green-berry tree as for the rest, they have no names—they are just trees, all of them Similarly there are larks (because there is a lark-pie) and turkeys (because there is a roast turkey) but the rest are just birds

Similarly sexual desires suddenly splits one's acquaintances into the male and female, the child and the eligible adult, and from such primitive instincts develop all man's far-flung interests and ambitions So that finally even the craters on the moon have their names, and the hosts of heaven are called forth by number

In all these cases, we may say that the abstraction we adopt, the nomenclature, the *principia divisionis*, are functions of (1) our interests and (2) the materials we employ to satisfy them Where there is a group of objects which (1) vitally affect some human interest, and which (2) is encountered often enough to make the framing of a symbol a labour-saving device, then behold a new concept springs fully armed from the brain of man [1]

The relativity of abstraction to human purpose (a pragmatic theory of abstraction) must not, however, be supposed to entail a theory of the relativity of *truth* to human purpose The definition of the sign 'British subject by birth' is the result of many human purposes and cross-purposes but if the definition is well-determined, then to say of a person that he is a British Subject by birth is to say something which may

[1] Compare Malinowski's appendix to *The Meaning of Meaning*, p 331

be true or may be false, but whose truth or falsity is not dependent upon anybody's purposes it is, as we say, determined by the facts

4 *The Revision of Definitions* —If non-formal signs have their rules, definitions, based upon 'empirical facts', we must remember that these facts are never themselves 'necessary' Though believed for centuries they may ultimately be disproved And any such discovery involves an alteration in the definitions within a given field Thus important discoveries such as the finite velocity of light, curvature of light waves, necessitate the revision of the definitions of 'Time' and 'Light' The newly discovered facts cannot, indeed, be expressed at all in the antecedently adopted symbols they would violate linguistic laws and be called (as they often have been) 'mere nonsense' Thus if we define 'X' as 'that which melts at x degrees C', such a statement as

"A specimen of X melts at x — n degrees C"

is just *nonsense* But the necessity of this definition does not bind nature It does not exclude any imaginable event And we can perfectly well imagine that a substance, which has all the other essential properties of X, melts at x — n degrees C The only difficulty is a purely linguistic one such a substance is not the metal X We must then find it another name let us call it 'malleable X' Then what we have to say about it will in no way conflict with what we have to say about 'X'

But now suppose, on re-examination, all specimens that have the *other* essential properties of X prove to melt at x — n degrees C, and not at x degrees C It is at once obvious that the term 'X' has now become of no practical importance in chemistry for there are no X's, but only malleable X's In this case it is plain to see what will happen The symbol 'X' drops out of active service (and interests only the historian), and is replaced by an altogether new symbol

But the new symbol is almost sure to appropriate the old sign-type We shall adopt a new definition for the sign-type ' X ', which includes ' melting at x – n degrees C '

This pouring of new wine into old bottles may be a regrettable sign of parsimony in human energy and initiative it does give rise to a certain amount of confusion , it enables conservatives to say that ' five-dimensional space ' is a *contradictio in adjecto* But most people will find it possible to remember that a new symbol is in use—that we have begun to talk a new language—and to keep two senses of ' the metal X ', ' Time ', ' Space ', as wide apart as the two celebrated senses of the sign-type ' bull '

We may notice in passing that a rigid adherence to traditional definitions—long after their usefulness is exhausted —is one example of the disease which the authors of *The Meaning of Meaning* designate ' logomachy ' It is very hard for men to avoid the feeling that words have magic power Hence if the words are used in certain ways, we are all inclined to think that Nature is as respectful of our classifications as we are that Nature decides to make men, horses, birds, hills, streams, geraniums *that Nature preserves the type* That, if we define ' the metal X ' as having a given melting-point, Nature cannot produce a body which has all the other properties of ' X ' but a different melting-point Nature is parsimonious of species, we think, and will not send us an anomalous body which does not fit into our classifications Now I do not expect ever to find a body falling in a vacuum with any acceleration except that of 32 ft per sec per sec That is because my expectations are determined by experience But I am not prepared to deny the possibility of such an event , nor, I suppose, is any scientist

5 The revision of a definition, arising out of the revision of an empirical generalization, may be illustrated formally in the following way

Let us suppose that the definition ·

All S is P

i e ' P ' is substitutable for ' S ', but not vice versa

is adopted by a body of men engaged in a definite limited enterprise, because they believe it will be a useful instrument for their purpose They have discovered (let me say) that in all examined cases

All h, i, j, are also k, l, m

Let us suppose that, if anything had h, i, j, it was properly called an S (The law or definition h, i, j, = S, had already been adopted), and anything that had k, l, m, was properly called a P (k, l, m, = P Df) Then they had discovered that, so far as investigation had gone

All S is P

It now seemed most likely to them that no cases of S ~ P would turn up Hence they felt they could infer, with very high probability, that if anything had S, it also had P They then felt that it would save time and effort if they were to have a single sign for things that are both h, i, j, and k, l, m in fact, that a sign for things that are only h, i, j, and not also k, l, m, would never be *needed* at all [1] What they did then, was to introduce the definition (only for limited purposes)

S′ = h, i, j, k, l, m,

That is All S′ is P

[But (unfortunately for their confused moments) since they regarded the sign S = h, i, j, as really *without any probable use*, they used the same sign ' S ' for the new symbol so that the law they adopted was written

All S is P]

Supposing that investigation provides at last a case of the unexpected

[1] There are cases of Natural Laws which have at last been discovered to be based on generalizations which have exceptions but these exceptions so rare that for *most purposes* the old law has served that is the old law has proved efficient and labour-saving except for certain very limited purposes

$$h, i, j, \sim (k, l, m)$$

This fact cannot be expressed by saying

This S′ is not P

since that is a contradiction

$$h, i, j, k, l, m, \sim (k, l, m)$$

So long as we really have adopted the definition

All S′ is P

we cannot discuss the case of S′ $\sim$ P for this sign is nonsense

There is no difficulty here we can find some sort of way to describe this anomalous occurrence We can say "y has all the defining properties of S, except P"

or $(\exists y)\ (h, i, j)\ y, \sim (k, l, m)\ y,$

or we can revert to a disused symbol and say

$$(\exists y)\ Sy\ \sim Py$$

(In the case where 'S' has been adopted for the new symbol All S is P, then we shall have to explain that we are using 'S' in the sense it had before it was redefined as h, i, j, k, l, m)

We must still insist that the law

All S′ is P

has not been broken the law says S′P $\vee$ $\sim$ S′ and here we have a case of $\sim$ S′

However, the new law was introduced because the scientists believed that a case of hij, and not klm, would never need to be dealt with That belief has been falsified It is therefore almost inevitable that, if Sy $\sim$ Py is well authenticated, the definition of S′ will be abandoned That is, no one will now use the symbol

$$S' = hijklm$$

because they will want to characterize anything that has hij in such a way that the question whether it also has klm is left completely open

6. The discussion so far has dealt with changes in the meanings of words that are supposed to be *unambiguous*

Revision there takes place because a definition is found to be based upon a false belief But, outside certain scientific languages and the simplest of our everyday terms, most of our words are not determinately defined In such cases the unforeseen or unusual occurrence does not upset the definition by falling squarely *outside it*, it may, however, lead to a revision of the definition because it falls *neither inside nor outside it*

My example, above, of ' British Subject by Birth ' suggests the familiar difficulties of legal definitions We may suppose that the people who draft a Bill do their best to ensure that any privilege, any right, or any crime, trespass, tort, is so defined that, in every possible set of circumstances, it shall be quite evident whether the law applies or not But in fact, as everyone knows, they seldom succeed, so that counsel are able to debate questions of law, as well as questions of fact Where there is some real (and not fabricated) question of fact, it falls to the learned judge to make up his mind whether this new and unforeseen set of circumstances shall be called legal or illegal that is, whether the case under consideration shall be introduced into the definitions of the legislators, or excluded from it In such a case, as is generally acknowledged, the judge is himself a legislator he is not deciding whether an event took place or not he is deciding whether it falls under a legal definition he is deciding whether the definition of A is to be amended so as to include x, or amended so as to exclude x And it is admitted that he cannot be guided by evidence or by the text of the law he can only be guided by analogies, by his *beliefs* about the views of the legislators, or by ' a plain man's view ' as to what the legislators ought to have enacted—the views (as the lawyers say) of the man on the Clapham omnibus

In a precisely similar way, very many terms indeed, which are held to be well-defined, are found to be ambiguous when presented with unusual circumstances Thus people were at

one time content to say that a man must be *dead* if his heart had stopped beating This, however, has led to serious paradoxes the newspapers tell us of the dead coming to life again the heart can be made to start work again after stopping for considerable times Here those characteristics which (it was believed) invariably accompany heart-stoppage, are found (in unusual cases) *not* to accompany them We then ask Ought we to amend our definition ? We find that the dead coming to life seems to contradict our notion of death we find (in other words) that we do not know the definition of ' death ' the sign ' dead ' has no determinate linguistic relations with *all* other terms hence its definition is indeterminate And the unusual cases of clinical history are nothing compared with the unusual cases of legend and imagination Was S Dennis dead when he walked down the hill of martyrdom, carrying his head under his arm ? [1]

7 We are now perhaps in a position to deal with the familiar contention that the Laws and Definitions of Natural Science do not really give us any information about the world, because they are *so vague* that we can always interpret data in such a way as to preserve the law or the definition In this way, of course, our system of natural knowledge is made proof against refutation from experience And at the very least (it is argued) the only reason we are so absolutely certain of *some* of our laws, is because these are fundamentally vague, and can always be made to fit our data other laws are more definite but not held with certainty—that is, we are still willing to revise them, and regard them as hypothetical, not as apodeictic For instance, Newton's Laws are apodeictic but the ' laws ' of psychology are still only hypothetical But the superior certainty of the former simply reflects our determination to interpret laws

[1] This illustration and the general notion are Wittgenstein's

which are intrinsically vague, so that the data will always fit them

This is a complicated objection and reflects a great many confusions which have to be cleared up It is especially important because the conclusion to which I must come is easily confused with the position outlined above I shall begin with a further elaboration of my formal illustration

Suppose that the original (antecedently adopted) definition $S = hij$ was ambiguous in respect of a property g that is, whether

$$\left.\begin{array}{ll} & S = ghij \\ \text{or} & S = \sim g, hij \end{array}\right\} \text{ has never been asked}$$

Then if we find a y, such that y has ghij, we have to decide whether or not y is an S′ In this case, our new definition of ' S ' is really ambiguous too whether

$$\left.\begin{array}{ll} & S' = ghijklm \\ \text{or} & S' = \sim g, hijlm \end{array}\right\} \text{ has never been asked}$$

Now g may be compatible with klm (we will suppose that g is compatible with hij) or may not be In case it is *not*, we shall naturally decide that y is not an S′, since y here has the properties ghij $\sim$(klm), and we want to say that *all S′ are P* In this case we remodel our law in such a way that the data fit into it, for y is not an S′ i e , we have $\sim S'$ $\sim P$ Suppose again, g is compatible Then we may, if it is convenient, *redefine* ' S′ ' so that

$$S' = ghijklm$$

We can still say S′ P which fits the form of our law

But in both cases, our decisions have involved the redefinition (further articulation) of the term ' S′ ' and ' P ', that is we really have a law involving *new symbols*, although *it has the same form, and involves the same sign-types as before*

Suppose now that the original definition of P is ambiguous in respect of a property n whether

$$\left.\begin{array}{l} P = klmn \\ \text{or } P = klm \sim n \end{array}\right\} \text{ has never been asked}$$

This ambiguity infects the definition of ' S′ ' also, since we are now in doubt

$$\begin{array}{l} \text{Does } S' = hijklmn \\ \quad \text{or } = hijklm \sim n \text{ ?} \end{array}$$

Now it may be the case that we find an anomalous y such that y has hijklmn is it a P or not ?

> e g We find what seems to be a man who dies but is raised again Is he mortal—or does mortality exclude resurrection ? If not mortal, then not man But y may have all the *other* properties of humanity

If we decide that P includes the property n, then we have redefined ' S′ ', but we are left with a law of the old form and employing (probably) the same sign-types for the new symbols

If we decide that P excludes the property n, we are in a difficulty for we have ·

$$(\exists y) \quad nhijy \sim Py$$

That is, we have a case of S not P it is not a case of S′ not P, only because we have now redefined S′, so that S′ equals hijklm $\sim$ n In this case, to stick to the law all S′ is P is virtually to hide the fact that, where S has the property n, it is not P (A man may rise again and so not be mortal) But this is simply another case where evidence is found contrary to the empirical generalization upon which a law was founded a case in which revision becomes *expedient*

In all cases, however, where it appears that we have found an occurrence which violates the empirical generalization upon which an *a priori* law is founded, a natural tendency of experts is to deny the authenticity of the reported occurrence *This conservatism must rely upon hypotheses which it is not possible, in full, to verify* . but the hypotheses are genuine, in the sense that they are

verifiable in principle And I think it now appears that we can give a perfectly definite account of the way in which laws are founded on generalizations, and capable of revision when the generalizations admit of well-authenticated exceptions Hence, although Definitions and Laws of Science do not directly tell us anything about the world, yet indirectly they do they suggest generalizations which have so far been proved true of the world I shall now examine in more detail what is the significance of the fact that our Laws of Science have the particular form that they do have what precisely the laws of our language 'show' us about the structure of the world [1]

8 *Definitions inevitably have some Application to Nature — Necessary* Laws of Nature of the form All S is P, do not state facts about the world at all only principles of language Hence their 'application' to any field is inevitable that is, any field which consists of members of the appropriate type For everything of a certain type *is either red or not red* What is excluded will presumably be *otherwise categorizable* But the terms defined in Necessary Natural Law (i e in non-formal definitions) are used to make *a posteriori* assertions a is S and P It is clearly *contingent* if a is S and P, because it is *contingent that a is P*, and if not P then not S This is a fact about the world, but it is not *inevitable* or *necessary*, or *certain*

Similarly, a hypothetical generalization

All SP are Q

[1] That a natural law 'All S' is P" can ever be *formulated*, rests upon the fact (1) that many people are able to agree that all S's they have ever met have also been P This, in turn, rests upon the fact (2) that many people call the same stimuli by the same names This identification (by Ostensive Definitions) rests upon the fact (3) that similar stimuli affect many different bodies in similar ways That is, that our bodies are so similar in their peripheral nervous organizations Upon this lucky and sociable accident, the possibility of *communication* rests All these facts (1–3) are important but *contingent* See Carnap, *Unity of Science*, pp 57–64—"a fortunate but contingent fact"

is either true or false it tells us about the world, but clearly it is contingent SP $\sim$Q is *possible* The world exhibits endless such uniformities, but any statement about uniformities in the world is contingent and uncertain I think this is part of what everyone means by the question Is Natural Law inevitable ? And I think *it is not*

But it might be the case that we never met with anything that had not a certain property Q This, again, is a fact about the world, and is neither necessary nor *absolutely* certain But it may become the foundation of a non-formal rule of language That *all that* happens is to be described as a ' Q ' This is a fact about language, not about the world It is a regulative definition it is not ' true or false ', but ' necessary ' It implies that anything to which Q did not apply would not be regarded as datum for science would be classified as ' unreal ', ' illusory ' In this case we have an attempt to found a category which shall apply *to everything* it indicates a determination to exclude anything which escapes *this category* from discussion under *any other category whatever*

Now as in the case of any other system of categories, we have here (virtually) a rule of the form All S is P but the limitation in S is tacitly concealed [1] The law is

Anything discussable has Q

[1] C I Lewis *Mind and the World Order*, 1930
" any set of co-ordinate categories is simply a method of exhausting the possibilities The ' unreal ' is a temporary pigeon-hole for what requires to be sorted or analysed in some further fashion " (p 350)
" The applicability of concepts and the argument from past to future, require the presence of some order and uniformity In an experience whose content is independent of the mind, it may be thought that such order could conceivably be lacking, and that the presumption of it is, therefore, dogmatic and without foundation
" The conclusion of which I shall hope to convince the reader is that no assumption of anything that could conceivably be false is necessary , that no sort of experience which the wildest imagination would conjure up could fail to afford a basis for intelligibility and probable judgment The contrary assumption has frequently been due to the false conception that it is *certainty* of apprehension and certainty of generalization which must be provided for " (347)
This suggests Wittgenstein, op cit , 6 363 6 37, cf 6 361

This is really a rule since it introduces ' Q ' into the new definition of ' anything discussable ' So that all it says is

Anything is ' discussable ' and has Q, or is not discussable ',

Clearly the inevitable applicability of this law is simply that of

All red is coloured

And it must not be confused with the purely empirical and uncertain proposition

Everything we have discussed or shall discuss has Q

Notice that there are many reasons for a refusal to discuss not-Q may be distasteful (as Psychic Phenomena to Natural Scientists in general) or it may actually (physically) render discussion impossible The Heraclitean Flux is said to be such that coincidence of Ostensive Definitions is absent—hence also *Speech* So that ' Q ' may represent a surmountable condition for discussion or may represent an insurmountable one

9 Wittgenstein has an interesting illustration of the inevitability of categorization. Consider some sort of irregular figure against a plain ground say a map of Wales in silhouette Then any shape which we care to superimpose upon it, in any way, is a sort of question asked of the facts · does Wales—the map of Wales—fall within the shape or outside it ? SP or not SP ? This can be answered [1] but perhaps some of Wales will be inside, some outside We may decide that the greater part is inside *then Wales has SP* But clearly the part left out may for some purposes be important Now we might say—important *for other* purposes and not for this one Well and good for *other* purposes, we can use another category one category *clearly*

[1] The answer *Wales SP* is a contingent and not absolutely certain fact about Wales But the fact that the shape applies to Wales is simply Wales (SP or not SP)—necessary, linguistic

cannot answer *all* questions [1] But it is likely that the 'remainder' is really just as important as the part inside to say that Wales falls in the square SP is to make a true statement (so far as it goes) about the area and shape of Wales But we can easily imagine *a set of superimposed shapes* which would ask many similar questions of Wales, and result in a collective answer that really gave us detailed information —all of it about one aspect of Wales, namely its shape and size So that the fact that Wales fits into such and such squares of a one-inch-square mesh is a far more detailed fact about Wales's shape and size, than the fact that it fits into one square, SP *But once again, the fact that this mesh is applicable to Wales is simply the 'fact' that Wales may occupy or may not occupy any one of the sections of the mesh* Now Wales might be such a shape that if we chose a mesh of say triangular sections, 1 inch each side, the area of Wales which is outside a given number of sections, all of which are wholly occupied, is reduced to a minimum Once again, the fact that this mesh can be applied to Wales is a Tautology the fact that it fits Wales almost exactly is a fact about Wales And the fact that for *any given purpose* (e g surveying) a certain mesh gives results which are sufficiently accurate, is a fact *about Wales and the purpose*

Similarly the 'fact' that a given system of terms applies to the world is a mere tautology but the fact that anything is truly characterized by any of these terms is an accidental fact (e g In the case of the principles of mechanics the things not characterized as mechanical systems are *negligible* this is a fact about the things in the world and about *human interests*) As Wittgenstein says

> 6 342 "And now we see the relative position of logic and mechanics That a picture like that instanced above can be described by a network of a given form asserts *nothing* about the picture (For this holds of every

[1] If unambiguous, *can* answer only one at a time

picture of this kind) But *this* does characterize the picture, the fact, namely, that it can be *completely* described by a definite net of a *definite* fineness

" So too the fact that it can be described by Newtonian mechanics asserts nothing about the world , but *this* asserts something, namely, that it can be described in that particular way in which it is described, as is indeed the case The fact, too, that it can be described more simply by one system of mechanics than by another says something about the world "

Of 6 34 " All propositions, such as the law of causation, the law of continuity in nature, the law of least expenditure in nature, etc , etc , all these are a priori intuitions of possible forms of the propositions of science "

(As I interpret it these are categorical schemes which apply to any facts we want to find the most convenient)

I have now tried to prove that the rules which govern our use of *non-formal signs* are ' founded upon facts '—they are founded upon facts about the interest that a given non-formal sign serves, and upon facts about the referents of that non-formal sign I have also tried to show why these last facts about the referents of a sign, ' cannot be said '—cannot be expressed by means of the signs defined by the non-formal rule in question (To say " we use the rule ' Man ' equals ' rational animal ' because in fact all men are rational animals " is merely to repeat the definition) *But there may be other signs available* for expressing these facts—particularly, the same signs as were used before the rule was introduced So that there is no theoretical objection to discussing the relation between non-formal definitions, and facts about the referents of the signs defined

10 *Formal and Non-formal Signs* —The rules for the analysis of an informative sign ' p ' show us something about the fact that ' p ' expresses for the rules show us something about the referents of the non-formal signs involved in ' p ' (e g That all men are mortal , that bodies under a constant

force accelerate at a constant rate) But the rules for the analysis of 'p' are not all of them non-formal Certain features of 'p' are formal signs the order of words, the logical constants, the quantifiers, the punctuation, and certain grammatical mutations such as 'red'—'redness' Can we say that these rules are founded upon facts about the objects that these formal signs represent? This, of course, we cannot do, for such signs do not represent their function is a purely syntactical one If we say that the rules about the proper way of using the formal signs rest upon facts, it will have to be 'facts' in an unusual sense of the word

The fundamental fact is that there are a great number of different ways in which we can express the same reference in the same language an expression may be more or less complete, explicit, direct, and its signs arranged in various orders Each of these signs must represent the structure of the referent—otherwise it could not represent the referent at all Can we learn from the rules which connect together these various expressions, facts about the logical structure of *the real world* we think and talk about? I propose to try to answer this question, and then to ask Do these words have any sense? If so, are they veridical?

(*a*) Consider first the order of words The temporal order is used to represent the place of the separate referents in the whole referent And we have such rules as *A is taller than B* entails *NOT* (*B is taller than A*), *A is of the same height as B* entails *B is of the same height as A* These rules 'show' that the relation *taller than* is non-reflexive, but *of equal height*, reflexive But it certainly cannot be said to be accidentally true that *taller than* is non-reflexive for if, *per impossible*, it were reflexive, then it would not be the relation *taller than* [1] So that here we seem obliged to make

[1] See Bertrand Russell, *Introduction to Mathematical Philosophy*, 1920 Of course, word-order often has non-formal significance successful candidates in examinations often have their names printed in order of merit

necessary propositions about *kinds of facts*—about the logical structure of facts of the kind *x is taller than y* and *x is of the same height as z* This conclusion needs further examination

(*b*) Consider next the multiplicity of all informative expression Must every such sign be complex ? *The Meaning of Meaning* suggests that ' green ' is an informative sign Professor Whitehead has suggested that there might be a language in which one simple sign means

I am going to tea with my Mother-in-law

and another simple sign (having nothing at all in common with the former) means

I am going to tea with my aunt

Perhaps we should answer But these signs are *inexplicit* besides being perhaps *incomplete* Thus ' green ' may mean

This is green

or may mean

Something is green

If so, then the rules for the analysis of signs would show that all informative signs are (at least implicitly) complex, multiple and that *at a given level of directness*, the multiplicity of an explicit sign is determined by the multiplicity of the referent that it indicates So that here also, we seem to have a ' necessary ' truth about facts, and upon this purely formal rules are based The necessary truth might be expressed

The world divides into fact
A fact is a combination of objects (entities, things) [1]

And the formal rule is that any informative expression must be the fact that several non-formal signs are arranged in a certain spatial and/or temporal pattern

(*c*) The order in which the signs are arranged also helps us to pick out the grammatical subject of a sentence . but

[1] Compare Wittgenstein, op cit , 1–2 0201 *et al*
My second statement is *adapted from* 2 01

the order is not sufficient, we need also rules about nouns and verbs, and 'cases' These grammatical rules have a place in the whole system of *syntax* we have rules of language which discriminate words according to the 'logical type' of the referent they indicate Thus in

'Red is the flag'

the logical subject (and the grammatical subject too) is not 'red' but 'the flag', for it is nonsense to say that 'to be a flag' is a predicate of 'red' Why? Because *red* is an object of other type than *flag* Is it a fact about logical structure, that there is a 'hierarchy of types'?

(*d*) It has been argued that all informative sentences can be directionally analysed to an ultimate stage and the sentences of this ultimate stage include signs of two syntactical types (i) Names (or hiatuses) for place-times and (ii) Names for qualities to be observed at such place-times and for relations between such place-times

This argument is then to the effect that any matter of fact proposition can be expressed by a set of sentences which include non-formal words of two different types subjects and predicates And these words are governed by rules which exclude as nonsense the 'predicative' use of a subject or the use of a predicate as a subject

Now if this linguistic rule is based on a true proposition, it would seem that it cannot be a contingent proposition If it is true that *red* is of a different type from *here* and *now*, then surely it must be necessarily true for if—*per impossible*—it were not of a different type, then it would not be *red*

11 Consider next the logical constants We commonly make use, in English, of

and, not, or, if — then —, neither — nor —

But there are, of course, many different sets of formal signs, in terms of which (together with non-formal signs) all

informative propositions could be expressed [1] Strictly speaking there are an indefinite number of possible basic signs But all these sets are mutually equivalent in terms of any of them we could define the formal signs of any other And they all therefore have as a definition or a theorem the rule which we ordinarily express A proposition is true or false, not both And in fact, all the theorems that are deducible from any of these sets of formal rules can be shown to be equivalent with explicit tautologies [2] It is true that there have lately been formulated so-called ' many-value logics ' which are regarded as showing the possibility of ' non-Aristotelian ' truth-systems, in much the same way that the theories of Riemann and Lobatcheffsky showed the possibility of non-Euclidean space-systems What are we to make of a so-called Foundational Code which has no ' Law of Excluded Middle ' ($p \vee \sim p$), but a ' Law of Excluded Fourth ' ? Can we regard these as codes of rules for logical constants ? That is, can we regard the signs defined in such codes as formal signs for use in informative propositions ?

It seems to me that we know in advance that a Law of Excluded Fourth (a proposition is true or false or something else) cannot define what we mean by ' true ' or ' false ', by ' p ' and ' $\sim$ p ' For p and $\sim$ p are defined as mutually exclusive *and collectively exhaustive* But if the new code does not define ' p ' and ' $\sim$ p ' then every expression of the new code in which we seem to be talking about truth and falsity will not really be doing so In fact, the ' new code for logic ' turns out to be only a *code-form*, and we cannot beg the question that it has any interpretation whatever

But, of course, such a code-form is sure to have *some* interpretations that is, it can certainly be given a

[1] See Chapter VII, §§ 7, 8
[2] See Lewis and Langford, *Symbolic Logic*, p 249,

Post-foundational interpretation We can, for example, interpret the three values :

$$p \vee ?p \vee \sim p$$

as ' Assertion-values ' or ' probability-values ' or even as ' assent-values '

believed, doubted, disbelieved
asserted, considered, rejected
verified, not verified, refuted

Then ' p ' will mean what we should express

This proposition is believed
is asserted
is verified

That is ' p ' is here given a Post-foundational interpretation But ' p ' of the new system does NOT mean ' p is true ', or ' p ' of a Foundational Code And we have no more right to say that a Three-value System is a Foundational Code than to claim that it is a code for mechanics or economics It is, therefore, highly misleading to read

$$p \vee ?p \vee \sim p$$

as " p is *true* or doubtful or false " , since ' true ' and ' false ' already have definite meanings What are we to say, then, of the Law of Excluded Middle, in Foundational Codes ? Are we to say that it is founded upon a fact about all propositions—that they are (in fact) either true or false and that they are never both ? If it is true to say this of all propositions, it is certainly a necessary, and not a contingent, truth for if, *per impossible*, a proposition were neither true nor false or were both, it could certainly not be a proposition at all

12 But we have still to deal with an even more fundamental feature of syntax Any code whatever, whether Foundational or Post-foundational, seems to include the rule

of consistency When a rule has been included in a code it must be adhered to in all the theorems deduced and it must be consistent with all the other rules of the code [1] Thus a Foundational Code excludes contradictions for it includes the postulate or theorem and this must be applied in all deductions. But a Post-foundational Code (e g for Euclidean Geometry) has no such postulate or theorem However, it excludes contradictions since these are one form of inconsistency But there are other sorts of nonsense besides contradictions Thus

$$\text{John loves } \sqrt{3}$$

is nonsense, not because it is self-contradictory, but because it violates a rule of type And (by the prescript of Consistency) we must not, in our deductions, violate any of our rules Thus the Prescripts of Foundational Codes are presupposed in all codes and all code-forms Even a ' non-Aristotelian logic ' must be consistently developed We can imagine such a code which had the descript

$$p \vee (p \sim p) \vee . \sim p$$

This would seem to allow us to make self-contradictory statements but it could not pretend to allow us to be inconsistent in applying our rules—whatever those rules may be In short, any code must be systematic—must be self-consistent—and hence must presuppose or include a rule of consistency [2]

Here then we seem to have another fundamental rule of logic Are we to say that this rule is founded on any fact —any necessary fact—about all referents ?

[1] This applies, of course, to the prescript of consistency itself, and also (of a Foundational Code) to the descript $p \vee \sim p$ Mr W V Quine " Ontological Remarks on the Propositional Calculus," *Mind*, vol xlii, p 472, points out that it is an anomaly of Foundational Codes, if regarded as codes for propositions, rather than for sentences, that their theorems are also elements in the code

[2] Even if it allows some inconsistent statements, it must say which and the rule must be consistently followed

13. We may summarize our conclusions and see how they can best be interpreted

(*a*) Any informative language must be self-consistent
(*b*) Any informative language must exclude contradiction
(*c*) Any informative language must have rules that distinguish absolute subjects from predicates
(*d*) Any informative language must consist of structured signs—signs which consist of facts about the combination of elements

If we consider the first of these conclusions, we see at once that this is an essential part of what we mean by 'language' A language is a set of signs used in accordance with rules—that is, consistently A man who tried to use a different sign-token every time he wished to indicate the same sort of object would find no one capable of learning his 'language' A further examination of this conclusion would lead us into psychology and sociology and not into metaphysics We must not be led into saying that the universe must be consistent, we must say rather that a language essentially involves the use of shapes or sounds of the same sort, in accordance with rules—however complicated those rules may be

What of the other three conclusions? These are none the less definitive of what we ordinarily mean by 'language' in this sense but the question is whether these definitive principles are *founded upon* any facts of more than psychological importance Could we say that these descriptions of the necessary properties of any informative language are founded upon facts about whatever such language may be used to describe? In other words, have we here a clue or a key to certain features of 'whatever can be described'—that is, either of whatever is *real* or, at least, of whatever real things our minds can comprehend? Have we here a clue to facts about all possible facts?

This inquiry, which may be as necessary as it promises to be unprofitable, I shall leave to others I wish to suggest that it is possible to explain why language must exhibit these features without having recourse to metaphysical principles. I regard all these propositions (*a* to *d*) as based upon facts about human behaviour, and it is by reference to such behaviour, in the last resort, that I should try to elucidate those most puzzling words 'fact,' 'abstraction,' 'proposition,' 'truth' and 'falsity', and 'event' [1]

14 Let us confine ourselves to one sense of 'fact' that is very important for the understanding of communication, although it is too rigorous a sense to be very useful in everyday life I distinguish facts from events A fact is essentially abstract, an event concrete *Actual* facts are only about *present or past* events they are not about events in the same sense of 'about' as propositions are about objects By the very meaning of 'fact' there must be an indefinite number of facts about the same event however trivial that event may be Thus it is a fact about a certain event in history *that Caesar crossed the Rubicon* but it is also a fact about the same event that Caesar had long doubted whether it would take place, that Rome dreaded it, and that the world remembers it, *and so on* This 'and so on' is interesting Compare "'The moon will be full to-night' means that any normal observer would report 'I see a bright circle high up', *and so on*" Here I think the words have the same meaning as in "The cardinal integers are 1, 2, 3, *and so on*" But I am sure that these second two have not the same meaning as the first (about events) for in the second two what is not given in detail is entailed by what is given, while in the first case this is plainly not so

[1] The question 'What is a fact?' is one which annoys some people very much indeed and I think it is rash to try, as I am doing, to answer it Mr Wisdom is more cautious and relies upon the *Strand Magazine* See above, Chapter V, § 6, for a discussion of 'occurrents', which are the facts I am here discussing

A fact is essentially abstract but *there* It is what is an object of attention, of discriminating awareness, in present events It is that in experience to which we make a learned and discriminating response It is that in events to which we make a response determined in part by previous thinking (Perhaps there is thinking which makes no use of language if so it does not concern me here in a study of communication, and in a question of the relation between language and the world) So that a fact is that in events to which we make a learned discriminating response determined in part *by the understanding of statements*

On hearing ' p ' I become adapted to future events (both in my inner experiences and in my behaviour) I shall react to those events as I should not have done if I had not heard ' p ' (see above Chapter II, para 3) But this adaptation does not wholly determine my reaction for the reaction may be *assent or dissent* And *which* it will be depends upon the future events when they occur (If, outdoors to-night I see a circle, then I may assent to the proposition " The moon will be full to-night " , if I see a crescent, I may dissent) So that a fact is that in events which determines the assent or dissent of people who have understood statements

But this needs modification In fact I often decide to accept or to reject a proposition (*a*) by inference from another proposition , (*b*) because I want to do so, or never stop to question it, etc So that we cannot define ' fact ' without reference to the *rules* of language, both the rules that concern understanding (ostensive definitions and symbolic definitions) and the rules that govern verification and assent A fact is that which determines assent or dissent, without inference and in accordance with the rules

I have argued in Chapter VI that the structure of a reference is determined by certain features of sentences—that is, by their indicative features So that the formal rules of language determine the structure of propositions and show in a general

way the sort of thing that a proposition is (see the principles *a* to *d*, above) But the fact which shows the proposition p to be *true*, is that in events to which I make a *response that has the same structure* as the proposition p Can I then learn about the general structural character *of facts* from the formal laws of language ? Yes, but not about the general structural character *of events*

15 We cannot define a fact except by reference to the meaning of a statement (or to some other form of learned discriminating selective response) To the same events an infinite variety of responses is possible he who understands ' p ' makes only certain responses and not others It is this that *introduces* limitation, structure , *events as such have no structure* But of course the description of any event whatever consists in propositions about it, and must be selective And these propositions have structure and this is revealed in the structured signs of the sentences that express them [1]

But we can properly say that all our learned selective responses are caused they arise out of events and the responses themselves are events Learned discrimination is only one variety of selective response—that is, one sort of regular causal relationship There is no *absolute* distinction between the reaction of an organism to a stimulus and the reaction of a thermometer to changes of temperature, or the reaction of a gas to a change of pressure It is in this sense that we may understand the remark of Professor Whitehead :

> " Abstraction expresses nature's mode of interaction and is not merely mental When it abstracts, thought is

[1] In his contribution to the Joint Symposium of the Aristotelian and Mind Societies, July, 1938, Mr Bertrand Russell says that it is only because we wish to describe certain psychological states that we require the logical constants The truth seems to me to be that any sort of description requires some sort of structural apparatus and the true-false dilemma But, of course, if there were no psychological states there would be no description

merely conforming to nature—or rather, it is exhibiting itself as an element in nature" (*Symbolism*, 1928, p 30)

It follows that it is only for thinking minds that there is structure in nature that only for thinking minds is there structure in thought itself A world without minds is a world without structure, without relations and qualities, *without facts* But of course I can describe such a situation (and it is a possible situation) only in terms of qualities and relations, and can affirm its possibility only in saying that it may one day be a fact that the world contains no minds And this *can be said*, although it cannot be said in a world that contains no minds [1]

It follows also from the view that I am trying to suggest, that the 'facts' that "logical form is exhibited in the universe", and "mathematics has application within the universe", are really facts about abstraction "This is one" simply means "I abstract this" "There is one finger," on the other hand, does convey information *about objects* The mathematical method (e g in physics, economics) is just the method of summary predication of specific and well-defined universals "This is 3 inches long" equals "Here is an inch, and here is an inch, and here is an inch, and all lie in a straight line" To suppose that it is a property of the universe absolutely, to possess mathematical structure, is simply to confuse formal and non-formal signs—to fall into the Pythagorean error of supposing that number is "the underlying φύσις of everything"

Note to Chapter VIII

How true is it to say, as Carnap and others have done, that sentences mean by conveying structure and not content? This might mean several different propositions

[1] This may be consonant with Dr Waismann's account of the place of words in the analysis of "A believes p" and "A doubts p" See the 1938 Symposium of the Aristotelian and Mind Societies.

(*a*) ' p ' leads A to expect, at s at t, the same sort of experiences as he has had at other times (when, for example, he used ' p ' as a report in the past, say at s' at t') It does not, of course, lead him to expect a certain object in its numerical identity, but a certain kind of object So that ' p ' indicates a possible *relation between experiences*—the relation of similarity.

(*b*) If B speaks ' p ' to A, this may lead A to expect that B would have at s at t the same sort of experiences that B had on other occasions when he used ' p ' in the past (say at s' at t') This is a sort of expectation, on A's part, of a *similarity of structure* between A's experiences and B's At s' at t', A reported something that he called ' p ' and at the same time and place, B reported something that he called by the same name , B, at s at t, says ' p ' again, and A supposes that if he were at s at t, he would have an experience like his own experience at s' at t' Then A may argue that for every variation in his experience there occurs some sort (not necessarily the same sort) of variation in B's experience

But it is important to notice that this is based upon causal reasoning B's body behaves like A's—therefore B must be having experiences, and experiences somewhat like A's own Without this causal hypothesis A can have no justification whatever for inferring variations in B's experiences

And this argument can be pushed farther on just the same basis Likeness between the microscopic workings of all our bodies—at least in some of their workings—support the hypothesis that B's experiences must be like A's There can be no argument to a mere similarity of ' structure ' between A and B *structure of what ?* The answer is structure of experience, and this must be defended by the sort of argument that I have put forward in Chapters III and IV Without some such explanation, ' similarity of structure ' is meaningless

(*c*) I think the assertion of (*b*) is often confused with the proposition that B's mere use of ' p ' *shows structure* Structure

of what? Structure of his language, i e patterns of signs We can see by looking at B's words, and hear, by noting his spoken words, the way in which his words are arranged in space and time A can see and hear that B's language exhibits the same *arrangements* as his own No causal argument is needed here at all " Sentences convey structure " . they *have* an arrangement of significant parts in space or time So that they convey this structure because they convey ' content ' too the ' structure ' is an arrangement *of signs* The ' structures ' that are studied in syntax are literally conveyed on pieces of paper but so—inevitably—are the structured things, the signs written on paper in definite patterns The 'structure ' here simply means the spatial pattern (The pattern is a fact, and of course, as such, it has its own logical structure too)

Chapter IX

RULES, PRINCIPLES, AND LAWS

1 In the last two chapters I have put forward the view that the necessary propositions of logic, mathematics, and philosophy are really linguistic rules What exactly is a rule ? Is a rule of language a ' rule ' in the same sense as a rule of morality ? In the following pages I shall examine those sentences which would ordinarily be said to convey moral rules or applications of moral rules , and judgments about moral value and ethical and aesthetic value What are such sentences used for ? Do they convey information, and, if so, what about ?

First of all I wish to exclude from consideration certain groups of sentences which may perhaps look as though they ought to be considered here, but which obviously do not mean moral, ethical, or æsthetic judgments (*a*) Such sentences as " The right act is that which involves as consequences the least evil or the most good " " The supreme good for man is happiness " " Virtue consists in acting in accordance with reason " All these are clearly intended as definitive propositions and they may best be regarded as attempts to determine the structure of a part of our language —that part commonly used in the discussion of moral, ethical, or æsthetic judgments Kant (for example) makes various attempts to define what we mean by saying " so and so is my duty " , and in each case he tries to show that the analysis offered does coincide with current usage . that (e g) *we should not say* a man was doing his duty if he showed benevolence simply because he enjoyed being benevolent

(*b*) Such sentences as " I like this place ", " I want to become a doctor ", " I approve of that suggestion ", " I feel

indignant with that man", plainly belong to the realm of purely 'natural' statements, and do not raise the problems peculiar to moral and value judgments *Liking*, *wanting*, *feeling* could all be ascribed to a dog or a cat without at all implying that it was a moral being or capable of understanding ethical or æsthetic predicates The properties which distinguish liking, wanting, feeling, can be described without in any way answering any question of right or wrong, good or bad, beautiful or ugly The mere statement that A *wants* or *likes* B, or feels approval or indignation against B does not *in itself* incline any other person to adopt any moral or critical attitude towards B On the other hand, such statements as "this is a good place", "A ought to become a doctor", "that suggested action would be right", "that is a bad man", do seem to affect immediately the feelings and desires of the audience, they seem to compel us to adopt a certain more or less definite attitude (whether friendly or hostile) to the person or the object which they are about We may say then that this group (*b*) are introspective statements about purely personal psychological facts Their analysis has been discussed in Chapter III, § 7, and Chapter IV, § 9 ('sentences of Type 3*b*') (*c*) In a somewhat similar way we may dismiss such sentences as —

(i) Bigamy is called a sin in Christian countries
(ii) Western countries commonly regard bigamy as a source of unhappiness
(iii) Christian countries are opposed to bigamy

In all these sentences there is no definite assertion that bigamy is bad or wrong they do not assess the value of bigamy They do not say that it has bad results or good results or that anyone ought not to commit bigamy (i) really tells us about the use of the word 'sin' (and equivalents) amongst certain groups of people it does *not* say that they use the word to make true propositions nor even that they

use the word in a recommendable way (ii) makes a statement about an opinion held by a vague group of people but it would not make a false statement if that *opinion* happened to be false Hence (ii) is a statement with as little moral or value content as " Western peoples commonly believe that the earth is a sphere " As for (iii) it is obviously a statement about somebody's *feelings*—the alleged feelings of a great group of people it does not in any way ' endorse ' those feelings—it does not express them or excite them in others We might contrast it with " Bigamy is wrong in Christian countries " which *might* mean . " If you were in a Christian country it would not be right to have two wives or two husbands " This is comparable with " If you were a sentry at a strategic post, it would not be right to go to sleep " A moral principle, in each case of limited application, a principle, *enjoined*, *recommended*, *commended*, by the words which formulate it

2 We may say then, that moral judgments and value judgments are distinguished by a certain dynamic purpose they are used in order to influence *feelings* or to influence *conduct* or both

This may serve to distinguish

" Bigamy is wrong "

from " I don't want to commit bigamy "
" I don't like the idea of bigamy "
" Bigamy excites our indignation,"

and the three sentences discussed above (*c*) It is only in " Bigamy is wrong " that the speaker really tries to influence the feelings (and the conduct) of his audience He is trying (by means of these words) *to move them* dynamic use of words is a distinguishing character of moral and value judgments

3 This serves to place such judgments in a class with imperatives in general and with poetry (*a*) We make such words as "Do this!", "Don't you believe it", "Hands up!", "Clear out!", "Come here!", "At the halt, on the left, form company!", in order to influence men's conduct or feelings This form of communication is, of course, very ancient and elementary Professor Malinowski describes fishing amongst the Trobriand Islanders:—

> "An animated scene, full of movement follows, and now that the fish are in their power the fishermen speak loudly, and give vent to their feelings Short, telling exclamations fly about, which might be rendered in such words as 'Pull in', 'Let go', 'Shift further', 'Lift the net', or again expressions completely untranslatable except by minute descriptions of the instruments used, and of the mode of action" (*The Meaning of Meaning*, Supplement, 1, p 311)

But clearly we must distinguish moral and ethical judgments from commands in general, an imperative may be uttered in isolation, and gain its persuasiveness entirely from the superior force of the person who utters it A moral judgment, on the other hand, seems to involve a reference to *something beyond the mere will of the judges* And similarly an ethical judgment tries to persuade the audience to feel in a certain way, by referring (implicitly or explicitly) to something beyond the feelings of the moment—the express feelings either of speaker or hearer (*b*) Poetry seems to have, as its fundamental aim, the promotion of a certain feeling or emotional attitude, here and now, for its own sake (Poetry may also aim at producing permanent changes of feeling, or changes in future conduct—see Chapter X, § 14, etc) Moral and Ethical judgments, on the other hand, seem to aim at producing a permanent change in emotional attitudes, and very often a change that influences future conduct And, whether they are sharp imperatives or more subtle

persuasion and incitement, they *seem to appeal to the future interest of the audience or of Society, not of the speaker himself* Whether they are imperatives or subjunctives, or whatever their grammatical form, they seem to depend in part for their persuasive force upon the use of *certain words* which have (for some reason or another) acquired more or less definite and permanent emotive meanings (the chief being ' good ', ' right ', ' ought to be done ', ' beautiful ', and their opposites) This serves to distinguish them from

' This commodious building is a College Hall,'
' That villain is your friend,'
' That funny man is a professor of History,'

which make references (but *not about the interests of the audience at all*)—although they also produce an emotional effect, perhaps even for the sake of influencing future emotions and future conduct

4 My view then is that the judgments under discussion (moral and value judgments) are both emotive and informative they make statements about the relation between the *interests* of the audience and certain events or objects and they make them in such words that the audience is moved immediately to feel in a certain way towards or against the objects concerned the very words used to describe these objects tend to make a momentary interest for or against them For example

" If you want to better your condition, the proper thing for you to do is to save your money and go to College. But don't do that ! The best thing you could possibly do would be to be content where you are, marry young and bring up a fine family You would find real happiness and you would be doing your duty to God and your country far more adequately than if you were to swell the ranks of the half-educated, half-contented, opportunists "

Here we have a good example of persuasion which rests

upon statements about the interests of society and of the audience The child is addressed in words carefully chosen for their emotive power 'better,' 'proper,' are commendatory, but they are not at all strong words: they merely suggest a possible emotional attitude in order to contrast it with another (the one actually urged) the thing that is 'the best thing you could possibly do', the thing that brings 'real happiness' and is at the same time a 'duty' —it is this that is described in really moving terms simply to hear it so described tends to arouse a momentary (and perhaps even permanent) inclination towards it And the opposite course is described not without abuse the 'opportunists', whose ranks are already 'swollen' (an unpleasant word) are stated to be in a miserable position and also this opposite course is directly *forbidden* But while we may say at once that the speaker is trying to sway the mind of the child by word magic, it is not merely by word magic The sentences certainly convey alleged facts They state that a given line of conduct would have certain consequence What consequences? The *unhappiness* of the child and the *evil* of Society Most people would say at once that these statements *might be true* or they *might be false* The words 'true happiness', 'duty', may be highly vague and general They may be words which cloud the judgment by their emotive power, but surely they are being used to refer to certain possibilities, and what they say may be true or false—that is, is verifiable This view would seem to conform with the general view which has obtained throughout the history of morals, but seems to be in disagreement with the views put forward (somewhat ambiguously) by recent logical writers (See Chapter I, para 5)

5 The description I have adopted would not seem to confine us to those judgments which have commonly been regarded as the subject of Moral Philosophy (See Professor

Moore "The Nature of Moral Philosophy," *Philosophical Studies*, No X) For example, we might say

> "If you want to better your condition—
> What you ought to do,
> The right thing for you to do,
> The best thing for you to do,
> Your job, your business (your duty?)
> —is to save your money and go to College"

But although we make use of words which often have a moral or ethical meaning, we are not, perhaps, using them here in any strictly ethical or moral sense At least, I think it is true that these words say nothing about *unconditional* obligation (hence Kant would not call them 'moral') nor anything about intrinsic goodness (hence Professor Moore would not call them ethical, perhaps) For the advice here offered is purely hypothetical and depends upon the existence in the audience of some particular contingent wish or inclination *If you don't want* to better your condition it may very well be that you are not obliged to save up and go to college In such cases the advice offered is a Rule of Skill, not a Law of Morality at all It seems to me that Kant was *quite wrong* (and I hope it will become clearer) in thinking that the Laws of Morality are not in any way founded upon Rules and Counsels that the moral 'ought' is by no means definable in terms of the non-moral 'oughts' I hold that the moral 'ought', in so far as it is used to make a statement, is definable in terms of the non-moral 'oughts' in so far as they are used to make statements Hence I shall consider a number of different groups of sentences, all of which include some such word as 'ought', 'right', 'good' (or words which could only be defined in terms of such words) though *not* all in the senses which Kant recognized as ethical or moral It will perhaps be convenient to adopt in part a Kantian division and to speak of Rules, Counsels and Laws I shall try to find out in more detail *what references are made by*

sentences which—as Kant would say—'*are used to express Rules, Counsels, Laws*'

6 *Rules of Skill*—"If you want to be a journalist, go to the university" "If you want to be a journalist you ought to go to the university" "If you want to be a journalist it would be a good thing to go to the university" Clearly these *all make the same statement, the difference in vocabulary involves a difference in emotional power, not in reference* We may, if we like, insist that the imperative mood cannot be employed to make a statement, and that 'go to the university' cannot be true or false But it is important to notice that the command is given only conditionally (cf if you have any money, go to the university), and that in this case the condition is the *justification* or *reason* for the command If the conditional clause were false, the command would be unreasonable that is to say, the impetus of the imperative clause depends entirely upon an *implied* hypothetical statement of fact "If you want to be a journalist, it would be a good thing to go to the university" This implied statement is often understood as the real purport of such a conditional imperative, and we say that the advice or command was 'proper' or 'mistaken', 'good' or 'bad', the criterion is the truth or falsity of the implied hypothetical statement As far as Rules of Skill and Counsels of Prudence are concerned, the imperatives are all conditional in this way, and I shall follow the wide practice of referring to them as true or false

A Rule of Skill, then, is a statement (in emotive language) about a certain desired object or condition, to the effect that a certain course of action would (not) lead to the achievement of one's desire Such statements can, of course, be verified by observation and experiment and are reasonable if they can be defended by appeal to past observations They are open, however, to three objections·

(*a*) It is not always the case that the desire or aim is explicitly described, or described with adequate definiteness Ought an aspiring journalist to take a degree ? That depends on what sort of a journalist he wants to be Ought anyone to go to the university ? We cannot say unless we know what are his aims, ambition (*b*) It is almost always the case that the social, economic, and physical conditions of the person advised are not described with sufficient clearness Of course, in continuous discourse, a given person or context is named thus, if I were to hear A giving this advice to B, I should know that, in order to test the valuation of the advice, I must consider *A's character and condition* and the general conditions under which *in England in the year 1938* a person may become a journalist But if I were to read in a letter from one person to another (both unknown to me) without date or address

" If you want to become a journalist, go to the university," I should be quite unable to say whether the recipient was being well or ill advised

For the necessary conditions are not described .

How old is the person advised ?
In what country is he living ?
At what date ?
What sort of a schooling has he had ?
What sort of a brain has he ?
What sort of health ?
Is he honest, hardworking, patient ?
To what social class does he belong ?

Clearly, if all the conditions were included, we should have a most complicated set of propositions All of them (together with the proposition that he wished to be a certain sort of journalist) implying causally that his wish would be fulfilled

" If you want to be a journalist and if you are under thirty and have passed the London Matric and can still read for four hours a day with profit, and have good

health—then if you go to the university, you will *become* a journalist "

Notice Kant's ' analytical connection ' between means and end to will the End involves willing the means It often happens, of course, that a man wants the end but doesn't want the means if he wants the end more strongly than he wants to avoid the means, then, of course, he has a volition for the means as well—a consequent volition, as Leibniz called it (See *Foundations of the Metaphysic of Ethics*, 2nd Section, §§ 24, etc)

This, it seems to me, is the *sort* of statement which might be expressed in continuous communication, incompletely but perhaps adequately, by the words we are considering Clearly it is a statement about the interest of the person addressed it is a causal implication of the form

" If you press the button, the light will go on " [1]

But (*c*) it is not expressed in the simple, unemotional language proper to science and history It has the defect (from the purely scientific point of view) of employing words which *are associated with* judgments of right and wrong The words do not *urge* the hearer to go to a university they do not attempt to create an interest in going there they merely *describe* the hypothesis that the hearer has an interest in going there But scientists, as a rule, try to avoid the use of ' good ' and ' right ' a scientist may perhaps write

" It is a good thing to wash out vessels after every experiment "

But this is understood quite simply to mean that unless you do, your experiment will give unreliable results Similarly, a chemist may write " The liquid gives off an ugly smell," but that (as we all recognize) is only because he finds it so hard to describe and classify smells We should

[1] It is ' objective ' in Professor Moore's sense (op cit), but not about ' intrinsic ' value

certainly be surprised to find a botanist describing a flower as *beautiful* or a physicist urging and praying his readers to perform a given experiment

7 *Counsels of Prudence* —It may be true that B wants to become a journalist, but it might be said that he is mistaken in wanting to be a journalist that he *ought* not to be a journalist even though he wants to be one In what sense can a wish of this sort be mistaken ? When the object wished for would in fact bring *unhappiness*

There is a sense of ' ought ' in which B ought not to be a journalist even if he wants to, if it would make for his ultimate unhappiness

This seems to assume (*a*) that the words ' B's happiness ' can be used to describe a definite condition of B , that it is possible to determine by observation whether or not B probably is happy (whatever he thinks or says or wants) just as it is possible to determine whether or not B has a temperature (whatever he thinks or says or wants) or whether or not B believes that C has wronged him (whatever B says or thinks or wants) [1] But more (*b*) that ' B's happiness ' may be something which is incompatible with other things (e g being a journalist) which he wants, but it is itself invariably *something that B wants* If A advises B that " he ought not to be a journalist " one of the things he may mean by these words is that to be a journalist would be incompatible with the thing that B wants *most* Such advice Kant called ' Counsels of Prudence ' It does not state in so many words, " If B wants to be happy he ought not to be a journalist " . the hypothesis is understood , and it is not stated, says Kant, because it can always be safely assumed for it is a fact (contingent but universal) that all men do want happiness more than anything else

[1] See the discussion in Chapter IV, §§ 1 and 9 *et al*

We may, then, regard Counsels of Prudence as advice (or commands) which, though not explicitly conditional, are implicitly prefaced by the condition that the person advised wants to be in a certain state called ' happiness '

It will then not be easy to distinguish Counsels from Rules which are supposed to satisfy some interest not explicitly stated (especially if it be an interest widely current) and it will not be easy to distinguish counsels from advise given unconditionally but *not* in the interest of the person advised Thus A may say to B

" Don't leave home and go to College "

This might be a Rule " If you want to win C's hand in marriage, don't " It might be a rule depending on some condition of interest which is very widespread

" If you want to save your money "
" If you want to be successful in business "

Secondly, it might be a Counsel To go away to college would not bring you happiness (and of course that is what you want most Thirdly, it might be a command given entirely in the interests of the speaker (e g the father or the wife or the mother of the person advised) And it might be a command given in the interest of society or Religion or the Laws of Morality Kant himself emphasizes how difficult it is to make sure whether the advice is given as prudential or as moral

Supposing, however, that a given sentence " You ought not to become a journalist " is a Counsel of Prudence What exactly is it meant to state and how can it be verified ? The sentence is, of course, rendered emotive by the word ' ought ', the words try to arouse B's feelings against being a journalist But they also make a statement they state that if B wants to be happy, to be a journalist will defeat his aim that is, they state simply that if B becomes a journalist he will not be happy too And this statement is the *justification*,

the *basis*, of the emotive appeal, because it is assumed that the person (B), addressed, does want to be happy at all costs Clearly (as Kant says) if we could define ' happy ' (as we can define ' being a journalist ', and as we can define ' having an abnormally high temperature '), the Counsels of Prudence could be treated in exactly the same way as Rules of Skill, they would make statements (in emotive words) about what conditions causally imply a certain definite result, namely ' happiness ' And the Counsels would be *applicable* only if the person addressed did want happiness more than he wanted to avoid the means to happiness, just as advice about how to become a journalist is applicable only to one who wants to be a journalist Aristotle's φρόνησις seems to have been (at least in part) a system of rules about how to obtain *happiness* he assumed they would be applicable to all (rational) men

8 But Aristotle admitted that the notion of happiness is a very vague one indeed, and that it is also an emotive word—a word of praise which may be flung after almost anything that a man, or a class of men, happens to like He remarks

> " As to its name, there is, I may say, general agreement The masses and the cultured classes agree in calling it happiness, and conceive that ' to live well ' or ' to do well ' is the same thing as ' to be happy ' But as to the nature of happiness they do not agree Nor do the masses give the same account of it as the philosophers The former define it as something visible and palpable, e g , pleasure, honour or wealth , different people give different definitions of it, and often the same person gives quite different definitions at different times, for when a person has been ill, it is health, when he is poor, it is wealth, and, if he is conscious of his own ignorance, he envies people who use grand language above his comprehension Some philosophers, on the other hand, hold that, besides these various goods, there is an absolute good which is the cause of goodness in them all " (*E N*, 1, 1095a)

This difficulty is re-enforced by Kant who seems to suggest that a man knows well enough when he *is happy*, but cannot say what conditions will make him happy in the future Kant adds the objection that a man would not think himself happy (in some sense) if he were to find only temporary ' happiness ' (in *another* sense—the sense in which he can recognize his own happiness) that human happiness must exclude all future possibility of unhappiness Hence it can only be determined by computing an infinity of possibilities (stretching, perhaps, through an eternity hereafter), and so is not determinable by a finite mind

> " But, unfortunately, the notion of happiness is so indefinite that although every man wishes to attain it, yet he can never say definitely and consistently what it is that he really wishes and wills The reason of this is that all the elements which belong to the notion of happiness are altogether empirical, i e they must be borrowed from experience, and nevertheless the idea of happiness requires an absolute whole, a maximum of welfare in my present and all future circumstances Now it is impossible that the most clearsighted, and at the same time most powerful being (supposed finite) should frame to himself a definite conception of what he really wills in this " (*Foundations*, 2nd Sect , Para 25)

It seems clear to me that the word ' happiness ' is an emotive word that it excites commendation that whatever is called ' happiness ' is thereby, to some degree, rendered attractive to us, whatever it may have been before But exactly the same is true of ' health ', ' wealth ', ' good fortune ', all of which have some definite references

A doctor could give a fairly clear description of what he means by a healthy body he would do so in terms that were without emotive meaning But the word which is the common general sign for such states of body will always have emotive meaning because the state it describes is one which all men really desire And it will, therefore, always be used loosely

(and perhaps confusingly) as a term of esteem, and its negation as a term of condemnation I think, however, that the word 'happiness' is very often used in a descriptive sense to indicate a certain state of body and mind, that "I am happy now" and "A is happy now" are sentences which mean verifiable propositions of a complicated sort But though we might analyse these propositions in such a way as to exclude all emotive meaning, the common general term for these states must have an emotive meaning because they are *states which everyone desires* And therefore, also, the word 'happy is sure to be used loosely as a word almost or entirely devoid of reference, but having strong emotive meaning it is used almost like an exclamation and simply to indicate the momentary feeling of the speaker ("That is a happy suggestion" = "I like that suggestion" = "Excellent! Fine!")

What does 'happiness' refer to? It cannot be defined merely by reference to a man's present social and economic position 'External goods', as Aristotle said, do not *in themselves alone* determine a man's happiness or unhappiness A man is not happy merely because he has £1,500 a year nor unhappy merely because he has £150 *Present wealth and present social position are not the sole determinants* This admission seems to me to go a great way towards explaining the apparent ambiguities of 'happiness' A becomes happy when he receives £1,000 per annum B becomes happy when he parts with £1,000 per annum "One man's meat is another man's poison" And if men react most differently to similar changes, the explanation is to be found in the past social position and circumstances of these two . in their homes, their educations, their social classes, their professions, their friends and family [1]

Both Aristotle and Kant emphasize the importance of time a man can hardly be called happy if his 'happiness'

[1] Cf Chapter III, § 4, for a discussion of emotional changes

lasts only " a casual period of time " (See *E N.*, 1, 1101a) A feeling of security seems to be an important element in happiness, and this is a feeling which cannot come in a few days or weeks Both writers seem to say that a man cannot be happy at any given time unless his happiness is absolutely assured for the rest of his natural life (and his supernatural life, perhaps) If this were *the* proper use of ' happiness ', no man ever would *know* that he was happy, since he could not *know* with certainty that his precautions (however patient) would be successful in this life or in the next It seems obvious to me that, in a usual sense of the word, men can be happy for a short time (but not for a moment, since a momentary enjoyment allows no comparison with the past, no thought of the future), and can know that they are happy This happiness may be based upon *false* beliefs about the future and *false* recollections of the past It seems to me a most perverse misuse of the word ' happiness ' to confine it to a certain condition prolonged for a certain definite or indefinite length of time I should prefer to use it for *that condition itself*, without reference to the length of time it may last [1]

9 A man's happiness, then, depends upon his past and present circumstances more exactly, it depends upon the way in which his body and mind have reacted to these circumstances and this means that his happiness depends ultimately upon his body and its good or bad fortune in the world—upon heredity and environment The possibilities of difference between different persons are thus quite inestimable . it is therefore possible that A is made ' happy ' by the very events which make B ' unhappy ', and that nevertheless

[1] Cf We might refuse to call a man a swimmer unless he could swim two strokes anything less, we might argue, is not really swimming but it would surely be absurd to refuse to call a man a swimmer unless he could keep going for half an hour or half a mile We should rightly ask what he is supposed to do for half an hour and the answer is—swim

the word 'happy' is here used unequivocally to indicate the same sort of condition

My suggestion, then, is that we use 'happiness' to describe a definite bodily (and also mental) state—a complicated state which involves memory, comparison, as well as instantaneous feeling What are the properties by which we recognize happiness? (*a*) It is a state which we do not want to destroy If a man is happy he is not anxious to part with his happiness (*b*) It is not the satisfaction of one simple desire A man may be experiencing many pleasures and yet not be happy a man may be suffering pains and yet be happy (*c*) Yet it would seem to imply a balance of pleasure over pain if a man can be happy on the rack, it is because he has still preserved something he *wanted* above all else—his integrity, his honour, his country's safety, his reputation (*d*) It seems to include an element of self-respect, a feeling that "I have done all I can" If I am aware of preventable pains or evils, then my happiness is imperfect awareness of unpreventable evils need not impair my happiness (*e*) It seems to imply fundamental integrity the harmony of all a man's powers the absence of inner conflict, the unity of personality absorption in a present experience which is enriched by memory and anticipation, and from which remorse or fear offer no distraction, no diversions

Such a state can be identified in introspection It can also be identified by considering many different actions which may be regarded as 'expressions of happiness'—not introspective judgments of a self-analytical kind, so much as unself-conscious words and deeds—casual and spontaneous *effects* of an inward harmony And if we have any confidence at all in our judgment that such and such a man is really happy (or happier than he was, or happier than another) we can proceed to investigate the external condition of happiness to discover what course of action will be likely to produce happiness in a man in such a society, and at such a

time, and to discover what changes in that society as a whole would result in a higher average of individual happiness Similarly we can investigate clinically what is the condition of the body of a happy man, and what bodily processes make for unhappiness, in this way we may hope to add to those signs by which we acknowledge the presence of happiness —that is, to make more definite, less ambiguous, the informative meaning of the word 'happiness' For example, Professor Cannon of Harvard University has used the word 'homeostasis' to describe a very complicated functioning of the body, a functioning in which a very great variety of organs (heart, lungs, brain, kidneys, spleen) all work together in a sort of harmony This harmony ('homeostasis') he believes to be a fundamental condition of bodily health There are degrees of co-operation variation within certain limits corresponding to mere variations in 'fitness', 'liveliness', temper', 'mood'. variations beyond those limits are illnesses. and when the harmony is interrupted altogether, death results In this way, Professor Cannon seems to be approaching the definition of the word 'Health', but this concept of Health has always been acknowledged to have its importance for ethical and moral theory Consider hatred, for example This emotion has most important physiological consequences within a man's body it can be shown to impair the health of the person who experiences it, by interrupting that subtle harmony (homeostasis) upon which the free and unimpeded functioning of the organism as a whole depends It seems to me that the Galilean advice "Love your enemies" has been long acknowledged as right, because it has long been felt that *hatred impairs happiness*, and that this popular belief is clarified by the work of Pavlov, Cannon, and other physiologists [1]

This, of course, is not the only possible approach

[1] J P Pavlov, *The Work of the Digestive Glands* (London, 1902) W B Cannon, *The Wisdom of the Body* (New York, 1932), p 24

psychotherapy has long been engaged in the task of discovering the *connection* between human failure, pain, and sin, and the bodily and mental history of the sufferer or the sinner Here, too, we see how 'health' depends upon a sort of harmony of all the powers of mind and body how disorder arises out of divisions, over-emphasis of one faculty at the expense of another, isolation within a fantastic world into which the direct reports of the senses are not allowed to intrude In this way we learn more and more of the character of that state we call happiness, and of the multitudinous deviations from it

It is obvious that this examination cannot stay until it embraces the various sciences that concern man, economics, sociology, politics, ought all to help us to understand what a man means when he says that he is 'happy' and how, in detail, happiness can be increased for a given person in a given situation, and for mankind in general

10 My contention is that we have a rough general idea of the reference made by the word 'happy', and that we can by various lines of scientific research, investigate the phenomenon of happiness [1] The more we understand human nature, and the conditions in which men live *and might live*, the better shall we be able to give counsels of prudence, and the more justified we shall be in expressing those counsels in emotive language, and similarly, the better qualified shall we be to discuss the Counsels of Prudence which are offered to us, which are current in a given group of society at a given time For I hold that a great part of what has traditionally been called morality has always consisted in Counsels directed towards securing or increasing the *happiness* of individual men and women, they have not always been *recognized* as such, they have often appeared as divine revelations which it would be improper to verify

[1] This must be understood by reference to Chapter IV, para 1, above

by reference to human experience But they gained currency, I think, often enough, because people unself-consciously acknowledged them as concordant with their own impartial views, and sometimes I think they have been quite openly recognized as Counsels of Prudence based on experience—recognized as such and contrasted (often enough) with some 'higher way' whether of duty or of devotion

Current counsels refer, mostly, to the world as it is—or rather *as it was*—within a given society, a given class Thus, if you are an English bank clerk, it will *not* increase your happiness to drink heavily, to marry two wives, to have a great interest in travel or in collecting All these things, *I think*, are plainly true If, on the other hand, you are a boy in the South Sea Islands you will not do well to have a passionate interest in the opera These also are obvious truths This is part of what is meant by the relativity of human morals, there is nothing to induce scepticism here unless we discuss Counsels of Prudence without stating *to what actual group they relate* "Is sexual promiscuity wrong? Does it increase a man's happiness, or not?" These are impossible questions and demand the answer "It depends (in part) on the latitude and longitude" And here we see at once an ambiguity from which so many counsels suffer "This or that is good"—in what condition, for what sort of person?

Out of the context of utterance we have a mere fragment. (*Counsels* suffer from all the logical disabilities of *Rules*)

11 Another thing that is meant by 'the relativity of human morals' is that the opinion a man holds upon value-questions and conduct-questions is largely (or wholly?) determined by his desires and interests, and is rarely (or never?) determined by the relevant facts This, of course, is painfully true It is hard to convince an inveterate drinker that he would be better off if he drank less He says he has

tried it and has been worse off He says it is not seriously believed by experts that alcohol has the effects popularly ascribed to it And so on We do well to call dishonesty by its name But that in no way argues that a disinterested opinion on the question is absolutely unobtainable, or that the dishonest apologist is not saying what is *absolutely false*

It is also true, of course, that all (or almost all) the maxims current in a given class are likely to be determined by the interests of that class—rather than by the facts Thus a propertied class will find it hard to believe that *it would be better off* if it were to surrender some of its privileges, that theft is not really as poisonous and damaging a thing (to anybody) as class-exclusiveness, snobbery, callousness Such a group may be honest enough in its formulation of maxims applying within itself, and to conditions which actually exist, but is not likely to be honest in its opinion of counsels which do *not* presuppose the conditions that actually exist This is only another way of saying that any class is likely to be highly conservative in its attitude towards counsels which would threaten its own *immediate* interests This is an illustration of the general truth that we all tend to suppose that our most *obvious* interests (especially our *present* interests) are our primary interests, we all tend to suppose that we can find happiness only in those conditions in which we are now living "We know what we are we know not what we may be" Thus I cannot deny that where I now live it would lead to my ruin if I were to disregard the laws of property (This is true for the society in which I live not at the North Pole) But it *may* be true, nevertheless, that I should be happier if these laws were abolished, it *may* be true that all members of my society would be happier so But they are naturally reluctant to accept this radical counsel, both because it would be impossible to prove without difficult experiment, and because it is hard not to prefer one's most obvious interests to one's greatest interests

hard *not* to allow desires which conflict with one's happiness

Summary —We may regard counsels as *statements* (although made in emotive words) about proposed conduct, to the effect that it would (not) causally lead to the happiness of a certain individual or group Such statements are *vague* they commonly omit the necessary conditions in which they are intended to apply, for these are usually to be gathered from the context of utterance But they refer us to facts discussion and debate upon them is entirely possible When A and B disagree as to whether it is right to marry at twenty-one, it may very well be that A asserts a proposition which B contradicts (and not that the clash is merely one of feeling) But though these propositions are objective, they are not about *intrinsic* values at all, indeed, as Professor G. E Moore points out, this view of the objectivity of such ethical and moral discussions might be held by people who feel a particularly sharp objection to the whole nature of intrinsic value—who "feel that to hold such a view is not merely to make a mistake, but to make a superstitious mistake" (See *Philosophical Studies*, p 258–9) [1]

12 It seems to me that Counsels of Prudence are the real basis of what is commonly called Morality, Ethics, and Æsthetics, that even principles which seem to be essentially imprudent can—if they are valid at all—be shown to be counsels of prudence But I have to defend this view and to show that it is really adequate to explain certain facts —

1 That we often think it best for ourselves to undertake tasks which do not seem to lead to our happiness

[1] It seems to me that Professor Moore exaggerates the objection that a purely subjective theory of morals cannot account for the appearance of disagreement upon moral questions Surely this appearance could be accounted for by the reality of an emotional clash, and by confusion about the emotive use of words I feel sure that many debates (not only in Philosophy, Criticism, and Politics, but also in Science and History) really are situations in which there is no disagreement as to matter of fact but simply an emotional clash, and that confusion of thought which generally accompanies such a clash

That we seem to prefer other things to the line of least resistance

2 That we often think we have an interest in others (both in particular individuals and in whole groups and even in men in general, and even in animals) which takes precedence over our self-interest

3 That we seem to have a duty which does not take into consideration our interest, that we often seem to be under an absolute obligation to do things whether we want to or not, and whether or not the doing will bring us happiness that we have the conception of " that which thwarts our self-love "

Counsels of Prudence need not be narrowly *hedonistic* Morality includes many familiar and widely accepted principles which urge us *not* to consult first our own *comfort* or *convenience*, nor even to think much about our own *pleasure* And such may very well be valid counsels of prudence, for—from the little that we already know about human nature—it seems that we often have strong desires which, if fulfilled, would have harmful consequences, that we seem to find it very difficult to consider our more remote and less obvious desires, that a pre-occupation with gaining our next aim seems to impair the pleasures which are actually present and might now be enjoyed; that effort, exercise, striving, seem to be an important part of human well-being, that, in general, " we know not what we may be " If something has given us great satisfaction in the past, it does not follow that it has given us as great satisfaction as some *other* would have done, hence the need for experiment, progress, critical awareness and *dissatisfaction* Our current views as to what is good or beautiful must be regarded as the judgments of beings whose range of experience is limited in every way, we may alter those views, *not merely* as prejudice and fashion alter, but because our knowledge of human nature and its possibilities has increased [1]

[1] This experimental attitude can, of course, be exaggerated I may come to the conclusion that at my time of life, I am more likely to appreciate the

13 Counsels of Prudence are not narrowly egoistic

(*a*) That a man's happiness depends largely upon the society in which he lives has been a commonplace of all political thought Aristotle, Spinoza, Butler, for example, all held that a man's duties to others are special cases of his 'duty to himself', that it is just because man cannot live alone that he is obliged, in all that he does and thinks and feels, to regard the interests of his fellows What would be the proper conduct of a man who could live alone has been dismissed again and again as a question without meaning, for the word 'man' is used for a *social animal* and not for a solitary

(*b*) A man's character is itself a social product *what I am* has been determined by my parents, my family, my school-teachers, my friends, my enemies, the government under which I have lived A society has moulded me and has therefore given me an interest in the welfare of that society as such so that one of the things I most value, one of the things that go to make up my happiness, is the prosperity of a certain group For me to act against such a group would be (in most cases) the height of imprudence (cf Socrates's arguments in the *Crito* and F H Bradley, *Ethical Studies*)

(*c*) All men form particular attachments to others a situation arises in which A cannot be happy unless B is happy, he will therefore (quite reasonably) regard B's interests as his own, and very often he will realize that B's interests are the principal part of his own happiness,

art of my own country than the art of Africa or China I may come to the conclusion that, having been educated in such and such a way, I am likely to find greater happiness in studying Philosophy than I would if I were now to turn my attention to aircraft Of course, I *might* be altogether happier if I renounced Philosophy but I should (quite reasonably) be hard to convince of this The reasonable defence of conservatism must rest upon the principles that if we know what we are, we do know what we may be this is true enough, but the conditional clause will never be wholly true See Mr T S Eliot's *After Strange Gods, A Primer of Modern Heresy*, and D H Lawrence s *Mornings in Mexico*

he is then willing constantly and readily to sacrifice his own other interests, in order that his interest in B's welfare may be satisfied This (as in the case of general social interests also) may lead a man, quite reasonably, to lay down his life for his friends

(*d*) I have noticed the paradox that a narrow pre-occupation with gaining the next desire is fatal to happiness In a similar way, there is a paradox of egoism , a narrow pre-occupation with interests that do not involve other people is often fatal to happiness Hence it would probably increase the sum of human happiness if each man were *more* occupied with other people's happiness, and *less* with his own , for in this way every man would in fact best secure his own happiness This is a paradox, but it is one that can be investigated scientifically, for it is a purely psychological, and *not* a logical, one

14 But I have now to face the objection that the greater part of morality seems to consist of rules which are not designed to secure individual happiness, but which are, in fact, sharply contrasted with such rules , they are designed rather to secure *the happiness of all* (of a given group of or mankind generally), and do not seem to consider the happiness of a given member as of any importance at all when compared with the happiness of all They seem to imply that it is *irrational* to allow any exceptions to the general rules for securing the social good, or to prefer individual happiness to social happiness How can it be shown that such rules are valid for A only in so far as they promote A's happiness ?

I shall give the name ' Principles of Social Polity ' to those rules which are designed to show how the greatest happiness of the greatest number (of members of a given group or of mankind) can be obtained, and to persuade people to seek it It seems to me that we can explain in

the following how when these Principles may be valid for a given person A, a member of the group

(*a*) General Moral Principles, like General Rules of Skill, are not addressed to A in particular and are not designed to meet any particular situation They are, in so far as they are informative, general causal laws of the kind 'If this, then that' They are *absolutely indispensable* for every man, for they embody the experience of past members of the group They are a 'collective representation', not proved in any one man's experience, but in the experience of many men They therefore tend to emphasize the *social* character of man they concern actions and objects which have proved beneficial (or the opposite) to many men at many times, not those things which men have enjoyed at the expense of the others, or in more or less complete isolation Their content is determined by the fact that they are *principles upon which a great many men have agreed*

(*b*) Hence their *negative, limitative* character One man in a thousand may think it would be a good thing to open a tannery, in a large society others will agree with him, but the nine hundred and ninety-nine will certainly agree that no one ought to open a tannery in the vicinity of other dwellings, or in places used for general amusement If A wished to start tanning he might himself think How will this affect the other man? But *Society is the other man*, its first and last thought is for the other man, because the 'other men' are society, and are all in agreement *to limit* the activity of the individual Thus the 'wisdom of our ancestors'—without which any man would find life impossible —consists of principles whose purpose is to secure the good of the group in general—that is, the good of the majority or of the most powerful—and which are directed pointedly against any action which jeopardizes that good [1]

(*c*) Principles of this kind can very often (but not always)

[1] Cf the argument of Adeimantus and Glaucon, *Repub*, II

be defended as reasonable for any given man to follow, even at the sacrifice of some particular interest of his For if he makes an exception of himself, he knows that it will encourage others to make exceptions of themselves, if he does not acknowledge others as 'ends in themselves', they will not acknowledge him as such These Principles of Social Polity then rest upon the simple and obvious fact that for all men, for *almost all* situations in their lives, the integrity of a lawful and peaceful and progressive society is a *supreme personal interest* That is to say, these limitative Social Principles are valid for A, because without the friendly support of society he cannot achieve his own interests, whether egoistic or altruistic, it would be *unreasonable* for A to expect to find happiness by making himself an exception to these general principles Such a sentence as "It is a bad thing to make a promise without any intention of keeping it," means primarily that it is a *bad thing for the group as a whole*; a bad thing for most men at most times, but it may be valid even for a man who has a particular interest in breaking this principle, for his action would damage that social fabric in which he has himself a primary interest

15 There is no doubt, however, that most men have rendered obedience to principles of social polity, without at all recognizing that obedience served their own happiness by serving the happiness of society For those principles, together with other rules of a quite different sort, have commonly been put forward in quite a different form not at all as stating (even in emotive language) facts about individual happiness in its relation to possible events and objects, but as stating something about *intrinsic value* or *unconditional obligation* Thus morality has often been supposed to consist mainly (or even entirely) of *Laws* which state what all men must do whether or not by doing so they obtain their own happiness or the happiness of mankind in

general And it has also been supposed that, just as certain actions are right (or wrong) in themselves, and quite apart from any consequences to human happiness, so certain things are good or beautiful in themselves, and would be so, even if no mind were ever aware of them—even if they existed quite alone in the universe and so could make no difference to human happiness

This requires examination if I am to defend my theory of Counsels of Prudence

(*a*) Unconditional Laws of Morality have commonly been promulgated as commands of God or of the State in such cases it is not hard to see that they were principles designed (whether mistakenly or accurately) to promote the happiness of Society in general, *or of the most powerful group within that society* in the former case they were entitled to respect from any member of the group, in so far as they were accurate, in the second they were not entitled to any respect except that to disobey was to suffer violence, they were analogous to the driver's whip which is not an argument and cannot be debated

(*b*) Kant and other writers who have rejected a 'naturalistic' or 'psychologistic' interpretation of ethics have clung to the notion that a man may be under an obligation (to do this, to prefer this to that in his estimation) which is neither prudential nor supernatural There is, they hold, all the difference in the world between saying that

Lying is prejudicial to any man's career
Lying is prejudicial to human happiness
Enjoyment of other people's pleasures is pleasant

and saying that lying is *wrong*, or that enjoying other people's pleasure is *good* in *itself* Thus Kant holds most strongly that the laws of morality are binding upon all rational beings, whether or not it makes for human happiness to carry them out we cannot tell, he says, whether a given action is right or wrong by asking what will be its *consequences* they are

irrelevant An action *must be done*, not because it leads to happiness, but because it is right, is an unconditional obligation We are not here to find happiness

> "—our existence has a different and far nobler end, for which, and not for happiness, reason is properly intended, and which must, therefore, be regarded as the supreme condition to which the private ends of man must, for the most part, be postponed" (Op cit, 1st Sect, para 6)

Professor Moore, on the other hand, held that it is by reference to the consequences of a given action that we determine whether that action is right or wrong, but we must ask ourselves whether the consequences of the action are *better* than the consequences of the possible alternative actions, and this 'better' means "contains more intrinsic goodness or less intrinsic evil"—it does *not* mean "more useful in promoting human happiness" Why not? Because 'good' does not mean anything about human happiness it is even logically possible that human happiness is not good at all in fact, we cannot define 'good' *in any terms* Is not obligation, for him, too, unconditional? [1]

16 Laws of Morality, in my view, include three elements (*a*) *principles of social polity expressed in a peculiar way* These principles are, as I have shown, essentially the work of the group as a whole, their first appearance was as dictates of the most powerful members of the group, they were promulgated in words, and in circumstances, of great emotional force, they were uttered by witch-doctors, issued by oracles in obscure language, read in the stars or discovered upon tablets of stone, and they were enforced by the severest penalties (*b*) Principles designed solely for the benefit of the ruling groups (*c*) Principles which expressed the *religious experiences* of rulers and ruled, which arose, not

[1] See *Philosophical Studies*, VIII and X, *Ethics*, Cap II, etc I am here discussing only the views expressed in these early writings of Professor Moore's—not his present views

from the irrationality of stupidity and ignorance, but from the irrationality of mysterious, overwhelming experiences—from the current experiences of the *numinous*

The individual was quite powerless to withstand this combination of religion, magic, and brutality, he must have been unable even to distinguish his own will from the will of the group—as represented by the father—priest—king Besides this his own interests really were bound up with those of the group These principles thus became bound up with the *mana* of the tribe respect for them arose from fear—not so much fear of punishment as fear of cutting himself off from his fellow men, a fear unconscious and fundamental And (what is at least equally important) he was bound in his heart to his rulers and his tribe and the gods, by his own religious experiences, by an admiring and reverent *affection* Without this bond, the position of rulers and ruled would have been intolerable As this primitive state of siege was ameliorated and men began to conceive of themselves as units, as having particular interests, as being able to stand a little more on their own feet, the power of the moral law did not disappear, but became liable to opposition and even criticism Now first the more powerful in the group, the guardians of the law, began to defend the law, not with sword only, but also with argument, they tried to *recommend* the law as being in the general interest, they even abandoned those principles which were most patently *not* in the interests of the whole Now, for the first time, 'morality' began to be adulterated with 'practical anthropology'. But (illogically enough) even those who tried so to *justify* the moral law, claimed for it unconditional obedience, claimed for it eternal and immutable validity, described it as absolutely categorical, as enshrining a conception indefinable in terms of any human interest whatever Now if we are to adopt a purely rational attitude to such Laws, we must *test* them all by reference to their social utility that

is, we must treat them all as if they were Principles of Social Polity (true or false), put forward in words which carry the emotive force of primitive authority (based on a primitive fear of losing touch with the group, and primitive reverence for the tribe and its gods) Such Laws (as traditionally presented) will therefore be found to include many *false* principles—dictated by the self-interest of the tribal rulers, of the governing class, by the ignorance and false religion of our ancestors [1] They will be found—like all Principles—to emphasize our collective interests rather than our individual interests , to glorify altruism, public spirit, and the useful social virtues such as courage, honesty, sobriety, docility , and to condemn very heavily those actions which are of the greatest danger to the social fabric of the group in which they hold , sheep-stealing in eighteenth century England, machine-wrecking later on , horse-stealing on the American Frontiers

17 What then are we to understand by such sentences as —

" Murder is a sin "

" Thou shalt do no murder " ?

In Laws of Morality the emotive meaning is much more striking than the reference These sentences are used by a speaker in order to create in his hearer an emotional attitude of aversion to murder—so that, in fact, he will not commit murder This he does partly by showing that he himself is averse to murder ' murder,' ' sin,' the imperative mood, all show on which side the speaker stands He is not only recording the fact that society is opposed to murder , he is expressing his own opposition But he is doing more , *he is a vehicle for the feeling of society as a whole* , the words introduce the feelings of the group, the clan, the father—priest—king Can we regard such sentences as making

[1] We must also suppose that many derive from genuine religious experiences, but have become misinterpreted in secular style

statements? Strictly speaking, I think we cannot They are *unconditional* obligations, and do not justify themselves by reference to anybody's interests But they *suggest* a parallel principle of Polity —

> "It goes against the happiness of society to take a man's life"

And this can be analysed to mean that it is not in anyone's best interest to take another's life And this is true or false

It seems to me that we must explain by this 'practical anthropology', the theory that 'right', 'ought', 'good', 'beautiful' are *absolute*, *intrinsic*, and incapable of a naturalistic analysis Of course it is true that the 'ethical words' never can be replaced by naturalistic signs without a change of *emotive* meaning, each of these has a unique emotive value which no scientific circumlocution can hope to imitate In this sense they are indefinable But in so far as these words are used to convey facts about human happiness, they can, I think, be defined—their references can be analysed And if a man uses 'good' in such a way that the goodness of a thing has no connection whatever with human welfare, it seems to me that he is using the word *merely* in order to express his feelings and to secure for the good object something of that obedient veneration with which the children of Israel regarded the Ark of the Covenant We cannot, I think, avoid the *paradox* that some men *feel*, or may be made to feel, under absolute obligations that conflict with their own interests Are we to make this into the fundamental principle of a *metaphysic* of ethics? Are we to assert some *necessary connection* between the nature of reason and certain possibilities of order and harmony in social life and even beyond? This I regard as outside the scope of my undertaking But it seems to me that the full explication of this paradox would lead us, not into metaphysics, but into an account of *religious* experience It may be that reverent

and fearful obedience to absolute laws has in it some awareness of a numinous object even when that obedience is rendered to laws that are based on social prudence or the enlightened self-interest of a governing class If this were so, the paradox of morality would be a paradox of feeling and not resolvable by argument

Note to Chapter IX

Ought we to prefer justice to a reputation for justice? That is, have we an unconditional interest in justice itself? This is the theme of the famous debate in *Republic*, II, 362–8 But Plato does not phrase the question as Kant would have done He asks rather Is the just man invariably happier than the unjust (even if he enjoys a reputation for justice)?

Plato answers that the just man would be less happy if he were to do injustice This is purely psychological, there are many men (Socrates seems to have been one) whose happiness was bound up with justice and obedience to his city's laws *He* cannot find happiness by breaking the law, and prefers death to disobedience It follows that if *such a just man* were to change places with his oppressor, he would be of *all* men most miserable Aristotle laughs at Plato for saying that a man may be happy on the rack (*E N*, VII, 1153), but Plato *need* only say that the just man is less unhappy even there than he would be if *he* were himself undertaking the oppressor's task

But Plato *tries to generalize his conclusion about the* just man Reason is man's vital principle, justice his perfection, hence all men (even the oppressor) have a supreme interest in being just (*Repub*, 443*c* and *d*) So that the just man is, after all, happier than the oppressor actually is (cf *Gorgias*, 527)

In a similar way, Aristotle tries to generalize his view that a rational man's supreme happiness lies in the βιος θεωρητικός And Kant tries to generalize his view that a rational man will wish to act consistently reason is the ' essence ' of man, hence all men have an interest in consistency, that is in morality Are these generalizations to be supported by empirical evidence ? Such evidence could never be found Some men love justice, some men love study, some men love to be consistent *It is always possible that a given man has interests which do fundamentally conflict with those of society in general* In that case, he will be at war with society and will give way only to *force majeure* or to deception, or to persuasion, or conversion, whereby there is *created* in him an interest in the good of society which is stronger than his interests that are opposed to society I do not, therefore, subscribe to the doctrine that man's failure to organize his social and political life is primarily due to ' the backwardness of the human sciences '—man's ignorance of his own ' happiness ' Rather this ' backwardness ' is itself a symptom of the real cause the genuine conflicts of interest and the illusions and interested deceptions to which these give rise

Plato is trying to convert us he clearly holds that the just man is *better* if he does not give way to the temptation to be unjust This is a social principle (*It is expedient* that one man suffer for the nation) But it may not in this case be a counsel of prudence for this just man, *his* interests may be at variance with society's It is, however, a social principle *which Plato feels strongly*, and which he *urges* in every word of his narrative Plato was *bound in the spirit* to the just man who stood firm And we all admire him, not only because we may benefit by his integrity, but because courage in itself moves us

Notice that in the *Gorgias* (525, 527), Plato tried to reinforce the argument that the just man is happier even than his oppressor, by an eschatology This, of course, would

mean that the just man was, after all, prudent not to submit to temptation And the unjust man fundamentally imprudent This also is the doctrine of the *Protagoras* We may regard it as the ideally rationalist solution, but one which is plainly inadequate outside academic society And the eschatology may after all be ' an old wives' tale ' , in the *Republic*, the serious Adeimantus especially asks Socrates to confine himself to the happiness or unhappiness that springs from the intrinsic nature of justice and not from the remote consequences of justice (367*d*)

Chapter X

THE LANGUAGE, TRUTH AND LOGIC OF POETRY

1 Certain sentences, as commonly understood, refer us to 'immediate' feelings, imaginings, imagings, and have been described in Chapters III and IV

I feel very angry
I like that picture
I want to go home
I am thinking about the problem
I remember this time last year
I have a toothache
I seem to see a bright light

Any of these *can* be interpreted as referring to things that a *normal observer* cannot (by the very definition of 'normal observer') perceive We must now consider this private sense of these sentences, and, in particular, of all sentences that would commonly be said to 'describe one's private and inward *feelings*'

(*a*) The signs, so understood, refer us to something that is beyond 'normal observation', but not in itself logically unobservable (see above, Chapter IV, § 9) It is not senseless for me to try to describe my feelings an audience may properly suppose that I am trying to describe something that they cannot expect to observe, but which may very likely resemble their own experiences

(*b*) The description of feelings, however, is no easy matter, as we shall see if we consider the various methods that are in fact used [1]

[1] This list is partly taken from Mr I A Richards' *Practical Criticism*, p 217, etc

(1) Names for emotions and attitudes —

e g *anger*, *fear*, *joy*, *hope*, *surprise*, and the derivatives *passionate*, *enthusiastic*, *tender*, *delight*, *startle*, *gaily*, *sadly*

These cannot (as I have tried to show) have established ostensive definitions I can only guess how great a variety is covered by the word 'anger', certainly a great variety even in my own experience

(2) Æsthetic adjectives —

e g *pretty*, *lovely*, *sublime*, *glorious*, *rare*, *exquisite*, *fine*

Such a sentence as 'This is a sublime prospect' offers some sort of description of the feelings of the speaker towards the objects that he is (ostensibly) describing (see the discussion of type 2 sentences above)

(3) Definite description of feelings by reference to their objects —

e g "feel for thee as a lover or a child"
"feel as a child does towards Santa Claus"

(4) Definite description of feelings by reference to their causes —

e g "feel as one does after drinking champagne"
"feel as one does after a day's fruitless work"

Very often, cause and object are one and the same, but of course the object may be fictitious, or causally unconnected with the feeling

(5) Metaphorical description —

e g *elevated*, *gross*, *fleeting*, *massive*

In these instances, the metaphor rests upon a supposed similarity between the feeling to be described, and something quite different But in others, the metaphor rests upon an analogy between the feeling to be described, and another feeling, described by reference to its cause or object —

e g *lofty*, *profound*

"Most descriptions of feelings, and nearly all subtle descriptions are metaphorical and of the combined (*sc* second) type" (Richards)

(*c*) It is obvious that the resources at our disposal for conveying information about our emotions are meagre and inadequate, when compared with the systematic methods used in history, the physical sciences, and in the everyday description of what goes on in 'the physical world' We may remark, besides, that the very inadequacy of this vocabulary reflects the fact that people under the influence of the more powerful emotions commonly lack the ability and the inclination to analyse and describe what they are suffering But in fact, if I want to gain information about the emotions that another person is experiencing, I commonly do not ask him to *describe* his feelings at all I observe the outer manifestations of those feelings in bodily behaviour and in *dynamic language* I watch his colour, his gestures, the pitch and tone of his voice, and his use of words that are *emotive*, and either *not descriptive at all*, or not, in a straightforward sense, descriptive *of what he feels*

(*d*) In other words, strong emotion naturally leads to verbal expressions that tend both to relieve the emotional tension of the speaker, and to secure from an audience a certain *emotional response*—whether sympathetic or antipathetic Even the description of emotions is more often used with a dynamic than with a purely informative purpose, the choice of metaphors, for example, is often determined far more by their emotive, than by their exact descriptive, power And in fact a purely theoretical *interest* in the description of other people's feelings is not a very common thing most of us listen to descriptions, as we listen to merely emotive expressions, chiefly in order to *feel*

2 A poet may be supposed to be a person who has unusually intense and varied emotions and besides this, to be one who associates those emotions with *words* which powerfully affect the feelings of others So that the poet doubtless uses his words, as we all use ours, to gain sympathy or to arouse

antipathy But we must certainly credit the serious poet with something more he tries to communicate novel emotions to his readers—to *widen* the range of their experiences and to *order* and *harmonize* them It is therefore in poetry, especially in lyrical poetry, and above all in *good* lyrical poetry, that we see at its most developed stage, *the use of words for the control of the emotions* This use is the subject of the present chapter The topic ought properly to cover the spoken words of endearment and abuse, greeting, gossip, humour, oratory, invention, and the written language of fiction, letters, imaginative and political reporting, drama and poetry But in fact I shall largely confine myself to good lyrical poetry

I have already referred to the considerations that led some philosophers to deny altogether that the words of poetry have any 'assertional sense' This conclusion is belied by what I have already said of the poet's methods —

(i) The poet often tries to arouse our feelings by the actual description of his own "Any lively, close, realistic thought of an emotion is so apt to revive it that most descriptions that are at all concrete or intimate, that do succeed in 'putting it before one', also reinstate it" (Richards, loc cit)

(ii) The poet's dynamic purpose often makes use of the description of other things—of nature and man and the gods, "of what is past, or passing, or to come"

(iii) As we shall see, *most* of the poet's words, including most of the definitely emotive words, have some reference to objects, and achieve their characteristic emotional effect by means of this reference

I shall begin by examining the way in which the words of poetry operate I shall not attempt to distinguish in detail between the description and the stimulation of feeling, but shall assume that the language we are studying is dominated by a *dynamic* aim [1]

[1] And, in fact, a strict distinction is not possible for (i) mere description of feelings is itself moving, and (ii) very often we hear or read words that

Secondly, I shall examine the view that, by means of his effects upon the emotions of the reader, the poet is trying to communicate some peculiar sort of *truth*—a sort of truth that is established, not in sense-perception or in mere passive introspection, but *in the feelings themselves*

Thirdly, I shall examine the view that poetry, and all other kinds of imaginative literature, may (or always does) communicate some alleged truth about man's place in the world, and that the value of such literature (or even of all literature) depends in part (or even altogether) upon how far it is 'true to life'

3 Very much poetry consists of sentences that mean true-or-false propositions —

> Hamelin Town's in Brunswick,
> By famous Hanover City

But here at once we notice that this plain matter-of-fact statement is not quite intended as a matter of fact The lines do not introduce a versified Baedeker, they are used to impress a child with a *real* place—"Of course this is a true story!" The poet is indicating referents, not for information, but only for the sake of the emotions associated *by habit* with the ideas of these referents If we now ask How is it that references are themselves signs for certain emotions (for the readers of poetry who understand), the answer must tell us of the causal relationships between our organisms and surrounding nature It is no accident (of

are *emotive*, and that might actually revive emotions in us, but which, in fact, succeed only in making us *think about* the feeling they express This does not necessarily indicate a failure of understanding or a failure on the part of the poet The dramatist, for example, cannot expect his audience to experience for themselves all the emotions that his characters *express* he is satisfied, very often, if the emotions are merely *noticed* But of course, where we assume that the speaker or writer has a dynamic, and not merely an informative, intention, we suppose that the play or the poem is intended, *as a whole*, to make us feel something To see a play and merely to be aware that the persons have been suffering emotions, is to fail to receive the writer's communication See the important remarks on this topic in Richards, op cit, Part IV, § 16

course) that so much poetry is 'nature poetry', for the earth, the seasons, the sea, the sowing and the reaping, human society and human passion, are the conditions of the existence and persistence of the race [1] The poet uses words which are conventional signs for referents that are of *vital* importance to mankind And in a civilization as complicated as ours, this importance may be shared by a very great variety of referents the 'daily bread' of simpler people becomes the 'weekly pay-check', and 'daily work' is represented by 'the last cage down', 'the 8 30 up', and 'clocking-in'

This is the beginning of the story But isolated words and phrases must have different effects upon different readers, and upon the same reader at different times Such a word as 'the sea', for instance, is likely to stir the emotions (even if ever so slightly), but *how*? Will it arouse in us the feelings associated with a cold morning bathe, with white-hot August sands, with long journeys, with storms and alarms? The aim of the poet is not merely to stir the emotions, but to control them For this end he must build up *patterns* of words, which determine narrowly the possible emotions that can arise in a normal and understanding reader Thus the four words—

The unplumb'd salt estranging sea

determine only a small group of possible emotional responses, perhaps the response made by some people who read the line for the first time, is for them an absolutely novel emotion

This fairly accurate control, here achieved in one line, is not usually achieved in imaginative prose without a much greater expenditure of words Within several pages of a novel, the author tries to build up in his readers a more or

[1] Cf Miss Jane Harrison's conclusions upon primitive religion in her *Themis* (Cambridge, 1912) All gods are nature-gods and all are *human-nature gods*, for they are all projections of human needs, and the chief needs of early man are food-supply and tribe-supply, the increase of man and of the earth

less determinate frame of mind—a system of hopes, fears, attractions, repulsions, which he can develop further in accordance with his own plan The novelist commonly crowds his pages with information about the actual world—taking care, perhaps, that it shall all be true—not with the idea of providing us with some *useful* facts, with something that will help us to future goods in real life, but simply as a means towards a *literary* end—an enjoyment of an emotional sort [1]

But the emotions which words arouse are not at all confined to those which are associated with the conventional referents of the words actually used For example, the word *salt*, in Arnold's poem, is emotive, not in virtue of its reference to sodium chloride, but because this reference is itself a sign for other referents which *have* direct emotional associates Now the referents *suggested* by any word may be very numerous indeed, and altogether heterogeneous, it is the poet's business to see that his poem (taken in its entirety, or all that precedes the given word in the poem) suggests only one of them, or only some of them, and excludes the unwanted others Arnold's line might suggest *tears*, *bitterness*, *strangeness* [2]

Again, a word has a physical character of its own, and may be a sign for other words (and hence, for what these mean), which are like it in sound or in shape Sometimes the meaning of the other (suggested) word adds to the emotional value of the poem, and is actually a part of the emotional effect that the poet is trying to produce It does not matter if the other word refers us to something that is

[1] It is not often difficult to distinguish history from historical fiction, topography from travel, science from scientific romance But much writing has a *dual purpose*, of course Cf below, §§ 12, 13

[2] This example suggests that a referent B, which is closely associated, in fact, with another referent A, is quite likely to become a second sense of the word 'A' This extends to the cases where B is an emotion thus 'rosy' has come to mean a mood as well as a colour See the interesting paper by Mr William Empson (*to whom this chapter is much indebted*) in the *Criterion* for January, 1936

quite irrelevant to *what the poem is saying* For instance, a poem on mathematical functions refers to them as " shining bright quaternions "—why ? Because the *word* ' quaternion ' suggests a unit of the Roman army This altogether contingent and inconsequent union is typically *poetic*, its only and sufficient justification is that it enhances the emotional effect of the verses [1]

Again words have their own affinities, and tend to congregate in phrases, clichés, familiar constructions, and mannerisms The use of one word commonly acts as a sign for a set of words, and the poet may well wish the other words to be in the back of the reader's mind, so that some emotional associates of the other words may add their force to the full value of the poem Or he may wish to create in us a more definite expectation that the other words are to follow this expectation he may wish to fulfil or to disappoint by substituting other words In such ways as this, the poet is able to prepare us exactly for what he wants us to feel to create tensions between what he actually goes on to say, and what we had expected him to say A special case of this sort of thing is the quotation, or the suggestion, or a definite context from some previous writer, old emotions are stirred, which the poet may link up, or contrast, with his main emotional theme All modern literature is shot through with allusions to biblical and classical writings, and much recent poetry gains its effects by allusions to exact contexts in the writings of modern times

The determinate effect of any emotional stimulus obviously must depend upon the antecedent state of the mind and body of the reader This is as true of the stimuli of poetry as of other sorts Even a poetic stimulus may lead to a muscular reaction as Aristotle remarked, the audience at the theatre stop eating sweets when the acting is at its best (*E N*, 1175*b*) The poet must therefore prepare the

[1] I am sorry that I cannot now trace the poem

way most carefully for the crisis or climax of his work he must, for the time being, be the ruler of our minds and bodies And this control is exercised by the help of the pure sound qualities of the words—the characteristic control of poetry may be described as the joint action of sound and sense upon the feelings of the reader

4 The importance of the sound-effects in poetry has often been misunderstood in the past The sound qualities that we admire in good poetry are not anything that would have any particular value in abstraction from the emotive and informative meanings of the words The sounds are good when used to express *this* sense and to suggest *this* emotion And the *rhythm* that the sounds seem to present is in reality an effect upon the reader of both sound and sense —

> " the rhythm which we admire, which we seem to detect actually *in* the sounds, and which we seem to respond to, is actually something which we only *ascribe* to them and is, actually, a rhythm of the mental activity through which we apprehend not only the sound of the words but their sense and feeling The mysterious glory which seems to inhere in the sounds of certain lines is a projection of the thought and emotion they evoke, and the peculiar satisfaction they seem to give *to the ear* is a reflection of the adjustment *of our feelings* which has been momentarily achieved " (I A Richards, *Practical Criticism*, 1929, p 229)

Rhythm—the creation of emotional tensions and harmonies —is effected in the ' plot ' of a story, the structure of a sentence, the opposition of words and phrases In poetry this control can be extraordinarily exact our expectations can be timed (by the help of metre and rhyme) to a split second The pattern which metre produces is a pattern in our own feelings —

" We shall never understand metre so long as we ask,

> 'Why does temporal pattern so excite us?' and fail to realize that the pattern itself is a vast cyclic agitation spreading all over the body, a tide of excitement pouring through the channels of the mind" (I A Richards, *Principles of Literary Criticism*, 2nd Ed, 1926, p 140)

The technical devices of onomatopœia, movement, metre, rhyme, are all discussed by Mr Richards in his two books on criticism

I return to certain other poetical methods which show even more clearly the differences between imaginative and informative literature Consider first the *ambiguity of words and sentences* The scientist or historian intends primarily to help his readers to identify referents of some sort—whether test-tubes, measuring rods, or documents, buildings, artefacts He must therefore try to use words that *in their context* indicate one and only one sort of object—ambiguity is fatal [1] But in poetry there is no such obligation to be definite, a sign that indicates ambiguously either A or B, may be a better word to use than a sign that indicates A alone or a sign that indicates B alone For (i) poetry has its own obligation to be brief, pointed, condensed, in order that the emotions aroused shall not dissipate themselves, that apprehension shall not be delayed the use of *one* sign for two or more referents is a principal way of achieving this And (ii) the poet may wish to evoke emotions associated with both A and B and to produce a tension between these two feelings The single ambiguous word alone will do this, for it introduces doubt, hesitation, *depth*—it relates two feelings without bringing either feeling, or the relation, fully into the reader's consciousness [2] The importance of

[1] It must not be forgotten that the spoken language may be highly accurate in the context of utterance and understanding, although it would be highly ambiguous if it were written down and read at another time and place

[2] Richards, *Practical Criticism*, pp 201 and 214 *et al* Ambiguity in Diplomacy—both political and social—provides an interesting illustration of language equally important for the information it conveys (*a*) to the outsider and (*b*) to the one who really understands, and for the feelings which it expresses and conceals

ambiguity has been demonstrated by Mr William Empson in his *Seven Types of Ambiguity* (1930) and his *Some Versions of Pastoral* (1935) This chapter owes its origin to these works and I shall here try to offer a few simplified illustrations of some of his theses

(i) Ambiguity in a simple referent —

" So in His purple wrapp'd receive me Lord "

Here *purple* refers us to the mockery of the soldiers before the crucifixion, and also to the Blood, under cover of which the sinner enters Paradise The word *purple* suggests a connection between these two that is emotional

(ii) Ambiguity is a construction —

" Donne, I suppose, was such another
Who found no substitute for sense ,
To seize and clutch and penetrate,
Expert beyond experience "
(T S Eliot, cited by Empson)

Here *expert* may relate to *Donne* or to *sense* Compare the opening lines of Mr W H Auden s " Sir, no man's enemy " (*Poems*, 1930, No xxx), where, as it seems to me, the construction is a puzzle without any good clue, and two poems are found in unhappy competition

(iii) Ambiguity in the total situation referred to in a poem In much of Traherne's work it is impossible to say whether the poet is concerned with the Sacred Love or the Profane And the poems would suffer, *even in their specifically religious character*, if the profane interpretation were totally excluded from the mind It is meant to be in the background or even nearer In a somewhat similar way, Pastoral Poetry refers us both to swains and shepherdesses, cotes, and dells, and also to the life of the Court and Society Such poetry would, of course, be destroyed by any fully self-conscious choice between the two interpretations

(iv) There may be ambiguity in the emotion which a poet is creating in regard to a perfectly definite situation Thus in the poem by Herbert called ' The Sacrifice ', it is quite clear that we are to contemplate the Passion , but are we to feel that the Sufferer is a Saviour or a Judge ? Does He forgive His torturers out of pity, or because *their* hour is not yet come ? The poem suggests *both* of these contrasted emotions towards the same theme , and in doing so reveals a most important conflict of feeling and of theory—two disparate theologies at war (See Empson, *Seven Types*, p. 286)

5 Generality and metaphor provide a source of many interesting ambiguities A metaphor may, of course, be quite unambiguous ' a sea of troubles ' rests upon a perfectly definite way in which troubles resemble the sea , both are cumulative and both are (or may seem) irresistible But ' the flinty and stele couch of war ' is ambiguous because we do not know definitely which is the ' standard of comparison ' and which is the ' object compared ' That is to say, we do not know whether the speaker is referring to the soldier's bed, his hard life in general, or his hard death (Empson, op cit) Similarly a generalization may or may not be ambiguous It is not ambiguous to refer to *any one* of a definitely determined class , but the class may be ill-defined " Some people know too much ! " may be a generalization including the person addressed, or it may not This is the popular instrument of abuse and humour—the ambiguity of the innuendo

Generalization in imaginative writing is often accomplished by an apparent particularization " None for the little boy that cries down the lane " Who is he ? It is not difficult for a child to see that it is *any* little boy who cries *any*where In Hardy's poem, ' Beyond the Last Lamp,' there is a great debate as to the *identity* of two who were seen walking on

the common, but the real point of the poem surely shows that they might have been any pair of lovers and that their sorrow is anybody's sorrow This generality-via-particularity revives for poetry some of the vividness of speech and gesture in an actual context of events [1]

Degrees of generality are an especially frequent source of ambiguity in metaphysical writings Professor Whitehead remarks that a great metaphysical principle is seldom at first grasped in its *full generality* commonly it will begin its influence upon men's minds as an ideal or feeling about some more or less obvious, and definitely limited, feature of the human scene For example, the water in a river is for ever changing, the grass withers and fades The generalized notion or feeling is only very slowly widened out to that principle which was imputed to Heracleitus "*All things change* and nothing remains" And at this stage, of course, the principle finds itself opposed by a contrary—also generalized from quite particular examples "The form remains, the function never dies"—the Parmenidean principle of the absolute, unchanging one [2] It seems to me that here we have ambiguity (1) in the implicit transfer of an emotional attitude evoked in one context into another and altogether wider context, in which it might or

[1] Cf Phlebas the Phœnician' in Mr T S Eliot's *Waste Land* he is introduced as a very definite person indeed, and we feel that we ought to know who he is Is he an historical character? Is he 'Mr Eugenides, the Smyrna merchant'? The chief answer (I suppose) is that he is someone who dies, and therefore *anybody*

[2] See Whitehead's *Adventures of Ideas*, p 5, etc An interesting example can be traced within the writings of Plato in early dialogues he objects to the art of the poet and the rhapsode, because the poet is a mere passive receptacle' unable to compose until he has been inspired and put out of his senses, and his mind is no longer in him" (*Ion*, 534*b*) Later this charge is made against the whole society in which Plato lived—against Democracy and the Democratic man, who has no mind of his own and is quite unable to distinguish good from bad, and is equally hospitable to all "he shakes his head and says that they are all alike, and that one is as good as another' (*Rep*, 561) Finally this criticism is erected into a metaphysical principle chaos, the formless and easygoing and uncritical, becomes the source of evil and of the irrational in the universe—the hypodoxe of the *Timæus* 'that which is to receive all forms should have no form' (This was pointed out to me by Dr Rafael Demos of Havard University)

might not prove itself relevant to a fully self-conscious and critical thinker, and (ii) in the determination of the wider context itself Very often it is quite *impossible* to reflect rationally whether or not the emotional attitude is justified in the new context, just because the new context is not a definite one at all It is obviously true that nature is in a constant flux all rivers, all living things and many inanimate ones These sayings, quite literally understood, arouse in men certain definite and inevitable emotions And these changes menace much that we value and admire and love, and impress us with a feeling of our limitation In all these cases, the *changes* are contrasted vividly with other things that remain *permanent*, ' rocks and stones and trees ' and ' earth's diurnal course ', perhaps But when the poet or metaphysician proceeds to tell us that " *all things* change and *nothing* remains ", what things is he really talking about ? We *feel* at once for those obvious changes, contrasted with permanencies, that we regret, but our expressions are not confined to these And so a certain mood may ensue, a mood in which we are confused in thought by the very expressions we use, and in which, nevertheless, we are especially apt to think that we have had a penetrating insight into the nature of things in general This state of mind is essentially poetic we transfer emotions germane to a definite context, into an altogether different and indefinite context It is a state of mind that would not survive if we were to regard the metaphysical principle as a scientific hypothesis to be *analysed* and *verified-in-observation* And in fact we find that many of the ' great sayings ' of the philosophers, sayings that have haunted the imagination of mankind, are fundamentally ambiguous in their range

6 Contradiction and verbal nonsense also have their uses in metaphysic and in poetry Contradiction is itself a kind of maximal case of ambiguity —

> " An example of the seventh type of ambiguity . occurs when the two meanings of the word, the two values of the ambiguity, are the two opposite meanings defined by the context, so that the total effect is to show a fundamental division in the writer's mind " (*Seven Types*, p 244)

Heracleitus provides many admirable examples —

> " The way up and the way down is one and the same
> We step and do not step into the same river we are and are not "
>
> " God is day and night, summer and winter, war and peace, surfeit and hunger "
>
> " Mortals are immortals and immortals are mortals, the one living the other's death and dying the other's life "
>
> (Translations from Burnet, *Early Greek Philosophy*)

A more complicated example comes from Donne —

> " Rebel and Atheist too, why murmur I,
> As though I felt the worst that love could do ? "

A modern example in the manner of Heracleitus —

> " Shape without form, shade without colour,
> Paralysed force, gesture without motion "
>
> (T S Eliot, *The Hollow Men*)

It seems to me that many of the characteristic *paradoxes* of philosophy might be interpreted as poetic expressions of emotional conflict Of course many others may be due simply to a mishandling of language—to the exploitation of the deficiencies of syntax Where, however, purely verbal nonsense does manage to gain a hold upon the mind of readers, it may be found that the nonsense does in fact act as a peculiar emotional stimulus and symbol [1]

Besides finding a use for contradiction, poetry employs other kinds of nonsense all sorts of grammatical laws may

[1] See the excellent interpretation of *Alice in Wonderland* and *Through the Looking-glass* in Mr Empson's *Some Versions of Pastoral*

safely be violated, and even sentence-structure may be abandoned This naturally gives rise to the criticism—to which all poetry is more or less liable—that it is not ' about ' anything, does not represent any possible state of affairs This, I think, illustrates the general principle that the *first* aim of all imaginative writing is to affect the emotions The writer commonly makes use of a natural theme as an object or focus for the emotions aroused But this theme need not be obvious, or consecutive, or consistent, and may (I dare say) be altogether absent For the *essential* connections and transitions and unity of imaginative writings are to be found in the moods they create Of course these moods themselves will lead to some sort of further effects upon the reader and the effects must concern the life of the reader *in the real world* There must therefore be relations between imaginative writings and the world in which the reader lives , but this is *not* to say that the writings are *about* that world , their relation is often very much more distant (See below, § 12.)

7 I must now discuss certain ways in which the syntax and vocabulary of poetry *differ* from those of scientific or historical prose There are certain words which are either avoided altogether in exact information, or have there a restricted meaning , these words are an important part of the poet's equipment

(*a*) Ethical predicates and their derivates

(*b*) Psychological words of a praise or blame variety

(*c*) Adverbs and adjectives of indefinite degree

(*d*) Certain psychological terms excluded from a behaviourist vocabulary

(*e*) Certain conjunctions and adverbs, used with emotive meaning

(*a*) All value-words are bound to have an emotive meaning

(Chapter IX) Words such as ' good ', ' honourable ', ' noble ', are useful to *the authorities* of all kinds , but it is characteristic of the scientist that he tries to do without such words, and tries to make himself believed merely on the evidence he suggests (A submissive, unquestioning, attitude is thought to be undesirable even among research students) But the poet especially values and uses such words —

" Sed omnia *praeclara* tam difficilia quam rara sunt "

This does *not* tell us about the incidence of objects of a certain kind , it inspires in us an attitude of endeavour, reverence, and resignation

(*b*) *Likable, disgusting, desirable, unpleasant*, etc , may be used to *assert* that certain objects excite certain reactions in certain people But very often, especially in poetry and conversation, they are used expressively and persuasively, to *create* in others feelings of certain kinds (See Chapter III, ' type 2 ')

(*c*) *Too long, rather big, very heavy*, etc , may refer us to some fairly definite standard of comparison supplied by the verbal context or (more often) by the context of utterance, and so may be used in information But often (especially in poetry) the context does *not* supply us with any objective standard of comparison , the real standard is purely emotional Thus " Life is very long " cannot possibly be regarded as true or false , we ' agree ' with the *sentiment* (if we do agree at all), and not with the *statement*

(*d*) In conversation ' my pain ' is not merely something that you can investigate with the help of your eyes or fingers , it is above all something that you can imagine and feel sympathetically for And this use of the psychological words is of supreme importance in poetry, and the informative use of *no* importance (See above, § 1)

(*e*) A discrepant selection of devices —

" O, would I had never seen Wittenberg, never read book ! "

Faustus does not tell us that he has never been to Wittenberg; the words simply *express* a feeling, and for this make use of a special construction—the subjunctive mood

> " Thou hast committed—
> Fornication but that was in another country,
> And besides, the wench is dead "

In these lines from *The Jew of Malta* a plain statement of fact is charged with emotion simply by the use of two conjunctions, *but* and *and besides* These words almost have the force of effecting a cynical withdrawal of the charge made This simple conjunction, *and*, so dear to logicians, is one which may introduce ambiguities of important kinds In discussing a line from Shakespeare, Mr Empson remarks

> " I hope the reader will agree with me that the word ' and ' here is standing for three quite different ways of fitting words into a structure " (Op cit, p 114)

The simple word *not*, also serves important poetic purposes, for it is always a way of *introducing* something relevant, something not to be forgotten, there is (or ought to be) as definite a reason for any negative statement in poetry, as for any positive one

Summary —The answer to my first question has now been attempted How do the words of poetry affect our emotions? They do so as *pure sound*, the sound serves to enhance the emotional effect of the *sign* They do so by means of their ordinary conventional meanings, those meanings are in their turn signs for feelings They do so, not by communicating to us any consistent set of possible facts, but by control of the emotions themselves, hence the freedom of poetry from the logic of informative propositions

8 I turn now to questions about the connections between poetry (and imaginative writing generally) and *truth* (*a*) Are the emotions expressed in poetry a revelation of non-sensuous

properties of the world? What is meant by Poetic Truth and is there such a thing? (*b*) How far does the value of poetry depend upon its being *true-to-life*? How far does being true-to-life involve the truth of the factual information that we find in poetry?

Poetic Truth has usually meant, I suppose, that the emotions stirred in us by poetry are themselves an indication of facts about the external world These facts belong, preferably, to some aspect of the world that is not accessible to perception through the senses Perhaps the commonest view is that these facts are about the goodness or badness, beauty or ugliness in the world. Some poets have explicitly adopted theories about the worth of the universe as a whole they have preached optimism or pessimism Others have been less decisive, but their very doubt is evidence that they thought their poetry *ought* to be able to decide such questions They too have felt that poetry ought to express and arouse a poetic *Faith* This view I shall now examine

Ethical Propositions have often been thought to provide us with *a reason for feeling in a certain way* Now the scientific assessment of the human utility of a certain emotion in certain circumstances would make it reasonable to indulge (or not to indulge) a given feeling, but it will not, strictly speaking, make *the feeling itself reasonable* (Nor, of course, will any psychological examination of the reasons for, i e causes of, feelings make them 'reasonable' in this sense) But I think that people, who regard Ethical Propositions as treating of absolute values, do think that they can show that a given feeling is *reasonable*, is *valid* And I believe that this comes about because people commonly mistake feelings aroused in us by objects for properties belonging in a straightforward dyadic manner to those objects So that the thing I happen to hate when I am feeling in a certain mood, I describe as objectively and absolutely *hateful* (See above Chapter III, § 3) In our saner moments

we can all of us be persuaded that we do very often make mistakes of this kind, but when we are under the strain of a great emotion, we are all of us liable to assert that the hateful person is absolutely hateful, and that if others do not all acknowledge it, this is because we are (perhaps uniquely) in a position to 'see' or 'intuit' his hatefulness In a similar way, it has often been supposed that the vivid emotions that poetry arouses in us must be a revelation of peculiar, non-sensuous, properties of some object, or of life in general The feelings that we have when we read a poem may therefore, on this view, be *valid* revelations of the value of the universe, or of certain values in it—or they may be invalid revelations, and so unreasonable, inaccurate, illusory, not to be justified by the facts

It follows from this account of the intuitions of poetry, that any novel emotional experience, promoted in a reader by a poet, is liable to be regarded as an insight into some property of the world This is especially likely to happen in great literature, where the emotions aroused by the theme are by no means confined to the theme itself but seem to invade the important relationships and situations of our own lives Such emotions are often expressed in a judgment about the total absolute value of the universe, in a pessimistic or optimistic 'philosophy' or 'creed'

This leads to a peculiar notion of the poet and his art For we are expected to believe that in poetry the moral and ethical *discoveries* of especially sensitive persons are to be read, learned, and thereafter to be put into some sort of practice The poet, as Mr Eliot remarks sarcastically, achieves his *ordination*

Now these poetic truths (people will be inclined to feel) must be harmonized with other truths We find that many thinkers have tried both to use poetic truths to support hypotheses about the nature of the world, and to find in science or metaphysics support for the truths of poetry

The first process, for example, leads men to support a mentalist or panpsychist view of the universe, by reference to the poet's experience of being 'at one' with "whatever is begotten, born or dies" And the second process occurs when the 'insights' of the poet are regarded as too transitory, fallible, isolated, to provide in themselves a 'poetic creed', and they are supported by appeals to the discoveries of science—the unity and simplicity of which the astronomer talks, the variety and complexity found by the biologist [1]

9 This second process is a further attempt to make a feeling, mistaken for a *belief*, in itself *reasonable* If I do not find any such supporting principles, I feel that life is unreasonable, 'meaningless', 'pointless', and, being unable to make my feeling seem reasonable, I may actively discourage it—mistaking it for a *false* intuition about nature, and in this way gratuitously robbing myself of a valuable emotion For example, the feeling has often been suggested in poetry (and occurs commonly enough) that man is *at home* in the universe, that nature is friendly to him, and that he belongs to nature This has often been taken for an intuition of facts about the universe—as that the world was made for man's enjoyment and benefit and that all things are overruled for man's final good This metaphysical hypothesis, however, is one which some scientific theories do not seem to support But to *doubt* the hypothesis may lead to a discredit of the feeling, and so to an attitude of thankless, needless disillusion and cynicism In other words, the discredit of

[1] The propositions asserted in the name of religion involve so many special problems that it seemed best to me to exclude them from a general work I only wish to remark that it seems to me that they can be explained only by reference to a quite special kind of experience, analogous with, but not precisely like, such emotional experiences as fear, love, reverence This view is derived from the well-known works of Rudolf Otto, especially *The Idea of the Holy*, first published in 1917

the feeling leads to a contrary feeling—perhaps a much less valuable one [1]

This example concerns the disillusioned But the fate of the illusioned is no more enviable Some people will find metaphysical propositions that seem to them to corroborate their poetic beliefs, but as these 'poetic beliefs' are (in my view) never beliefs of genuine factual propositions, they cannot *really* be entailed by any genuine factual propositions The 'support' given by the wider principle can never be logical and rational It is not surprising, therefore, that metaphysical and *a priori* ethical treatises are liberally supplied with fallacious arguments, unplausible connections, and sentences which are absolutely meaningless It is surely doubtful whether people generally benefit by an attempt to *believe* such systems The attempt must often lead to prejudice and blindness towards the real evidence and towards new theories based upon it, and even to a general warping of belief [2] And, once again, the interference will not be confined to belief feelings that do not harmonize with the metaphysical system will be suppressed as 'false intuitions' Thus the Calvinist who believed literally that God provided for all the Righteous, was inclined to quench his own pity for the indigent and the unfortunate—for did they not deserve their punishment? Moreover, the believer may attempt to feel those emotions which *do* harmonize with his system—even when circumstances do not naturally provoke these feelings, this involves him in all kinds of insincerity of emotion

These not unimportant results may follow from a confusion

[1] An interesting comparison is provided by Mr Bertrand Russell's early and celebrated essay, *A Free Man's Worship*, in which a heroic and bellicose cynicism is displayed, and his recent book, *Religion and Science* (pp 17, 18), in which the point of view of the present writer is suggested

[2] Cf Russell "It is undesirable to believe a proposition when there is no ground whatever for supposing it true"

I A Richards "There is no human activity which may not on occasion require undistorted reference"

about the way in which words are used This same confusion, however, rests upon another—between emotion and perception—which is a very difficult and ubiquitous confusion indeed [1] It finds a focus in two senses of the word ' belief ', corresponding to two senses of ' truth ' Belief *that a proposition agrees with the facts* (whether or not that belief rests upon verification) would seem to involve a modification of conduct in a definite way, *whatever the feelings* of the believer towards the change are now, or may happen to be in the future Few of the ' ideas ' or ' thoughts ' that we entertain are serious candidates for this sort of belief (see above, Chapter II, § 3) But there are other ' thoughts ' that demand something more than immediate enjoyment These may be accepted as more or less permanent modifications *of our feelings* towards particular people, things, events, or towards life in general In other words, I may adopt a verbal expression as a sign for *my attitude*, whether an attitude I had already taken up, or a novel attitude, arising out of the feeling directly stimulated by the words This sort of adoption is quite properly described as a belief about, or a *belief in*, somebody or something, in this sense, I may believe in the Future, in the Equality of Man, in the doctrine of Original Sin, or believe that my friend is highly gifted, or is childish-looking, or is self-seeking, or opinionated But of course these two senses are highly liable to confusion, in fact there would not be the two senses for the one sign, unless the confusion had already been very common

10 Are we then to say simply that a poem conveys a *truth* to me if it arouses in me feelings that are concordant with my temperament, that ' satisfy ' me ? Surely there are further ways in which the truth of a poem or a novel can be

[1] The conclusion of this argument does not in the least impugn the reality of the values expressed in poetry the emotions that poems express and arouse are real in all earnest, and their values can be assessed in the way suggested in the last chapter See also Conclusion, § 4

tested? Could not we say, for instance, that a poem might satisfy me or you, or even a generation of readers from one nation and class, and yet be *false* because it is *not true to life*? Is there not here a further sense of *truth* that is highly important to imaginative literature?

When a novel is called 'true to life', this seems to mean that events in all important respects *like* those described in the story have taken place or will take place A story that claims to be 'Realistic' seems to be offered as a logical deduction from certain general conditions that are believed to hold at a given period, e g Mrs Mitchison's *Cloud Cuckoo Land* is surely supposed to show what life was like in Ancient Greece, and if the description is false, the book is to some extent a failure And does not all Realistic Art make *assertions*, *statements*, about the real world? And if this is conceded, where are we to stop? For if Realism tries to be true to life in a direct way, does not all art try to be true to life in some way, direct or oblique? Does not even Fantasy try to suggest true generalizations about man and nature?

We can at least answer that no art is concerned *merely* with the description of actual or probable events—and no Realist would disagree Even so-called 'Reportage' is obviously undertaken with the idea that the direct and naturalistic account of certain kinds of actual events is most likely to be enjoyed by a definite sort of reader, and that if the events are carefully chosen, they will probably produce certain desired effects upon the feelings of those readers The Realist maintains that imaginative literature *ought to arouse*, in the average likely reader, an active-emotional attitude that is *relevant*, and *suitable*, to the facts of actual life

For example, the 'mill-girl and millionaire' romance suggests to a reader that she is living in a world in which all her troubles are likely to be solved any day by the sudden appearance of man-and-money This is certainly not *true to life*. On the other hand, in Samuel Butler's *Way of All*

Flesh, a young man's difficulties are ended by a legacy, but the story suggests merely that we are living in a world where most of us want nothing so much as comfort and security, where few of us can solve our problems by any 'taking thought', where the blind working of an economic system decides the real fate of each This is much more nearly true to life And it is often argued that the only art that can be true to life *to-day* is art that shows quite clearly that the conditions of living, for all but a very few, are very bad, that individual effort or good luck cannot change these general conditions, but that collective action by all the dispossessed classes is an absolutely certain method of remedy This (many hold) grasps more of the truth than Butler's pessimism does That is to say, the attitude that the revolutionary art suggests is really the *most useful* one to adopt in to-day's circumstances But could it have been useful, unless revolutionary art had portrayed life as it really is? It looks as if we cannot assess the value of *at least some kinds of art*, without asking whether they provide a true picture of contemporary life

We may compare other cases in which subsidiary references seem to have a somewhat similar importance A novel which describes a particular place must surely be true to the general conditions of the place, must not falsify the scenery or the dialect or the character of the people A story of a very definite set of events, such as a surgical operation or a boat-race, cannot take liberties with the facts A novel that deals with a particular period must remain in period And *didactic* poetry, instructive stories and letters, all seem intended to show us useful facts about the universe, facts that are going to modify our future conduct—described very often in that *tone* that is reserved by those who know for those who don't

Now clearly, *didactic* art seems to be under the same truth-obligations as political art, but for the rest a writer certainly *can* justify himself for 'taking liberties' with the

facts, provided that he simply writes to amuse, and makes this intention clear enough. If any sort of distortion adds to the emotional effects, that is a sufficient justification for it, we object only to anachronisms and innovations that are out of harmony or out of taste

What are the obligations of art that is intended *to teach lessons*—whether political lessons or lessons about God and man, human relations, practical affairs, foreign lands, and strange peoples? How are we to assess the value of *Prometheus Unbound*, *Pilgrim's Progress*, *Nicholas Nickleby*, the *Georgics*, *Swiss Family Robinson*?

11 It is clear that we can allow any distortions in the method of presentation, provided that the message delivered is itself plain We do not demand *a naturalistic technique*, any sort of fantasy may properly be used to convey a true lesson But it must be obvious that in assessing the total value of political or didactic art, we must always ask Is the action or the attitude suggested by this book a good thing *in the world as it actually is*? But it is not always the case that the book suggests an action or an attitude by setting forth a picture of the world in which the action must take place, or in which the attitude is to be adopted For the writer may do one of two things —

(*a*) He may put his advice in the form of Counsels of Prudence, or Social Principles in that case he will recommend it by showing how it is relevant, how it comes to be what the age demands, that is, he paints a picture of the real world

(*b*) But he may not base his message upon reasoned argument at all He may rouse emotion by quite other means In this case there may not be any information about the real world at all

In the second case, we should be unable to assess the

total value of the work, without asking Are there in fact any truths about the world that would make it reasonable to adopt the attitudes evoked here ? So that in the case of any kind of didactic art, it still seems to be necessary to consider its relation to the actual world in deciding upon its total value Are we then to admit that *didactic* art (in a broad sense) is quite unlike other kinds of art , that the one is obliged to have some important bearing upon the actual facts of contemporary life, while the other is purely a matter of emotional recreation ?

12 I think that some theorists (Marxists, for instance), might argue that the difference that appears between the two kinds of art can really be overcome , for all art, whether self-consciously or not, is didactic, and cannot avoid being so For all art has ' further effects ' upon those who read or hear or see it It is hard to imagine any art that has not some possible social-political consequences if some books (e g) are not at all revolutionary, they may have the effect of suggesting a revolutionary *inaction* , if some seem to make no suggestions at all, they may be labelled ' diversionist ' and assessed as tending to support the *status quo*. And if all art has social consequences, then we must always consider the *relevance* of any work of art, when we try to assess its *total value* (Thus in a Revolutionary Age, escapist art may be deprecated, but this same art may be at a premium in a period of unavoidable evils)

Some, I think, would wish to go farther, and would claim that the total value of all art depends *entirely* upon the social value of the emotions it arouses in its readers , that there is no sense in talking of art that is ' merely enjoyable ', since ' enjoyable ' is obviously a relative term Whether or not a book is enjoyed by a given reader depends (it might be argued) upon his whole life and character and position in society He will not find it enjoyable unless it is harmonious

with the whole system of his interests and activities And the *value* of the enjoyment depends upon what tendencies in him it encourages, and what it discourages The value of a work of art depends (it is said) upon its utility, and that must depend upon its relation to life as the reader has to live it [1]

On the other hand, an attempt of a different sort might be made to resolve the duality, it might be argued that a work of art must always be judged *as such*, only by its immediate value and not by its utility This would mean that a book may be a great work of art although it inculcates dangerous or immoral attitudes to life, and a book may be very useful and yet be no more a work of art than a treatise on ethics or engineering For it may simply show us how to reach further values, and have no value in itself at all According to this view, a work of art is 'true' only in the Pickwickian sense, of having high internal value, its 'picture of life' (if any) may be *literally* false or true This view does not require us to suppose any intrinsic and absolute values all its values are human a poem is good if it is enjoyable in some way by men and women

13 It seems to me that justice can be done to both these views

[1] See Mr Edward Upward's essay in *The Mind in Chains*, 1937 Marxists tend to assess all art by its relevance to the artist's contemporary public, and would be inclined to disparage an artist whose works were unsuitable to his own times, however they might be suited to other periods in history But this does not exclude the continued value of the art of past ages (of Shakespeare and Aristophanes, for instance) Art remains great so long as it remains useful, that is, relevant to actual conditions Thus a very penetrating analysis of human conditions may enable a man to write 'for all time but, of course, it may equally well enable him to display important factors in a highly fugitive situation The value of all art is thus held to be relative to some period when art seems to have absolute value, then this must really be understood as value for the present, or value for any predictable future If there are conflicts between classes, of an insurmountable kind, then the value of all art is relative to one class But naturally, any such group will try hard to show that its values are really values for everyone and in many cases, no doubt, this can be shown to be really so

(*a*) The *total* value of a work of art plainly includes both its immediate value and also the value of its further effects on the reader's conduct and environment

(*b*) What a given person can enjoy must depend largely upon his environments and quite considerably upon his *work* So that the taste of various groups must alter as their social situation alters some literature will last longer than others, because (by good luck or acute insight) the writers have created something which men in all sorts of circumstances find enjoyable All values are social products, the art enjoyed by any group reflects the conditions in which the group are living [1]

(*c*) We cannot sharply distinguish 'enjoying' from 'preparing to enjoy' Congenial work is both prudential and enjoyable, many people like to think that their enjoyments are 'worth while' in the sense of educating them for future enjoyments

(*d*) If, then, we are trying to assess the Total Value of an imaginative work we must consider how far it will act as an incentive to further action, and we must ask whether it is an incentive in a good direction or a bad And in so far as the incentive is conveyed by propositions asserted (however indirectly) about the actual world, the truth or falsity of such propositions will be relevant to the assessment This is the most *definite* thing that can be meant by saying that "art must be true to life"

(*e*) Whether we confine 'artistic value' solely to immediate enjoyment is a matter of linguistic preference, but clearly it is this value-in-itself that is peculiar to a work of art

(*f*) In some periods ('political ages') it may be a bad thing to spend too much time in enjoying the present it may be imperative to concentrate all efforts upon preparing for the future At such times, many of the ablest minds and most sensitive natures will produce art that is mainly didactic,

[1] Cf § 3, note All Poetry is Human-Nature Poetry

polemical, propagandist. Hence much of the *best art* of such a period will be of this sort, and much internally enjoyable art may quite properly be condemned as bad, because it tends to divert men from necessary enterprises The best art of an unavoidably Revolutionary Age may be transitory

It is only if we *abstract the aspect* of a work of art that is valuable here-now (the aspect peculiar to a work of art), that we can contrast sharply, art and political propaganda, art and religious ritual, art and science In a 'less political' age than ours, Miss Jane Harrison wrote —

> "Ritual, we saw, was a re-presentation, or a pre-presentation, a re-doing or a pre-doing, a copy or imitation of life, but—and this is the important point—always with a practical end Art is also a representation of life and the emotions of life, but cut loose from immediate action Action may be and often is represented, but it is not that it may lead on to a practical further end The end of art is in itself Its value is not mediate but *im*mediate
>
> "In his actual life (primitive man) hunts and fishes and ploughs and sows, being utterly intent on the practical end of gaining his food, in the *dromenon* of the Spring Festival, though his *acts* are unpractical, being mere singing and dancing and mimicry, his *intent* is practical, to induce the return of his food supply In the drama the representation may remain for a time the same, but the intent is altered man has come out from action, he is separate from the dancers, and has become a spectator The drama is an end in itself" (Jane Harrison, *Ancient Art and Ritual*, 1913, pp 135–6)

It is possible to speak of Art as cut loose from its causes, as well as from its effects The intrinsic value of an experience is logically independent of its causes, if two quite different stimuli could produce similar experiences, their value would be similar [1] To a great extent the special value of literature

[1] Aristotle tried to assess the values of different experiences by reference to their origin

> "may we not say that pleasures differ in kind? Those derived from

lies in this, that we are able to experience profound emotion by the aid of a very simple set of stimuli words, words, words All art (even the most realistic) is, of course, selective, it is a calculated control over emotions and impulses, designed to produce total experiences of high value How that is done—the technique of an art—is quite irrelevant to the intrinsic value of the result, but it is relevant to judgments upon the life and work of the writer, and is a revelation of the social character of the period in which he wrote

14 It seems to me then, that we can distinguish the Artist from the Moralist and from the Scientist only in the sense of marking out the characters that make a man an artist, and the characters that make a man (*the same man* or another) a moralist or a scientist As an artist, by the use of a quite special technique, he produces experiences which are enjoyable in themselves, he produces them for their own sake, whether or not he *also* produces them for moral reasons As a moralist he tries to produce certain experiences because he believes these will change the aims and intentions of his audience As a scientist he conveys information, quite regardless of its immediate emotional effects or of its further consequences upon behaviour, he offers the information solely because it may be useful in the future, for the furtherance of whatever purposes we may have (Hence the notorious non-moral character of works of science, and the catastrophes that result when science is enlisted in bad causes) But, of course, men are never interested in means as such, but always in *means-to-ends* which they have embraced or which they might embrace The professional scientist is not (of course) interested only in means his peculiarity is simply

honourable objects, for instance, are quite different from those derived from disgraceful ones Nor is every kind of pleasure desirable there are some kinds that are desirable in themselves, and they differ in kind or in origin from the others' (*E.N.*, 1173*b* and 1174*a*)

that his ends are other people's means He finds his enjoyment in collecting, publishing, and reading, matters of fact which laymen merely use as means That is to say, science is the scientist's art, he prosecutes it for pleasure, as well for his own livelihood (And commonly he *tries* to prosecute it without a too close attention to its utility, he boasts, in fact, of its uselessness to others and its delights for the initiated But always it may have its uses) Similarly, we cannot contrast the scientist and his public We can only contrast the preparatory utilitarian stage with the final *consuming* stage A child playing catches is very likely engaged in something he likes and values for its own sake, he is busy *living* The same child, searching the long grass for a lost ball, is a scientist, he is collecting information which he does *not* value for its own sake, but only as a means towards something he does value for its own sake (the game of ball) Each activity is abstract in its own way When 'finally' employed, the child is not trying to learn to catch the ball better, nor trying to maintain his physique As a scientist, on the other hand, he would do well not to be diverted by the immediate enjoyment of buttercups or butterflies (Of course he may decide that he prefers butterflies to his lost ball that is another question) The professional artist as such provides for the æsthetic attitude, the professional scientist, as such, for the prudential, utilitarian, forward-looking attitude

15 *Conclusion*—My conclusion then must be that imaginative writing has its quite distinctive 'truth' and 'falsity', its 'reasonings' of the heart that Reason does not know, its 'meaning' But for these different features of imaginative writing, the terminology of science and history is inappropriate and positively misleading For the 'truth' *that is peculiar to poetry*—its *validity*—is simply its value for men this can be assessed, and statements *about* the

value of poetry are themselves either true or false in the straightforward sense of those words And the ' reasons ' of poetry are those emotional connections which are fundamental to poetry , they are not founded upon any relations of implication And the ' meaning ' that is peculiar to poetry is not reference to an identifiable object, but a certain definite effect upon the feelings. In all these cases it seems prudent to avoid, in exact speech, words that are almost inevitably misleading

The paradoxes, ambiguities, contradictions, of poetry and of imaginative and mystical writing, are seen to depend upon a familiar fact about human psychology , it is possible for the same man at the same time to feel impulses towards, *and repulsions from, the same objects and from closely* associated objects [1] So that all these contradictions in emotion can be discussed in plain scientific language of a non-paradoxical kind (And such a discussion must be sharply distinguished from poetic language used to *express* or *provoke* contradiction of feeling)

We are left, then, with no grammar, no logic that is a genuine alternative to the logic and grammar of scientific and historical language Where we use language that is *exempt* from the canons of scientific and historical writing and has its own canons, we find that *we are not using words to convey information at all* And, conversely, wherever we wish to convey matters of fact (whether in prose or verse) we must employ the rules of clarity and consistency Poetry offers us no pretext for talking of Alternative Logics

[1] Cf Plato, *Repub* , 436, etc

CONCLUSION

1 The last two chapters have carried me so far afield that I must now try to relate what I have there said to the previous discussions of informative language and of logic, and to indicate shortly what I have tried to do in the whole book

I began by discussing four principal kinds of language the language of empirical propositions, necessary principles, moral and ethical judgments, and poetry I have tried to show that all these can be explained by two quite different functions for which language is used, it may inform and it may affect the emotions The long discussion of the necessary propositions of philosophy, mathematics and logic, was designed to show that these propositions both inform us about language-customs and also make recommendations about language (Chapter VII) The discussion of Value Propositions was necessary in order to show that we have not here something quite different from information, that to assess the value of something cannot be contrasted sharply with describing its properties for value-propositions do tell us certain properties of things, viz the way in which they may help or hinder human happiness But they convey information in words which inevitably affect our attitude towards the things described—tend to make us favour them or oppose them, seek them or shun them So that a value-proposition may be highly persuasive—whether it happens to make a true statement or a false one

2 My principal conclusion about Informative Language is that all such language is about what we may experience The language of the physical sciences, I have argued, is about what any normal observer might perceive through his five senses, and ' a physical property ' just *is* that to which

the great majority of people can learn to make a uniform linguistic response This involves me in saying that the testimony upon which our scientific conclusions rest must not be understood as the true record of other people's experience, but as reports uttered or written by people under certain conditions In other words, my view of the exact sciences is the same as a Behaviourist's This will be repugnant to many philosophers, while others will be no less shocked to find that I accept as perfectly proper empirical propositions, assertions about what other people perceive and what they feel My view is that we cannot explain our attitudes to each other, especially those expressed in science and other forms of communication, and to the physical world, except by reference to beliefs which are about what other people experience and *not* simply about the way they behave So that my view entails this rather odd situation there are certain beliefs which we all hold, but which we do not regard as suitable to an exact science And this rather odd situation is, I think, one in which we find ourselves But perhaps it would cease to seem odd if we better understood how *the standard methods of perception* provide the basis of science, the basis of that close collaboration which is one of the defining characteristics of ' exact science '

The Phenomenalism I have expressed rests partly on a view about the possibility of finding a last stage in Directional Analysis This has been denied by many writers who hold that there really is a direction, but not a last stage, in such analysis, and that we may be able to define what we mean by saying that one sentence is more direct than another, but no more I have offered arguments (in Chapter VI) which lead me to believe that, if I understand ' p ' clearly, then only certain difficulties of introspection, and the lack of time and a suitable vocabulary, prevent me from being able to offer an analysis in phonemenalistic terms But what would be the kind of phenomenalistic terms used—what sort of

Gestalten would form the simplest occurrents—this could be answered only by an experimental psychological inquiry

Does this Phenomenalism raise metaphysical problems? Does it lead us to search for a realm of noumena, by means of which to explain the continuity of the physical world, and its existence before life appeared? Can we give a really satisfactory account of the pre-human world, and of the dependence of experiences upon bodily changes? Or *must* such theories be understood to assert more than 'what any normal observer would perceive at certain places in the present or future?'

Such questions are genuinely puzzling, even if they are not genuine questions Do they require answers that are supported, not by experimental tests, but by clear and distinct ideas? Or are we to say that the answers offered do not make statements, but express feelings, that the solutions are 'True' only in the sense of being a satisfactory solvent for the feelings of puzzlement expressed in the questions? I am quite sure that many of the great philosophical debates have been about *Scheinprobleme* Are the problems of Phenomenalism also spurious?

3 It is hard, certainly, to separate the informative from the dynamic, expressive, emotional uses of language, they are seldom met with in pure forms We can all recognize, e g, that 'swearing' is not informative and that it is intended to express and arouse emotions and (very often) to influence conduct as well Some 'bad language' is all but devoid of reference, it gains its emotional force from quite irrelevant contexts, chiefly from religion and sex, but sometimes simply from physical violence [1] and exclusive association with violent situations But emotive meanings permeate every sort of language except that of academic and technical

[1] Examples of the profane (Christ, God, Jesus), and the violent (bleeding, bloody), and the obscene may suggest themselves to the reader

information and 'business' And in many cases the question, True or False, is of quite secondary importance (as generally in sentences of type 3), in others it is hardly possible to apply it at all (as in many cases of type 2), and the question, 'What did A mean by saying that?' refers more often to his dynamic than to his informative intention I feel that everywhere in this book problems of 'meaning' have had to be over-simplified the 'meaning of a word'—its meaning in a sentence—cannot be regarded as simple and invariable all the important words of non-technical language are capable, in different sentences, of widely different meanings This especially applies to the emotive meanings of words Words achieve definite meanings only in definite contexts, whether in actual situations, or in literary contexts And in such contexts they may have an accuracy which can never be explained by the application of definite rules supposed to govern the use of a word in *all* its contexts [1]

4 My discussion of the emotive meanings of words showed how easy it is to confuse them with informative meanings The Pathetic Fallacy is to imagine that language which really arouses emotions is conveying information about the physical world But possibly that discussion showed that the Fallacy is not quite as great as might at first appear 'Seeing red' and 'disgust' are both perfectly genuine and simple reactions to external stimuli—perhaps both to the

[1] And beyond even this, the question, 'Does he mean this or that?' may concern differences of meaning so fine that there are *no rules at all* for distinguishing them if it is *this*, we cannot say that his words properly mean *that*, and vice versa So that even where words are properly used, and we know their proper meaning, we can still ask questions as to what they mean, that is, what the speaker uses them to mean here These can be answered only by a consideration of the whole situation in which the words are uttered it cannot be certainly answered 'It takes two to speak the truth'—or rather, to make communications whether true or false See I A Richards, *The Philosophy of Rhetoric*, for valuable correctives against oversimplification

very same stimulus—to blood, for example But whereas redness is a physical property, it is not a physical property to be disgusting. But to represent one property as real and the other as an illusion, is a gross over-simplification Nor can we dismiss as illusions the more general feelings promoted in us by wider experiences and expressed in poetry, metaphysics, and theology What we must describe as illusory are the inferences we make from our feelings and from the poetry in which we express them They do not really imply any consequences about what we, or anyone else, will *perceive* in the future 'And because life feels tragic or high or noble or silly or empty to me now, it does not follow that it will feel so for everyone , nor does it in the least follow that it will feel so for me to-morrow' It is this last which we try hard not to recognize we like to be sure at least of ourselves, and are reluctant to admit even that we improve

5 I must now say a final word about Necessary Propositions I have put forward the view that Definitions and Tautologies, whether explicit or implicit, are Rules of Language That is to say, they are about word-usages this, of course, does *not* mean that they are in any sense trivial They are not merely about the way in which people *actually* use words in a given country or society Such an interpretation would not explain their *necessity* They are about how people in a given group *ought to use words* Such propositions are certainly not arbitrary A definition which sets forth a new symbol is—in a certain sense not difficult to understand—arbitrary But such a definition does not assert that people ought to use the sign in this way , though it may invite them to undertake the obligation to do so, it does not assert the existence of such an obligation But the 'necessary propositions' I have discussed in Chapters VII and VIII certainly do assert that the obligation to use words

in such and such a way *is binding* upon all who use the language in which they occur

What warrant could there be for such an assertion? A rule in English is binding if it formulates the way in which the vast majority of English-users do in fact use the word, or the way in which the approved authorities use it, if it fits in, is not inconsistent with, the whole infinitely complicated system of other word-usages, if by following this rule communication is rendered possible or less difficult All this, I hold, is what is implied in asserting that a certain usage is an actual obligation All this, however, still seems to fall short of the assertion of an actual *obligation*, and I am convinced that this is because my analysis lacks the *urgency*, the emotive, persuasive, imperative force of the words 'ought', or 'properly', or 'rule', or 'obligation' For in these words may be expressed the command or demand, not merely of the speaker or writer, but of the society to which he belongs. It is this that provides the *necessity* of rules

If this analysis be accepted, we see at once that the rule makes a statement which is false if the usage it describes is not in fact that followed by the majority or by the authorities Of course it is not false merely because some people don't follow it Just as a command may be addressed to the disobedient so a rule may perfectly well be an obligation upon those who break it

A rule of language has been interpreted as a mere rule of skill "If you want to talk English this is what you *must* do" The obligation is contingent upon a desire which not all share "If you break these rules you will be talking nonsense this may amuse you but it is not English" This is the interpretation which leads people to speak of a language as a *game* like chess or bridge They point out that there are no penalties for breaking the rules of language we can do so, if we wish, with impunity It seems to me, however, that the

'ought' of linguistic rules can be interpreted more strongly Society has an interest in the means of communication (and a language is a *system* to misuse a part is to endanger the whole) and I do not think it exaggerated to say that misuse of words is anti-social, even if it is only a mild offence And it seems to me that in the 'ought' of linguistic rules, and in the epithet 'nonsense', 'absolute nonsense', that greet violation of those rules, we can feel the expression of society's wishes [1]

If this interpretation is ever a valid one, we ought to see a resemblance between Rules of Language and Principles of Social Polity and I think we can "People ought to drive on the left side of the road" is addressed only to certain communities, and states that, in those communities, it is anti-social to drive on the right, or from side to side And plainly this statement is true However, the Principle is more than a statement it is an expression (through a speaker) of society's feeling This expression cannot be true or false Many alleged Social Principles, which are not true, are expressed with no less urgency

But we can contrast Rules of Language with very many Social Principles in several respects (*a*) One almost never has an interest in the deliberate use of nonsense *as such* hence the temptation to break rules of language consciously is seldom experienced Of course we are often tempted to lie but lying is not effective unless it is good sense (*b*) The

[1] If we speak of language as a game, then it is a game which we are all expected to play—for, at least in primitive societies, the silent man is an object of general mistrust and disapproval The rules of language are not—like the rules of bridge—mere instructions, a mere definition of the word 'bridge' they are directions And to the question "What happens if I do otherwise?" the answer is "Then you *must not* call what you do 'talking sense' it is *nonsense*" And this answer, I think, expresses society's interest, not only in the customary usages of 'sense' and 'nonsense', but also society's interest in the whole system of customary linguistic usages "You must not call what you are playing, 'bridge,'" on the other hand, does express society's interest in the customary use of this word, but *not* society's interest in bridge-playing

immediate consequences of nonsense are chiefly upon the person who utters it, and these are hardly severe But general laxity about language certainly has serious consequences for everybody (*c*) It is true that there are no legal *penalties* for nonsense the epithet itself, and being ignored, seem to be the chief social penalties Hence the animus connected with rules of language is everywhere slight [1]

Perhaps, however, this is partly because Society's interest in maintaining accurate methods of communication is not sufficiently appreciated The confounding of information and inspiration, the cultivation of subtle ambiguities in the vocabulary of information, and in the vocabulary of emotional expression, are very real social menaces which I need not here enlarge upon The Rules of Language, as I have interpreted them, are worth more respect and attention than they commonly receive

6 This applies especially to the psychologist who studies communication The account I have here given of linguistic rules makes it possible for the experimental psychologist to study them without appearing to himself or to others to be superstitious "What is logically possible '—that which the Rules permit us to state—cannot be omitted by the psychologist By this I mean that we cannot understand *inference* without considering *implication*, we cannot understand *certainty* without considering *corrigibility* we cannot understand the way in which people actually use words, without understanding the alternatives which language rules offer to them. *Why* these rules rather than others ? is the question which the scientist must ask

[1] A Social Principle asserts that a given action is bad for society as a whole But it cannot be said to be evidence in favour of this assertion, that society will be ' upset ' by the action, and enforce sanctions i e, We cannot pretend that ' This is my duty ' just because Society thinks so and will back its opinion with force But of course a *Counsel of Prudence* might properly urge obedience to any Law which Society sanctions

In the case of some rules, the answer concerns only historical accidents In the case of others, it concerns the conditions which make communication possible the use of sounds and shapes to prepare us for features in future events, towards which we are able to make a selective discriminating response

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