

The Fiduciary Mode.

At the close of my last Lecture I completed my map of intellectual performances and arrived thereby at a situation in which the necessity of a philosophic enquiry into the justification of what had just been presented appeared inescapable. ~~This course follows~~ I pointed out that in the drawing of my map there was implicit the distinction between true intellectual performances and alleged, or apparent, but not actual performances. My map purported to include only instances of the former kind and to avoid listing any of the latter. If this distinction between valid and specious acts of intelligence were challenged, ~~I could justify~~ any particular intellectual performance ^{could be justified} by reconsidering the evidence for it; but ~~my recognition which I had granted comprehensive~~ ^{in place of} whole classes of such acts - like science, law, history, etc. - would require the justification of the very grounds on which the reconsideration of any single act would rely. ~~Such a justification~~ ^{This kind of} would represent therefore an act of intelligence performed within a framework not yet indicated on my map; it lies outside science, law, history, etc. and I identified it with 'philosophy'. I have ~~shown~~ ^{urged} that the fundamental challenge which it is the function of philosophy to answer, cannot be ignored today but must be fully faced and effectively met, if our beliefs are to be upheld both against disintegration within our own minds and against attack from outside.

^{cause} This ^{proposed} philosophic critique and justification ^{would have} ~~has~~ the whole process of mapdrawing, as performed up to this point, as its object and it seems therefore convenient to represent it on a different level, situated above the map which I have so far drawn up. ~~I shall~~ ^{If we} call the performance ^{may} listed on ~~this~~ map the primary acts of intelligence, ^{may be said to refer to} philosophy is concerned with these primary acts, ^{refer to} in the same way as these acts themselves are concerned with the things they mean; ^{and philosophy may thus qualify as a secondary act of intelligence.} ~~and~~ philosophy may try to justify any principles of primary intelligence which it accredits, in consideration of the relation between these acts of intelligence and the things to which they refer. To include the latter we ^{may} ~~shall~~ postulate a logical level situated below that on which we have mapped the primary acts of intelligence. That would make three levels in all.

There is a painting by Matisse which illustrates this logical stratification. It shows a painter facing his canvas on an easel. The canvas on the easel represents a woman who is seen sitting as a model to the painter on a couch beside the easel. The window

of the room (in which all this is shown) stands open and through it one gets a glimpse of the street outside. This picture by Matisse is on a logical level above that of the painting represented in it. The logical level of the picture within the picture is the same as that of the image of the woman representing her as sitting as a model. And the logical level of both these representations of the woman is one grade above that of the real woman as she actually sat there when Matisse painted the scene of her being painted. That makes three levels. We may call the level of the model the Zero level and ascribe number One to the pictures of the model and number Two to the picture of its picture.

These are the same three levels which I identified before, so that according to my definition of philosophy Matisse's painting should be classed as philosophic. It does indeed indicate very movingly, at least to me, the painter's position as he faces his model and his canvas in a room quivering with his problems, while the world's traffic passes ~~on~~ by the open window, unconcerned and unquestioned, the unconscious background of all his active thoughts. Yet Matisse's picture is not philosophy for it does not pursue these problems systematically, which can be done only by the use of language.

2. It is obvious that the kind of reflection symbolised by Matisse's painting could be carried on to further stages, indefinitely. He might have represented the painter producing the picture on which he is shown painting a model; and so on. In such a series each higher level would differ from the lower one. Something new would have been produced by ascending to it. Though the process may soon lose interest it would not be essentially futile.

Answer → The matter might be different, however, if reflection were undertaken with a view to justifying the principles of some primary

intellectual process on Level One. It could happen that this justification were in exactly the same terms as the intellectual process itself, in which case the problem would have advanced nothing by this handling of it. This would constitute an infinite regress defeating the purpose for which it is undertaken. It ^{would be} achieve nothing, for its aim ~~is~~ receding at each step precisely by the length of the step. We shall meet examples of this later.

So far as I have been speaking here in terms of philosophy, my discourse was on Level Two, but while trying to define the principles of philosophy I have already stood for a moment on Level Three. The fact that any present discourse is always on a logical level not yet explored within the present discourse is important. Philosophy must try to remain conscious of it so as to avoid saying anything that could be discredited by the mere fact that what is being said is necessarily subject to a later reflection, the outcome of which is ^{essentially} indeterminate.

3. For the moment we may limit our main interest to the three lowest levels and try to summarise their furnishings at least in a preliminary manner.

On Level Zero we have objects that can be localised in space. Among these we can readily distinguish objects that are nothing but objects, like pebbles and planets - we may call them simple objects - and other objects which are also persons. ^{The latter case introduces a complication} Simple objects can only be observed, persons can both be observed and listened to; simple objects can only be manipulated, while persons can also be addressed.)

(Persons addressed or listened to as persons ~~do not~~ have ~~not~~ either a well defined place on the Zero Level. In direct convivial exchanges, for example in an embrace or a quarrel, there is no I-It relation but an I-Thou relation which is fused into a We-communion. To have a friend, a follower or a master is to be a friend, a master or a follower. ~~we may say~~ Communication between ^(we recall) persons may refer to simple objects or to other persons as persons. In the former case ~~it is~~ the objects ~~which~~ are on the Zero Level; while in the latter we have an extension of the We-community, without any distinct differentiation between a Level One and a Level Zero

Another contraction of the object-directed I-It relation has been mentioned before in Lecture 2 with reference to mathematics, abstract painting and music. By these activities new things are produced and mentally animated, so that no division is possible between the logical level to which they are assigned and a logical level of their objects. The relationship between a creative activity and that which it creates, will have to be discussed in different terms, to be provided ^{later} by the concept of commitment.

The division between the two levels is again absent, but for the opposite reason, in conditions of extreme passivity. Intense suffering and other overwhelming affections may overthrow entirely our intellectual control of these ^{affections} ~~content~~ and eliminate thereby any distinction of logical levels ^{an} as between intellectual performance and its object.

Thus the Zero Level with its content of simple objects - the pebbles and planets located in space - is well defined only for clearly object-directed acts of intelligence. But this does not affect our conception of Level One. Its furnishings are the primary acts of intelligence described in detail in the previous lecture; ~~these~~ primary acts being defined as not having other acts of intelligence as their object.

This will still leave us with certain complications the importance of which will become clearer at a later stage. Take for example Matisse's picture representing a painter in the act of painting. It portrays the painter as an object on the Zero Level and simultaneously as an intelligent agent engaged in a performance, namely of painting, on the First Level. We see that the different aspects of the painter are on different Levels. This ^{condition} ~~duality~~ is widespread. A machine - for example a typewriter or a bicycle - may be described as a simple object, as seen by a carter who has to consider only its weight, its shape and the material of which it is made, so as to pack it safely for transport. Alternatively, it may be understood and used as a machine, and thirdly, it may be characterised by the principles of its operation and specified in a patent covering this principle. This distributes ~~the~~ ^{three} aspects of the machine to three ^{necessary} logical levels. From the carter's point of

^{the machine}
 view ~~is~~ is on Level Zero; the user's understanding and manipulation of it is on Level One; and its analysis by the patent lawyer is on Level Two.

I had previously described Level Two as furnished by ^{philosophic} ~~general~~ reflections on the validity of the primary intellectual activities, ^{situated} on Level One. However, the example of a patent specification has shown that there are other secondary acts of intelligence which we shall have to include on Level Two. Indeed, all critical and analytical investigations such as the criticism of literature and art, the formulation of grammar and logic, ~~the~~ ^{or} specification of the principles of business management, ^{or} ~~of~~ military strategy, etc. must be assigned to Level Two. Such forms of criticism or analysis are sometimes said to elucidate the 'philosophy' of the intellectual processes which form their topic. But I shall prefer to reserve the term 'philosophy' for the examination of the more fundamental aspect of intelligent acts. Analytical statements made on Level Two would accordingly still require philosophic justification on Level Three.

This splitting up of philosophy between Level Two and Three, and possibly between a number of further levels of higher order, is unwelcome but inevitable. ^{logical} The level of philosophy is indeed so far indeterminate: if it is to express the ultimate justification of all acts of intelligence that we recognise as genuine, ^{situated not lower than} philosophy is ~~at least~~ on Level Two but may be shifted indefinitely to higher levels. Philosophy - as I have already hinted ~~much~~ earlier - must envisage the possibility of its own further philosophic reconsideration on an indefinitely ascending flight of levels.

4. With this general programme of philosophy ^{enquiry} in mind, I shall now point out a striking difficulty of such an enquiry and suggest as a first step towards overcoming this difficulty the relaxation of certain conventions by which the scope of philosophy has been hitherto restricted.

The difficulty ~~arises from the~~ that I have in mind ^{comes into view if} ~~we consider the~~
~~There is a~~ vast disparity between the modes of expression
~~at present~~ open to the philosopher and the forms of intelligence
 on which he is asked to reflect; the former ^{being} ~~are~~ incomparably fewer
 than the latter. I shall describe this disparity in three stages.

Consider in the first place the wide range of inarticulate
 intellectual performances, beginning at the lowest level with the sub-
 intellectual acts of drive satisfaction and perception, and
 ascending to the more clearly intelligent achievements of the
 observation of signs, the purposive manipulation of means and the
 understanding of alternative part-relations. Primarily, the
 process of articulation is itself inarticulate. To ~~the~~ ^{these} object-
 directed acts of inarticulate intelligence we must add the great
 host of inarticulate convivialities, both of a practical and a
 cognitive kind, and the process of articulating them. Moreover,
 we have on a higher plane, an inexhaustible fund of cultural
 tradition which alone gives weight and meaning to the articulate
 lore handed on to the succeeding generations. Philosophy, by
 contrast, tries to restrict itself to articulate terms. Even
 though its whole purpose were to direct our attention to the
 contemplation of the ineffable - as may be said of Bergson's
 metaphysics - it could itself not be a mute contemplation. The
 restrictions within which a scholar's performance is hemmed in are
 obvious enough from my own position at this moment of speaking.
 I may draw a crude diagram on the blackboard or show an

occasional slide; but on the whole I am limited to talking to
 you. Apart from slight gestures of my hands I must keep my
 body quiet except for my vocal apparatus, with which I must go
 on producing an incessant flow of speech.

This limitation places speech in a singular position.
 It is only one among many intelligent actions yet it is the only

action open to the philosopher. All kind of intelligent actions are among his topics; he must mention all these but speech is the only one he may ~~exhibit~~ ^{perform}. He has to reflect on speech itself including its inarticulate premises and what he says of speech must be consistent with his own use of speech in saying it.

Secondly, the forms of speech that are open to the philosopher are much fewer than those employed in the various intellectual performances on which he is expected to reflect. Philosophy must be in ordinary language. It must speak of numbers, of painting, of music, but all its reflections must be expressed in verbal terms, relying mainly on the vocabulary and grammar of common usage. And there is a further restriction to be observed. Speech may be animated by a variety of emotions which are sometimes expressed by interjections or reflected in distinctive moods in which sentences are set. Cheers, groans, sniggers, 'oh'-s and 'ah'-s are but a few samples of the exclamatory language. In Latin there is an optative mood for use in sentences referring to hoped for events. While ~~the~~ ^{optative} mood ^{refer stand for} can be applied ~~to~~ ^{hopes} purely object-directed occasions, other moods, like the imperative and the interrogative are by their very nature addressed to persons. There are actually many other moods of this kind that are not distinctly formulated by grammar. There is an invective mood in which we abuse people, a jocular mood in which to amuse them, an indignant mood to reprove them and so on indefinitely. These moods are usually conveyed by appropriate inflections of voice and accompanying facial expressions. They transmit an infinite variety of emotional impacts.

The present conventions of philosophy as a part of academic studies would preclude me from stirring up any emotions, and indeed from making any personal demands on you. I may issue no commands here, nor enquire about anything or reproach anyone. I must not accuse, commiserate, curse or cajole. There is in fact no form of speech that I am entitled to use

but that of making assertions. I am supposed to justify the whole range of both tacit and articulate forms of intelligence, which are pervasively animated and indeed ultimately sustained by emotional forces of an inexhaustible variety, by uttering a series of totally dispassionate observations. I am restricted to the use of declaratory sentences of the type "It rains", Napoleon is dead' or "the square root of 2 is an irrational number".

And, once more, I must reflect in the terms to which I am thus restricted, also on the use I am making of these terms. I must generally justify declarations of the type that I am making in terms of my own declarations; for if I came to the conclusion that such declarations are in general unjustifiable I would discredit all that I am saying here, not only about such declarations but about any other topic as well.

Thirdly. The range of assertions that I can properly make here is much more limited than what is otherwise admissible. Conversationally, it would be quite normal to mention that I have a toothache, or that I am hot or feel bored. But such references to my private affairs are excluded here. What I say here is expected to be of public and indeed of universal interest. My assertions are to be restricted to topics on which I can speak impersonally, in the form of statements claiming to be objectively valid.

5. I shall briefly ^{indicate in my next lecture} ~~illustrate at a later stage~~ how these conventions have gained acceptance. For the moment it will suffice to say that they reflect the current conception of scientific statements. Science is supposed to consist of declaratory observations that are precise and impersonal, and this implies that they are wholly, or at least as nearly as matters, explicit and universally valid. Therefore, what I have described as the position of philosophy is its being placed under the obligation to be scientific, in the sense of

these supposed characteristics of science. This amounts to saying that philosophy ought to be superseded by science, since science comprises all authentic modes of valid systematic assertions, including any that it may be the task of philosophy to make. This contention coincides in fact with the argument based on the affirmation that meaningful assertions must be either empirical or tautological; for a precise and impersonal statement can be valid only either if it is determined by evidence which is independent of the person making the statement or if it merely asserts the equivalence of two statements according to rules conventionally accepted within a group of persons.

I can now state more substantially than before the grounds on which I propose to contradict this argument, so as to liberate philosophy from the stifling restraints which it would impose on it. I shall deny that science is exact and impersonal and shall propose that this should be expressed whenever the true nature of science is to be made clear, by translating science from the misleading idiom of declaratory sentences into the more correct terms of a 'fiduciary mode.' Once science is stripped of its claim to be uniquely scientific in the currently accepted sense, the other forms of human intelligence will no longer be intimidated into a universal imitation of science. Philosophy in particular will cease to accept the limitations imposed on its scope by the supposed standards of science. Having recognised the covert fiduciary character of all science, it will take courage to fulfil its own functions by the formulation of open professions of belief. To a technical preparation of this programme I shall now turn.

~~6. I am going to suggest here a first step towards a revision of philosophic practice, by which I hope to facilitate further steps in a similar direction.~~ 6.) My field shall be limited for the moment to articulate reports on observed events as e.g. 'it rains' or 'Napoleon is dead' or statements

of sign-event observations, like 'planets move on elliptic orbits' or 'blood corpuscles contain haemoglobin'. The latter class may be taken to include the former, for to observe a fact like rain or the death of Napoleon requires an intelligent interpretation of evidence, which relies on previously established connections between signs and events. As the choice of my examples indicates I wish to exclude at this stage any reports on private events, such as 'I feel hot'. The reports with which I am concerned here are paradigmatically illustrated by the contents of natural science and what follows may be considered without loss of generality to apply particularly to scientific statements. A statement such as 'planets move on elliptic orbits' may be designated by p. It involves two logical levels: the Level One on which the statement p is made and the Level Zero containing the objects of scientific study, the planets etc., to which the statement refers. Consider the case that we have accepted p and that we are challenged to justify this. Our response may consist either in a reconsideration of p or in a reflection on p; the two kind of responses may be combined but at the moment I shall be only concerned with drawing a distinction between them.

Take the case that p stands for 'planets move on elliptic paths'. Kepler derived this law first from a number of planetary positions observed by Tycho Brahe. Its reconsideration based on new observations has since led to its confirmation for most planets but has also revealed deviations, particularly for Mercury and Uranus. In the latter case the explanation was found by the discovery of Neptune, in the former it had to wait for the advent of General Relativity. The result of this reconsideration of p forms now part of science, just as Kepler's original First Law formed part of it at an earlier date. A change has taken place on Level One involving no ascent to a higher logical level.

Contrast with this what I shall call a reflection on p.

We ask: how do we know that from observations of the kind as we possess in this field we are justified in deriving any laws of the kind represented by p ? Suppose we respond to this by a series of scientific observations comparing the relation between p (on Level One) and the evidence for p (on Level Zero) with the relations between other scientific statements ($p_1 p_2 \dots$) and the evidence on which these respectively rest. And suppose that such a study of the series $p, p_1, p_2 \dots$ revealed that the empirical foundation of p is similar to that of the whole system of scientific statements of which it forms part. Such a result would suffer from a weakness which has two aspects. Firstly, (as was pointed out by Hume) it does not justify our acceptance of p as valid, but merely finds that this acceptance conforms to the general habit of scientists. (A justification of this habit could be derived from this result only by assuming the justification of the same habit for the derivation of the result itself; and this would be circular.) The second aspect follows from the first. Since the result of our reflection ignores the issue in question, it leads to an infinite regress. Suppose we designate the statement of this result by p' . Since p' articulates a secondary act of intelligence, it ~~is not part of natural science but~~ belongs to, to the next higher logical level, Level Two. It is an observation made on Level Two by the methods of natural science, concerning the relation of the statements of natural science on Level One to the evidence on Level Zero on which they rest. As such p' is open to challenge on exactly the same grounds on which are the statements of science to which it refers and which it tries to vindicate. p' has supplied some information about the methods of empirical science, but it leaves the question of the justification of these methods to which our reflection was directed exactly where it was to start with. If there was any reason to raise this question in respect to p or any other scientific statement there is the same reason for re-opening it in respect to p' ; and if we

responded to this once more as we did in the first place by further scientific observations receding to Level Three, this process would have to be repeated ad infinitum without ever approaching any nearer to its aim.

The futility of justifying the validity of scientific procedure by reflection based on scientific procedure may be expressed in the symbols of Boolean algebra. Suppose we confront the statements p p_1 p_2 ... on Level One, which have just stood ~~the test~~ the test of reconsideration with the evidence on Level Zero on which each of them rests and wanted to express that we are satisfied that the relation of each of these statements to its supporting evidence is similar to that of the others to their ~~supporting evidence is similar to that of the others to their~~ supporting evidence and that on these grounds they are severally accepted. They would then all appear to have in common something that other, ill-founded, statements lack. Accordingly, p , p_1 , p_2 ... will be said to be demonstrable and true while the corresponding contradictories, $\text{not-}p$, $\text{not-}p_1$ $\text{not-}p_2$, etc., would not only fail to be demonstrable but appear demonstrably false. In Boole's notation this result would be written: " $p = 1$, $p_1 = 1$, $p_2 = 1$... and $\text{not-}p = 0$, $\text{not-}p_1 = 0$, $\text{not-}p_2 = 0$, etc." The statement $p = 1$ is the same as was designated previously by p' . The two series " $p = 1$, ... etc. and $\text{not-}p = 0$, ... etc." would be situated on Level Two. However (as has been pointed out) these statements merely add further items to the previously accepted list of scientific statement to which they refer and are as open to a critique of the scientific method as were the items on that list. Thus if our reflections in respect to p , p_1 , p_2 ... etc. were justified, we would have to repeat them in respect to $p = 1$, $p_1 = 1$, etc. and $\text{not-}p = 0$, $\text{not-}p_1 = 0$ etc. The result would be a further series of statements once more removed to a higher level, Level Three, of the form $(p = 1) = 1$, $(p_1 = 1) = 1$ $\text{not}(p = 1) = 0$, $\text{not}(p_1 = 1) = 0$, etc. we would also have $(\text{not-}p = 0) = 1$, $(\text{not-}p_1 = 0) = 1$ etc.

We may sum up the result in general terms as follows. Suppose we try to distinguish a series of empirical statements p, p_1 etc. that have been scientifically demonstrated from their contradictories $\text{not-}p, \text{not-}p_1$ which have been disproved, by observing the relation which the former bear to the evidence in contrast to the corresponding relation for the latter, we shall enter on a process which, if justified in the first place, will lead to an infinite regress that can be symbolised by this table:

Number of Level	One	Two	Three	Four
	p	$p = 1$ $\text{not-}p = 0$	$(p=1) = 1$ $\text{not}(p=1) = 0$ $(\text{not-}p=0) = 1$ $\text{not}(\text{not-}p=0) = 0$	etc.

It makes no difference for this conclusion in what words we choose to express the result of a scientific demonstration; whether $p = 1$ shall be read as 'p is true' or 'p is probable' or 'p is the simplest description of the facts' or else 'p is the most useful description of the facts'. The statement $p = 1$ may stand for the attribution to p of any quality which generally applies to a scientifically demonstrated proposition and $p = 0$ for its denial. Any such attribution if required in the first place will continue to be required for an indefinitely regressing series of statements produced by the process of the attribution itself. If the process was initiated for the purpose of justifying the scientific method, this purpose recedes at every step by the extent of that step and thus each new step proves as futile as the one before.

7. The difficulty which we have met in the attempt to justify scientific assertions concerning matters of experience will be seen to lie - as already hinted - in the fact that we

appreciate these statements by standards of impersonality. We are reluctant to accept (as we ^{should} must) an overtly personal justification for statements which we accept because we regard them as impersonal. We shall be better prepared for this if we first deal with a problem of notation which dates back to an early stage in the development of symbolic logic.

Compare Kepler's statement "all planets move on elliptic orbits" with the historic statement made in the light of subsequently observed deviations from the elliptic paths: "Kepler said all planets move on elliptic orbits". We may say that what Kepler declared as his First Law was p and that schoolchildren who are not taught about deviations from this law continue up to this day to repeat p . In all these instances p would stand for a statement believed and alleged as true by those making it. This is not so when we today say "Kepler asserted p ", while believing that p is not quite correct. The factual statement to which we are committing ourselves in this case is not about planetary motion but about Kepler's views on planetary motions. The notation p appears therefore ambiguous; it sometimes is equivalent to the allegation of p by the person who wrote down p , while on other occasions it is not.

A sincere allegation is an act that takes place in speaking or writing down certain symbols. Its agent is the speaking or writing person. Like all intelligent actions, such assertions have an affective quality attached to them. They express conviction and are intended to convey conviction to those to whom they are addressed. We have on record the outcries of dizzy exultation to which Kepler gave vent at the dawning of discovery as well as at the false dawn of supposed discoveries. We know the violence with which scientific pioneers have often upheld their claims against their critics and can hear the same angry impatience expressed today by fanatical cranks like Lysenko.

A doctor deciding on a serious diagnosis in a difficult case or a jurymen bringing in a fatal verdict in dubious circumstances will

feel the weight of a heavy personal responsibility. In routine observations, unobstructed by opposition and unworried by doubts these emotions are dormant but not absent; no sincere assertion of fact is essentially unaccompanied by feelings of intellectual satisfaction, of persuasive desire and a sense of personal responsibility. Therefore, in a strict usage the same symbol should never represent the act of sincerely asserting something and the content of what is asserted.

8. The symbolic distinction between the two has been carried out by Frege (1893) and following him was embodied in the Principia Mathematica by Whitehead and Russell. A special sign \vdash called assertion-sign is introduced and prefixed to p if $\vdash p$ is to signify the actual assertion of p, while the bare symbol p must henceforth be used only as part of a sentence.

Written down by itself the assertion sign \vdash conveys as little meaning as would a solitary question-mark or exclamation-mark, which are its nearest analogues among existing symbols. It is true that a writer of fiction may occasionally take the liberty of putting down as a reply in a conversation a number of question-marks and perhaps more rarely exclamation marks. The question marks are meant to express mute puzzlement by a communication just received, the bare exclamation marks stand for inarticulate excitement evoked by it. We could likewise imagine a person mixed up in a heated argument, burning to intervene and making stammering noises but unable to find something to say. He would be filled with persuasive passion that could be approximately expressed by an assertion symbol in fat print. As a rule, however, we shall look upon \vdash as an incomplete symbol which acquires meaning only when followed by symbols denoting that which is being asserted. In the present chapter I shall deal only with the assertion of declaratory sentences concerning public facts.

The incompleteness of the assertion symbol has an important and perhaps not so readily acceptable correlate. It suggests

signpost!

that a declaratory sentence is by itself also an incomplete symbol.
 ? If language is to ^{constitute} denote speech it must reflect the fact that we never say anything that has not a definite emotional quality. It should be clear from the modality of a sentence whether it is a question, a command, an invective, a complaint or an allegation of fact. Since an unasserted declaratory sentence could not stand for an allegation of fact, its modality would be unspecified and could therefore ^{constitute} denote no spoken sentence. This is not to say that a sentence like 'all planets move on elliptic orbits' should be considered as meaningless in itself as would be a bare assertion sign or question mark. So tireless are the interpretative powers of our mind, that they will seize on any set of words, and indeed any marks even remotely suggesting a symbolic character, and squeeze some meaning out of them, however vague that may be. A sentence like the one just quoted is obviously full of meaning, I am only suggesting that it lacks the meaning of a spoken sentence. Just as there are words like 'however', 'altogether' or 'into', and clauses like 'if I were king', which though not meaningless, can only have definite significance as part of a sentence, thus I suggest, a sentence itself has only vague significance until supplemented by the symbol defining its modality. In the case of sentences intended to convey a factual communication this must be a prefixed assertion sign. A declaratory sentence may of course be correctly used as part of a sentence of properly clarified modality and in particular as part of an asserted sentence, as when I say: "Kepler believed that planets move along elliptic paths". Or when I say: "the sentence p implies the sentence q". These assertions involve neither the affirmation of the sentence 'planets move along elliptic paths' nor of the sentences p or q.

9. We have now got a sign which when prefixed to a declaratory sentence forms with it the notation for a spoken allegation of fact. But this notation is not yet sufficiently defined. It is clear that I can make use of it to put to paper an allegation of my own,

but it has not been explained how it is to function between different persons and successive periods in the same person's life. If the assertion sign is to signify the emotionally coloured act of sincerely pronouncing the asserted sentence, and there are many people in the world and innumerable moments in any single person's life, the symbol $\vdash . p$ must be supplemented so that it may tell us whose allegation it represents and at what time the person in question had alleged p . Obviously, we may take this to be expressed by the act of writing down the symbol $\vdash . p$ by a particular person at a particular moment. This is how Whitehead and Russell define the assertion sign in their introduction to Principia Mathematica: they say that if an asserted sentence is printed in a book and the assertion turns out to be false the author will be blamed. But the translation of this sign into words which Whitehead and Russell suggest tends to obscure this interpretation. They translate for example ' $\vdash . p$ implies q ' into the words 'it is asserted that p implies q '. The phrase 'it is asserted' suggests an impersonal happening of assertions. 'It is asserted', as 'it rains' or 'it happens'. A truer reading of the \vdash sign in a book by W. and R. would be "W and R assert . . ." from which, after accepting their conclusions I may proceed to "I assert ...". The value of the assertion sign is lost if we allow ourselves to revert in our verbal translation of it to the middle of a declaratory sentence, which asserts itself or is impersonally asserted in any other manner.

On closer scrutiny we shall even reject any wording which mentions assertion. The decisive act in my writing down ' $\vdash . p$ ' is not my making an assertion ^{but} ~~my~~ my commitment to it; it is not the act of my saying a sentence p that I denote by ' $\vdash . p$ ' but the fact of my believing the sentence p . The correct reading of ' $\vdash . p$ ' written down by me in good faith is therefore 'I believe p ', and that is also how we should write down in words the meaning of $\vdash . p$.

(— · p)

Correspondingly, when I read ~~the~~ in a book by someone else than myself, say by Doctor Faustus, I shall read it 'Doctor Faustus believes p'. If Dr. F. is dead or has changed his mind or was notoriously dishonest, I shall have to vary my reading accordingly. At any rate I will not read out his ' — · p' as an assertion of my own. What I read in his book is not that I believe p, and whatever I read out about believing or asserting will in the first instance be an assertion of my own about Dr. F. This reading of mine I shall correctly denote therefore in the form ' — · Dr. F. believes p', and if called upon to read out my notes I may make my assertive attitude explicit in the words "I believe Dr. F. believes p".

What applies to a book by Doctor Faustus is obviously true also in respect to a book of my own which does not express my present convictions. All its assertions can then be read out in the past tense as "I believed p", which would have to be denoted as ' — · I believed p'. There is of course no purpose in this transcription unless I really desire to dissociate myself from my previous commitment to the statements made in my book, but if that is the case the suggested reformulation is appropriate and indeed indispensable.

These rather obvious remarks are intended as a preparation for a perhaps less obvious consideration, which forbids the use of the assertion sign as a prefix to 'I believe p.' For ' — · p' and its verbal equivalent 'I believe p' stands for a present assertive act of my own and an act cannot be asserted. A declaratory sentence can be asserted, because it is an incomplete symbol, of indeterminate modality; while a question, a command, an invective, or any other sentence of fixed intention can no more be asserted than could the act of ^hewing wood or of drinking tea. It would be as meaningless to prefix the words 'I believe' or the assertion sign which denotes

these words, to such fully qualified sentences as it would be to any inarticulate act. It follows that the words 'I believe' in the assertion 'I believe p' must not be taken to form a declaratory sentence and indeed no sentence at all. They are in the nature of an exclamation like 'By Jove!' or of some other manner of vouching or asseveration. They form an incomplete phrase which acquires definite meaning only by the clause which follows it.

10. Let me sum up at this point as follows. *I urge that we should*
~~We must~~
 recast, at least in principle, all declaratory sentences which express allegations into sentences framed in a 'fiduciary mode' embodying the fiduciary act of a definite person made at a definite moment of time. This conclusion is based so far purely on the demands of accuracy; but it may be apparent already that it will substantially modify the position of scientific statements and thus also affect the problem of their justification. The supposed impersonality of scientific statements concerning public facts had granted them a unique position among all human utterances. Their more precise fiduciary formulation wipes out this distinction and abandons the impossible claim which it embodied. If a sentence in itself can say nothing, it cannot be either veridical or erroneous and there is no occasion left to account for such qualities of sentences. Instead we shall have the problem of justifying certain acts of our own; namely the holding and expression of certain beliefs. Once started on this line we may well expect to end up in a position in which our own personal responsibility will play a substantial and indeed the ultimately dominant part.

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 p. 9.
 above