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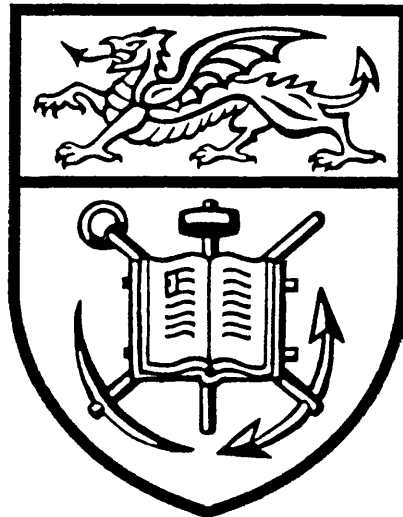
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**Russell, Quine and Wittgenstein in Pursuit of Truth:
A Comparative Study**

by

Sohrab Alavinia



Thesis is submitted to the University of Wales,
In Candidature for the degree of
Doctor of Philosophy

Department of Philosophy
University of Wales, Swansea

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Acknowledgement

Being a student of philosophy for so many years, I am not able to express my debt to all the writers on the subject. I have tried to acknowledge the main sources of and influences on my views; but I am far from sure that I have identified and remembered all of them. I would like to express, in particular, my gratitude and debt to my supervisor R. W. Beardsmore, Peter Hylton, Peter Hacker and Gordon Baker. I should also sincerely thank my former supervisor Prof. R. F. Atkinson, Prof. I. Dilman and Bill Hart among many others.

Summary

Understanding the intellectual competition facing a philosopher gives a clearer sense of the depth of his work. This thesis is concerned with the reactions of Wittgenstein and Quine to Russell's foundationalism in epistemology. In particular it is concerned with the foundations of mathematics. Wittgenstein's conception of language is the deep source of his philosophy of mathematics. That is why the study of the Wittgensteinian account of mathematical truth goes beyond the limits of reflection on mathematics and extends to the philosophy of language and logic.

The claim is that contrary to the framework of thought of both Russell and Quine, there is no language / reality dichotomy. Russell's search for indubitable foundations of knowledge and in particular his attempt to establish the foundations of mathematics in logic is misguided. The very supposition that mathematics needs foundations is an illusion. It is an attempt to transcend the bounds of sense. The epistemological riddles faced by Russell and Quine disappear in the later Wittgensteinian understanding of the matter. They collapse into logical insights.

Following modern debates in epistemology, Russell is looking for a proof of the 'external world'. This traditional line of thought continues in Quine's notion of 'The myth of physical objects'. Though Quine's naturalized epistemology is a reaction against foundationalism, the dichotomy in question, still remains. This is finally disposed of, by Wittgenstein's later conception of language. To complete the layout of the discussions; it is demonstrated that the idea of the alleged dichotomy lies behind the arguments of Einstein, Hilbert and all of the logical positivists.

Instead of pursuing the source of necessity of *a priori* propositions in the world or in the mind, we may explore the function of such propositions. Once their role has been properly grasped, the very disturbing epistemological riddles disappear. The absolute certainty of the propositions of logic and mathematics resides in the role that they play in our practice of inference and calculation. According to Russell's account in *Principia Mathematica* it is a fundamental law of logic that the proposition 'Q' follows from the proposition 'P & (P - Q)'. But what does this 'following' consist in? There is nothing in reality that provides a foundation for this inference. Logical and mathematical propositions *define* the techniques of inference and calculation. There is no foundation for our techniques that could justify them from the point of view of a non-participant in the practice. That is why it makes no sense to doubt logical or mathematical propositions.

Russell's total loss of the 'objective world' is the inevitable outcome of his understanding of the problem. His scepticism concerning the ordinary empirical judgements is against the mastery of a technique in the practice of describing the world. Without that technique, we would be unable to think or to use language. Our certainty concerning these judgements is a practical certainty that shows how the expressions of our language are used. The function of these judgements makes the question of establishing their ground out of place.

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Chapter one

Introduction

'Wittgenstein's chief contribution has been in the philosophy of mathematics.'¹ But, Wittgenstein's *Remarks on the Foundations of Mathematics* have so antagonized mathematicians that Wittgenstein has been isolated from the mainstream of modern philosophy of mathematics.

What makes a subject hard to understand - if it is something significant and important - is not that before you can understand it you need to be specifically trained in abstruse matters, but the contrast between understanding the subject and what most people *want* to see. Because of this the very things which are most obvious may become the hardest of all to understand. What has to be overcome is a difficulty having to do with the will, rather than with the intellect.²

Understanding the intellectual competition facing a philosopher gives us a clearer sense of the depth of his work. A philosopher's view may be important not because of its acceptance, but because of the reactions it stimulates and the different paths into which his rejected ideas induce his successors. We are here concerned with the reactions of Quine and Wittgenstein to Russell's foundationalism in epistemology. In particular, we

are concerned with the foundations of mathematics. Our claim is that contrary to the framework of thought of both Russell and Quine, there is no language/reality dichotomy. Russell's search for indubitable foundations of knowledge and in particular his attempt to establish the foundations of mathematics in logic is misguided. The very supposition that mathematics needs foundations is an illusion. As we shall show, it is an attempt to transcend the bounds of sense. Bearing in mind that Wittgenstein's philosophy of language is the deep source of his philosophy of mathematics, we see that the study of Wittgenstein's conception of mathematical truth goes beyond the limits of reflection on mathematics and extends to the field of his philosophy of language and logic in general.

The epistemological riddles faced by Russell and Quine, disappear in the later Wittgenstein's philosophy. They collapse into logical insights. Though we will discuss this matter in detail in the following chapters, we may make the point clear here, by means of some examples:

According to the traditional epistemologist, words and sentences *represent* in virtue of their correspondence with reality. Russell argued that words are connected to the world by the mediation of the ideas derived from experience. Quine as a behaviourist held that they are connected to reality by causal links between stimulus and verbal response. Wittgenstein sides with neither of them. The meaning of a word is determined by its use. Ostensive definition which appears to connect the network of language to reality, connects a word with a sample, the sample itself belongs to the method of representation - it belongs to language.

As another example, many philosophers had argued that the propositions of logic are descriptions of the laws of thought. Russell held that they are descriptions of the

most general features of the world. Given that they are *truths*, it was thought that they must be descriptions. But the problem is that what do they describe? Wittgenstein denied that they describe anything at all. They say nothing. Now, how can they be both true and vacuous? How can one proposition of logic differ from another one- given that they say the same thing, namely nothing? Instead of pursuing the source of their necessity in the world or in the mind, Wittgenstein explored the *function* of such propositions. Once the role of these propositions has been properly grasped, the very disturbing questions disappear since their presuppositions are undercut.

We start with Russell's challenge of scepticism. Following modern debates in epistemology, Russell is looking for a proof of the 'external world'. This traditional line of thought continues in Quine's famous notion of 'The myth of physical objects'. Russell's philosophy of logical atomism and the logical atomism of the *Tractatus* are discussed in chapters two and three. Both epistemological foundationalism and the language / reality dichotomy are advocated by Russell and the earlier Wittgenstein. We see in chapter four that though Quine's naturalized epistemology is a reaction against foundationalism, the dichotomy in question still remains. This will be finally disposed of, by Wittgenstein's later conception of language in chapter five. To complete the layout of the discussion, we will devote the penultimate chapter to the foundations of mathematics, where we will see how the idea of the alleged dichotomy lies behind the arguments of Einstein, Hilbert and all of the logical positivists. The last chapter is concerned with comparison and conclusion.

Is there any knowledge in the world which is so certain that no reasonable man could doubt it? I think that I know for certain that I have never been to the Mars; that I have two hands; that I have been born of parents, etc., etc. Russell thinks that I

should accept propositions of this kind as hypotheses:

If we take any common object of the sort that is supposed to be known by the senses, what the senses *immediately* tell us is not the truth about the object as it is apart from us, but only the truth about certain sense-data which, so far as we can see, depend upon the relations between us and the object. Thus what we directly see and feel is merely appearance, which we believe to be a sign of some 'reality' behind. But if the reality is not what appears, have we any means of knowing whether there is any reality at all? And if so, have we any means of finding out what it is like?³

He concludes that:

No logical absurdity results from the hypothesis that the world consists of myself and my thoughts and feelings and sensations and that everything else is mere fancy....There is no logical impossibility in the supposition that the whole of life is a dream in which we ourselves create all the objects that come before us.⁴

Quine follows Russell's scepticism. In his view, physical objects are posits comparable to the gods of Homer. He says:

In point of epistemological footing the physical objects and the gods differ only in degree and not in kind. Both sorts of entities enter our conception only as conceptual posits. The *myth of physical objects* is epistemologically superior to most in that it has proved more efficacious than other myths as a device for working a manageable structure into the flux of experience.⁵

He says again:

Physical objects are postulated entities which round out and simplify our account of the flux of experience, just as the introduction of irrational numbers simplifies laws of arithmetic.⁶

Foundationalism

According to many philosophers, in so far as we are rational in our beliefs, the intensity of a belief will correspond to the firmness of the available evidence and we will drop a belief when we have tried in vain to find evidence for it. But is it right to say that the mark of rationality is the proportioning of one's belief to the evidence? Can a person believe something rationally without having evidence for it? To answer this question, we must enquire what kind of thing evidence is:

One may say that a proposition like ' $2 + 2 = 4$ ' is self-evident⁷. Some propositions are evident to the senses like 'It is raining'. Such evident propositions may provide evidence for propositions which are not evident, like long multiplications or scientific theorems. So, we may rationally believe a proposition that is self-evident, evident to the senses or something for which other propositions provide evidence.

Things that are evident, are believed without evidence. It is a mistake to regard evident propositions as resting on themselves as evidence. Nothing can provide evidence for itself, any more than a witness can confirm his own word. Therefore, it is rational to accept some propositions without evidence. Philosophers who say that rational belief must be proportioned to evidence must, at least to this extent modify their position. We may conclude that rational belief is either itself evident or based on what

is evident. In other words, the rationality of a belief must be tested by its relation to a set of basic propositions which form the foundations of knowledge. This view is called ***foundationalism in epistemology*** meaning that there is a set of propositions F such that a belief is rational if and only if it is evident with respect to F. If we call the set of all beliefs a man holds, with the logical and epistemic relations that hold them together, that man's world-view; then the set F will be its foundations.

Russell holds that even propositions that are evident to the senses such as 'It is raining' do not belong to the foundations. Their place should be taken by incorrigible propositions concerning immediate sense-impressions. This is, in the first place, a misunderstanding of the function of the ordinary empirical propositions in our world-view as we will see shortly. We will also argue in chapter five that it is wrong to regard such propositions as being known by inference from appearances. But, this in no way affects our present discussion.

One may ask; how do we know whether a proposition is self-evident? Not every proposition that seems self-evident, turns out to be so. For instance, it seems self-evident that some sets are members of themselves; e. g., the set of sets is itself a set. It is self-evident that some other sets are not; e. g., the set of men is not a man. It seems also self-evident that every set either is or is not a member of itself. So, there is a set of the sets that are not members of themselves. But, Russell has shown that far from being self-evident, this is nonsense. Therefore the foundationalist, must accept that whatever seems self-evident may not genuinely be so. He has to come down and accept that F-propositions are just likely to be self-evident. This violates the foundationalist canon of rationality. Moreover, the foundationalist's canon, that nothing is to be accepted as basic unless it is self-evident or evident to the senses is itself

something that he accepts as basic. But, it is neither self-evident nor evident to the senses. Why should we accept it? The foundationalist commits himself to reason and to nothing more. He declares irrational any world-view that contains more than F-propositions in its foundations, but there is no reason for us to accept his own canon. We are not obliged to take his word for it. There is nothing contrary to reason in accepting other sorts of propositions as basic. It may be rational to accept a proposition that is neither self-evident nor manifest to the senses. There are many such propositions: 'Human beings sleep', 'Cats do not grow on trees', etc., etc. I think that I am rational in accepting these propositions. There is no reason for excluding them from the foundations. These truisms are not self-evident and do not report anything that is manifest to the senses. The point is that I cannot give any reasons for my belief in such propositions. I cannot offer reasons to convince myself that, for example, I have two hands or that there is a city called Geneva, which I have never seen. I will not take anything as reasons for them. *It is an important feature of the activity of giving reasons that premises should be better known than conclusions.* *P* can only be a reason why I hold *Q*, if *P* is a more basic proposition in my world-view. It is because of this that I think there are no reasons on the basis of which I believe that there is a Geneva. My belief in this proposition is not based on reasons. There are no other beliefs which are more firmly established in my world-view that could be used to support this belief. If there were any conflicts between my belief that there is a city called Geneva and the information which could be given on the topic, it would be these latter information and not my belief which would have to give way. The proposition that there is a Geneva sets the standard by which anything that might be offered on the topic would be judged. This proposition is not related in my world-view to those new pieces of information, in

the way that conclusions are related to evidence. I do not mean that no one's belief in this proposition could be based on reasons . For a young child, for example, or a tribesman who has not studied geography it could be based on reasons. The basic role of a proposition in the world-view is relative to persons and to times. A belief may be basic for one person and not for another. But there are beliefs which must be basic for everyone. For example, I believe that there are other human beings; that other human beings also sleep; etc. If beliefs like these are false my whole web of belief would collapse. These are things that I know, if I know anything at all. If any beliefs deserve to be called foundations of knowledge, these beliefs definitely do. Let me try to suppose that, for example, other human beings never sleep. Anyone who has appeared to me to be sleeping has been awake and all have been united against me in a deceitful play. If I could seriously entertain this supposition, what reason would I have to trust anything I have ever been told or the meanings I have been told of the words I use (e.g., the meaning of 'awake' or 'asleep')? My identification of objects and my verbal usage have been confirmed over the years by agreement of others. If they are all united to deceive me, then this confirmation too could be the result of that malevolent stage management. Anyone who pursued this train of suppositions seriously, would be insane. These basic beliefs are neither open to doubt, nor based on reasons. They are neither self-evident, nor evident to the senses, yet nor are they believed on the basis of evident truths. One cannot give evidence for the proposition that 'Other human beings sleep.' To point to individual slumbers can only illustrate, but never can provide evidence for this general truth. Such truths are used as standards for testing other claims. They have a role in the web of belief that is incompatible with regarding them as conclusions on the basis of evidence which is better known. So, we

see that the foundationalist's criterion of the rationality of a belief as proportioning it to the evidence is not tenable. Because, it is not only the self-evident or sensibly manifest propositions which can be properly believed without reason, we also have a class of ordinary empirical propositions which are deeply embedded in our web of belief and are not based on reason.

The claim of a foundationalist like ***Russell, that the beliefs of a rational man should consist only of propositions which are self-evident, evident to the senses or derived from such propositions by a process of reasoning is a confusion.***

Such a theory is self-refuting, because this criterion for rational belief is, itself, neither self-evident, nor evident to the senses, nor yet is it easy to see by what process of reasoning it could be derived from such premises. Moreover it is possible to put forward a class of ordinary empirical propositions which are rationally believed without evidence. For example; 'Human beings sleep'. The difficulty of providing evidence for them arises not from their obscurity, but their obviousness. There is nothing more certain which could be offered in support of them. They are believed by everyone. However, there are other propositions such as 'There is a country called Sweden', which may be believed by some people (a tribesman who does not know geography, for example,) on the basis of evidence; but are rationally believed by others without evidence, because of the fundamental role that they play in their world-view.

These propositions *seem to be* foundational, because they are universally held as basic and we do not accept them on the basis of other propositions. But, for a proposition to be a foundation it is not enough to be unbased. It should also serve as a basis for other propositions. The belief that there is an ant moving on my desk while I am writing is basic for me. It is manifest to my senses, but it does not serve as a

foundation for my web of belief and if it turned out to be false it would cause no damage to my world-view. On the other hand, propositions that are universally basic, such as 'Human beings sleep' could not be given up without tearing apart the web of belief. However, it is misleading to regard them as *foundations* of knowledge.

I want to say: propositions of the *form* of empirical propositions and not only propositions of logic, form the foundations of all operating with thoughts (with language) ... In this remark the expression 'propositions of the form of empirical propositions' is itself thoroughly bad; the statements in question are statements about material objects. And they do not serve as foundations in the same way as hypotheses which, if they turn out to be false are replaced by others.⁸

A proposition such as 'The earth has existed for many years' is not a foundation in the sense of being a truth from which other truths are deduced, as one might deduce consequences from an hypothesis or from the axioms of an axiomatic system. Rather 'in the entire system of our language-game it belongs to the foundations'. The metaphor of *foundations* is not suitable, because the relation of premise to conclusion is inadequate to explain the kind of support that propositions of the world-picture give to each other. The fundamental propositions in the world-picture stand fast, just as the keystone of an arch does, because they are held fast by the propositions that lie around them.

The metaphor of foundations of knowledge had a great hold on the traditional epistemologists. Descartes used a different metaphor to describe his epistemological views. He spoke of knowledge as a tree on which various branches of belief could grow. Cartesian doubt can be regarded as a pruning operation. No doubt, we can cut

higher branches by sitting on the lower ones, but we must be careful not to cut off the branch on which we are sitting. We cannot remove the keystone of the building or cut off the lower branches of the tree without destroying the whole thing. That is why we said that doubting a truism like 'Human beings sleep' would call in question one's own state of sanity. Wittgenstein preferred the metaphor of a river-bed to the other metaphors. This is more appropriate, because it shows that the function of a framework proposition may change with time.

It might be imagined that some propositions of the form of empirical propositions were hardened and functioned as channels for such empirical propositions as were not hardened but fluid; and that this altered with time, in that fluid propositions hardened and hard ones became fluid...The same proposition get treated at one time as something to test by experience and at another as a rule for testing.⁹

In this way, *we see that to be basic is not to be incorrigible.*

We may, now, consider the non-basic beliefs of our world-view. These are beliefs which depend on (are based on) the basic beliefs. We must specify the relation in which these beliefs stand to the basic beliefs. When a non-basic proposition is derived by inference from a basic one, the argument may be deductive or inductive. The non-basic propositions may be derived as the conclusion of a deductive argument of which basic propositions form the premises. Or, the non-basic beliefs may be the hypotheses which are confirmed by the basic propositions. Besides deductive and inductive inferences, our non-basic beliefs may be based on testimony. There is no doubt that testimony plays an important part in the build-up of our world-view - a more important part than inference. It is not easy to draw a line between what is believed on

the basis of widespread implicit testimony and what is accepted simply as basic. Wittgenstein has pointed out that many of our beliefs about the nature of universe were not learnt but were rather swallowed down with things which we explicitly learn.

Moore's Truisms

Russell and Moore around the turn of this century challenged decisively the dominant philosophies of their period. Moore had no doubts about many things which he took himself to know with certainty. His concern was not a quest for certainty, but for the analysis of things which he was convinced that we do know with certainty. Russell, on the contrary, followed the Cartesian line of scepticism. *His aim was to set knowledge on a firm foundation - first mathematical knowledge and then empirical knowledge of mind and matter.* So, approving of the Cartesian method of doubt, Russell argued that we do not know in advance where methodological doubt will lead us and we cannot suppose that it will leave intact the certainties which Moore cited. This is the line which has been followed by Quine, as we shall see in chapter four.

Moore's method of attacking the sceptic and his defense of common sense is explained by Norman Malcolm in this way:

Philosopher: 'There is no material things.'

Moore: 'you are certainly wrong, for here's one hand and here's another; and so there are at least two material things.'

Philosopher: 'Time is unreal.'

Moore: 'If you mean that no event ever follows or precedes another event,

you are certainly wrong; for *after* lunch I went for a walk, and after that I took a bath, and after that I had tea.'

Philosopher: 'Space is unreal.'

Moore: 'If you mean that nothing is ever to the right of, or to the left of, or behind, or above anything else, then you are certainly wrong; for this inkwell is to the left of this pen, and my head is above them both.' ...

Philosopher: 'No one ever perceives a material thing.'

Moore: 'If by 'perceive' you mean 'hear', 'see', 'feel', etc., then nothing could be more false; for I now both see and feel this piece of chalk.' ...

Philosopher: 'We do not know for certain that the world was not created five minutes ago, complete with fossils '

Moore: 'I know for certain that I and many other people have lived for many years, and that many other people lived many other years before us; and it would be absurd to deny it.' ...

Philosopher: 'All empirical statements are really hypotheses.'

Moore: 'The statement that I had breakfast an hour ago is certainly an empirical statement and it would be ridiculous to call it an hypothesis.'¹⁰

Wittgenstein's remarks in *On Certainty* focus on the propositions that the sceptic doubts and Moore claims to know. These propositions form the framework of our practice. So, we call them framework propositions. Wittgenstein is concerned with an *understanding* of the function of these proposition that shows why they do not need the justification that the sceptic demands. He says that in a normal context, they would not be remarked and if they were, they would not be doubted. They do not have any epistemic status and constitute the unquestioned background against which all justifications of

beliefs go on. Wittgenstein gives an account of the judgements of the framework of our practice that is both non-sceptical and undogmatic. It is a misuse of the expression 'I know' in an ordinary context when Moore says: 'I know this is my hand'. The whole point of our language-game is lost in the case where the claim to knowledge is something that everyone would accept without question. The knowledge claim is, in this context, unintelligible.

Someone says irrelevantly 'That is a tree'. He might say this sentence because he remembers having heard it in a similar situation; or he was suddenly struck by the tree's beauty and the sentence was an exclamation; or he was pronouncing the sentence to himself as a grammatical example; etc; etc. And now I ask him 'How did you mean that?' and he replies 'It was a piece of information directed to you'. Shouldn't I be at liberty to assume that he does not know what he is saying, if he is insane enough to want to give me this information?¹¹

Wittgenstein does not say that we can never find a legitimate use for the framework propositions:

For each of these sentences I can imagine circumstances that turn it into a move in one of our language-games.¹²

Our belief in these truisms derives from the fact that we can imagine circumstances that would make their employment intelligible. The use of the expression 'I know' is connected in grammar with the possibility of saying how we know:

One says 'I know' when one is ready to give compelling grounds.¹³

The sceptic would agree with this, for the whole force of his argument is that our knowledge claims must be established. That is exactly why he demands grounds for

the claim 'I know that this is a hand'. He then goes on to show that any grounds that can be offered are inadequate. According to the sceptic, we have assumed the knowledge of these truisms. We need to supply the grounds of our assumption. What Wittgenstein says is that the notion of grounds cannot be intelligibly applied to them. He says that I cannot understand the sceptic's demand of grounds for Moore's truisms. Our notion of giving grounds for a judgement is an appeal to something that is both independent of and more certain of the original judgement. Nothing could be more certain than Moore's truisms and therefore nothing could grammatically serve as their grounds. With these propositions we have already arrived at the rock bottom of our convictions.

My having two hands is, in normal circumstances as certain as anything that I could produce in evidence for it. That is why I am not in a position to take the sight of my two hands as evidence for it.¹⁴

Wittgenstein sees our inability in providing grounds for Moore's truisms as a logical feature of these propositions. I neither believe, nor doubt the proposition that 'I have not been on the Mars'. My relation to this truism is not a state of belief based on evidence. We talk of believing a proposition in cases where we understand what it would be to doubt it.

'In cases where doubt is hollow, isn't belief hollow too?'¹⁵

Neither can we apply the concept of mistake to these truisms. When we make a mistake, this can be fitted into what we know correctly. It does not contain any idea of losing our footing completely. The concept of mistake is rather linked with the idea of revising a belief or reinterpreting an evidence. None of these make sense in connection with these propositions. The sceptic accepts that the use of epistemic concepts implies

the possibility of being mistaken. He, then, extends the notion of mistake to Moore's truisms. This draws him to the conclusion that we might be wrong about everything. If the possibility of being mistaken is extended to propositions like 'I have never been to the Mars', then it would put every judgement in doubt. In the case of these truisms doubt would seem to drag everything with itself and plunge it into chaos', and 'the foundations of all judging would be taken away.'¹⁶ Establishing anything in the circumstances where every judgement is undermined, is impossible. The sceptic does not regard this as a proof of reductio. Instead of concluding that in such a case the notion of mistake may not come in, he rather regards the argument as a discovery of the weakness of our position. For Wittgenstein, this implies that the concept of mistake has ceased to apply in this context. What can our grip on the notion of mistake consist in? When the sceptic applies the concept of mistake to the framework propositions, there remains no system of established judgements to work against and therefore the notion of mistake becomes incoherent. It becomes empty or at most different from our ordinary concept of mistake. Falling into falsehood in connection with Moore's truisms is never a question of mistake, but something more fundamental.

If Moore were to pronounce the opposite of those propositions which he declares certain, we should not just not share his opinion: we should regard him as demented.¹⁷

Accepting framework propositions as beyond doubt is a condition of participation in linguistic practice of the community.

It is not agreement in opinions, but in form of life¹⁸

The inapplicability of the notions of doubt, mistake and grounding to framework propositions reveals that our relation to them is non-epistemic. *Both Russell and Quine*

are confused in believing that our relation to the propositions that form the frame of our practice is on the same model of our relation to the propositions within the frame.

Moore would agree with Wittgenstein that the idea of providing grounds for knowledge claims with respect to framework propositions is problematic, because nothing could be more certain than they are. He would agree that we cannot regard these propositions as hypotheses open to doubt. He would also agree that the notion of mistake is not applicable to them. But, he sees the inapplicability of the notions of grounding, hypothesis and error to these truisms as a proof of the certainty of our knowledge claims with respect to them. Wittgenstein's disagreement with Moore is just over the question whether our certainty regarding framework propositions is to be *understood epistemically or non-epistemically.*

I want to say: my not having been on the Moon is as sure a thing for me as any grounds that I could give for it. And isn't that what Moore wants to say, when he says he *knows* all these things? - But is his knowing it really what is in question and not rather that some of these propositions must be solid for us?¹⁹

Instead of 'I know ...' couldn't Moore have said 'It stands fast for me that ...'?²⁰

I should like to say: Moore does not *know* what he asserts he knows, but it stands fast for him as also for me; regarding it as absolutely solid is part of our method of doubt and enquiry.²¹

The propositions that belong to the framework of our judgements play a special role in our practice. Understanding this special role would yield both a non-sceptical and an undogmatic account of these propositions. We will see how our relation to these

propositions is non-epistemic and why the absence of justification for them is neither dogmatic nor a threat to our convictions. We will find out how all the epistemological riddles concerning these propositions disappear.

Wittgenstein's account of the function of Moore's truisms in our practice makes us free from a misconception of the certainty of all *a priori* truths. It is parallel to our understanding of the function of the propositions of logic and mathematics. Given a new understanding of the certainty of these propositions, we will be in a position to understand how what appear to be empirical propositions of the world-view could play the same logical role in relation to our practice of describing the world. So, we shall begin with a discussion of the propositions of logic and mathematics.

Logic and Mathematics

It is supposed that our certainty about a proposition like ' $2 + 2 = 4$ ' or ' $\sim(P \ \& \ \sim P)$ ' is the archetype of an indubitable belief. According to the traditional epistemology, if there were no such beliefs, then we would not be able to construct our knowledge on secure foundations. Wittgenstein's response to the sceptic is a reinterpretation of the certainty that we attach to these beliefs. The absolute certainty of the propositions of logic and mathematics resides in the role that these propositions play in our practice of inference and calculation. The practice of inferring and calculating is traditionally seen as grounded in a calculus that produces the absolute truths of logic and mathematics. It is as if we have a 'logical machine' that works inexorably to produce, for example, Q given that $(P \rightarrow Q) \ \& \ P$. It is suggested that the workings of this machine justify our

procedures for drawing inferences. In his later philosophy, Wittgenstein set out to show the emptiness of this picture and the misunderstanding on which it is based.

One is often in the dark about what following and inferring consists in; what kind of fact and what kind of process it is. The peculiar use of these verbs suggests to us that following is the existence of a connexion between propositions, which connexion we follow up when we infer. This comes out very instructively in Russell's account (*Principia Mathematica*). That a proposition $\vdash Q$ follows from a proposition $\vdash (P \rightarrow Q) \ \& \ P$ is here a fundamental law of logic:

$$\vdash (P \rightarrow Q) \ \& \ P \rightarrow Q$$

Now this, one says justifies us in inferring $\vdash Q$ from $\vdash (P \rightarrow Q) \ \& \ P$. But what does 'inferring' - the procedure that is now justified - consist in? Surely in this: that in some language-game we utter or write down (etc.) the one proposition as an assertion after the other; and how can the fundamental law justify me in *this*?²²

The idea of a logical machine whose workings justify our practice is really no more than a picture that we impose on reality. This does not mean that we are not correct when we derive $\vdash Q$ from $\vdash (P \rightarrow Q) \ \& \ P$ but that there is nothing in reality that provides a *foundation* for the inference. Our practice of inferring does not need the foundation that the picture of a logical machine tries to give it. There is nothing absolute or essential in reality or in the calculus. The rigidity in what we count as valid inference or correct calculation is a feature of our practice.


We talk of the 'inexorability' of logic and think of the laws of logic as inexorable...It is *we* that are inexorable in applying these laws.²³

The rigidity is thought to be in the calculus or in the 'logical structure' of reality; whereas we project the grammar (logic) of our practice onto the world. We should abandon the idea that logic and mathematics constitute a system of true propositions. Logical and mathematical propositions define the techniques of inference and calculation. These techniques have grown in the course of our practical lives. The question whether these propositions *are themselves true or false is completely empty*.

The propositions which are not brought into question are logical inferences. But, the reason is not that they 'certainly correspond to the truth' - or something of the sort - no, it is just this that is called *thinking, speaking, inferring, arguing*. There is not any question at all here of some correspondence between what is said and reality; rather is logic *antecedent* to any such correspondence; in the same sense, that is, as that in which the establishment of a method of measurement is *antecedent* to the correctness or incorrectness of a statement of length.²⁴

Within the practice in which the propositions of logic and mathematics have their special role, arguments can be assessed; but the techniques that are employed cannot come up for assessment in the same way. Within our practice someone may infer or calculate correctly. This means conformity with our actual practice. The role that was traditionally played by the empty notions of logical and mathematical *reality* is now played by the idea of the established practice. Viewing logic and mathematics as constitutive of the techniques that are employed in our every day lives, we see *the emptiness of the problem of the foundations of logic and mathematics*. There are no absolute necessities in reality which underpin logic and mathematics. It is necessary that '3' comes after '2' in the series of natural numbers, because only this order accords

with the technique of counting. It is necessary that Q follows from $(P \rightarrow Q) \ \& \ P$ for only *this transition accords with the technique of logical inference*. The alleged necessity springs from the fact that nothing else counts as inference or calculation. This does not mean that logic and mathematics are arbitrary, because our techniques of inference and calculation are deeply embedded in the form of life we lead.

What does the peculiar inexorability of mathematics consist in? - Would not the inexorability with which *two* follows *one* and *three, two* be a good example? - But presumably this means *follow in the series of cardinal numbers*; for in a different series something different follows. And isn't *this series just defined* by the sequence? - Is that supposed to mean that it is equally correct whichever way a person counts and that anyone can count as he pleases? - We should presumably not call it 'counting' if everyone said the numbers one after the other *anyhow*; but of course it is  not simply the question of a name. For what we call *counting* is an important part of our live's activities. Counting (and that means counting like this) is a technique that is employed daily in the most various operations of our lives... [I]t can't be said of the series of natural numbers - any more than our language - that it is true, but that it is usable and above all *it is used*.²⁵

New techniques for making transitions between propositions may be disclosed by means of pure mathematical and logical proofs. But, Wittgenstein believes that it is wrong to regard these proofs as uncovering essential connections that were, in some sense, *already there*. Proofs construct patterns that we recognize we can use in countless ways. ***The pattern is not there prior to our construction of it, waiting to***

be revealed.

The propositions of logic and mathematics can be known with certainty *a priori* because they constitute the criteria by means of which we judge whether a mathematical calculation or logical inference is correct. They *define* everything that is unavoidable in our practice of inference and calculation. There is no foundation for our techniques that could justify the steps we take, from the point of view of a non-participant in the practice. Our certainty concerning the propositions of logic and mathematics is pre-epistemic. It reflects our mastery of the techniques of the practice. It is a form of practical confidence which could be best expressed as: *This is what we do*. There is no question of whether one knows these propositions to be true, but a practical question of whether one is competent to take part in the practice. Wittgenstein's philosophy of mathematics is a new understanding of why it makes no sense to doubt logical or mathematical propositions. It shows what it is to accept them undogmatically without providing grounds for them. His view concerning the certainty of logical and mathematical judgements is the result of his reflection on the grammatical role that they play in our practice of inference and calculation. Questions of truth and falsity arise within our practice, not at the level in which the techniques of inference and calculation are defined. Our certainty concerning the propositions of logic and mathematics is prior to our knowledge of the results of their application in empirical contexts. This is a form of certainty for which the question of justification is out of place. Accepting these judgements amounts to nothing more than the exercise of a practical capacity. Holding them fast is a prerequisite for mastery of techniques that we employ in calculating and inferring. There can be no participation in a practice that at the same time puts in question the propositions that constitute the techniques employed in it.

Treating these propositions as beyond question is a prerequisite of our being able to calculate and reason.

Extension of the Account

Can we now extend the account of the status of logical and mathematical propositions to Moore's truisms? Do ordinary empirical propositions like 'This is a hand' play such a role in our practice that we can accept them unjustifiably without being dogmatic? If yes, then we are provided with a non-sceptical understanding of the absence of justification for Moore's truisms. The sceptic construes our relation to these judgements on the model of our epistemic relation to empirical propositions. So, he regards our judgements as lacking justification. Wittgenstein's account of our relation to these judgements, is a new understanding which shows that the absence of justification for them is not dogmatic. We come to understand that both Moore's claim to know and sceptic's doubt about them are equally wrong. These truisms form the frame of our practice. No other proposition can be used to establish them. They constitute the rock-bottom of our convictions; the stopping point for all our enquiries of knowledge claims. The sceptic's position is that so far as we cannot justify these propositions, we may not accept them dogmatically. The whole point is that he regards our relation to them as epistemic. Here, Wittgenstein's argument is on the same line of his reinterpretation of the nature of the propositions of logic and mathematics. The meaning of a word consists in the use that is customarily made of it within a practice.

To obey a rule, to make a report, to give an order, to play a game of

chess, are customs (uses, institutions)²⁶

So, understanding of a word is not a matter of hitting on the correct interpretation of it. Coming to understand an expression means coming to have the practical ability to use the expression. We are to think of understanding a word in terms of a practical mastery of a customary technique. To understand a language comes to be not as a state of knowing propositions, but as a practical capacity.

But is it wrong to say: 'A child that has mastered a language-game must *know* certain things?

If instead of that one said 'must be *able to do* certain things' that would be a pleonasm, yet this is just what I want to counter the first sentence with.²⁷

Describing the world in a language, like inferring and calculating, presupposes the techniques which are determined by a system of judgements that members of the community share. This system of judgements play a role with respect to the practice of describing the world, that is analogous to the role that propositions of logic and mathematics play with respect to the practice of inference and calculation. These ordinary empirical judgements form an unavoidable background that we universally share.

When Moore says he *knows* such and such, he is really enumerating a lot of empirical propositions which we affirm without special testing; propositions, that is, which have a *peculiar* logical role in the system of our empirical propositions.²⁸

For Moore's truisms, the idea of agreement with reality, does not have a clear application. The purpose of these truisms is to show us, for example, what a hand is, what a red colour is and so on.

If I wanted to doubt whether this was my hand, how could I avoid doubting whether the word 'hand' has any meaning?²⁹

Doubting a judgement that shows what sort of thing it is that we are talking about, deprives the words we utter of their meanings.

The fact that I use the word 'hand' and all the other words in my sentence without a second thought, indeed that I should stand before the abyss, if I wanted so much as to try doubting their meanings; shows that absence of doubt belongs to the essence of the language-game.³⁰

The only way to express a doubt about anything whatsoever is by accepting judgements that together determine what our doubt means.

If you are not certain of any facts, you cannot be certain of the meanings of your words.³¹

My certainty regarding the judgement 'This is a hand' is a pre-epistemic attitude that is partly constitutive of my practical ability to speak the language. It is not a variety of certainty for which the question of justification arises. It is analogous to my certainty concerning the propositions of logic and mathematics. Russell and Quine believe that our relation to any proposition in our system of judgements is epistemic. The judgements that form the frame of our practice are also to be justified. Otherwise, we would accept them dogmatically. According to Wittgenstein this picture is the misunderstanding of the nature of the judgements that form the frame of our practice. Our practice of language does not rest on knowledge, for which the question of justification could arise. It rests on the mastery of techniques which we acquire through the training that constitutes our method of acculturation. The idea that language is founded on knowledge is replaced, in later Wittgenstein's philosophy, by the idea of its

being founded on a practical mastery of a system of judgements. These judgements constitute our techniques for describing the world.

It is something that lies beyond being justified or unjustified; as it were, something animal.³²

It is not reasonable (or unreasonable). It is there - like our life³³

This understanding of Moore's truisms reveals that Russell's assessment of them as lacking grounds is a misconception of their nature. The function of these judgements makes the question of establishing their grounds, out of place.

Russell's total loss of the 'objective world' is the inevitable outcome of his understanding of the problem. He thinks of the judgements that form the frame of our practice, as empirical claims that must be established by experience. His solipsistic conception of experience is the product of his confusion about the nature of these judgements. Wittgenstein intends to show that the difficulty is inherent in the way Russell has set up the problem. His alternative assessment of the nature of Moore's truisms prevents scepticism from arising. By clarifying the function of these propositions, Wittgenstein shows why the absence of justification for them is not a failure.

Wittgenstein *is not defending a form of naturalism*, arguing that since our world-view is the one that has naturally evolved, it must correspond with the way things really are. The point is that we have been living in this world and in the course of our lives, we have developed techniques for describing it. The question of whether this system of techniques is true or false is logically out of place.

I did not get my picture of the world by satisfying myself of its correctness.

Nor do I have it because I am satisfied of its correctness. No; It is the

inherited background against which I distinguish between true and false.³⁴

The sceptic is reacting against the mastery of a technique in the practice of describing the world, but without that technique we would be unable to think or to use language. Our certainty concerning Moore's truisms is a practical certainty that shows how the expressions of our language are used. 'This is a hand' is as certain as ' $2 + 2 = 4$ '.

The physical game is just as certain as the arithmetical.³⁵

We know with the same certainty with which we believe *any* mathematical proposition; how letters A and B are pronounced, what the colour of human blood is called, that the other human beings have blood and call it 'blood'.³⁶

'This is a hand' is necessary in the same way as 'This rod is one meter'. Here, the objects referred to, function as samples or standards. They serve to show what a meter is or what a hand is. The question of justification of these judgements does not make sense. So, Moore's truisms, like the propositions of logic and mathematics, are both *a priori* and analytic. But, there is a difference between them:

The mathematical proposition has, as it were, officially given the stamp of incontestability. I. e. : 'Dispute about other things; *this* is immovable - it is a hinge on which our dispute can turn.'

One can *not* say that of the proposition that I am called L. W. The propositions of mathematics might be said to be fossilised. - The proposition 'I am called ...' is not.³⁷

The proposition ' $2 + 2 = 4$ ' is never open to question. Its status as a technique-constituting proposition does not depend on the context or the speaker. It has been officially given the stamp of incontestability. The same does not hold of Moore's

truisms. In exceptional cases 'I have two hands' may function as a genuine empirical proposition; for example, when asserted by an amputee. It is exactly this possibility that makes sceptic's challenge to Moore's truisms appear meaningful. But, this does not affect our cardinal tenet that in ordinary circumstances, for Moore's truisms *as for the propositions of logic and mathematics 'the absence of doubt belongs to the absence of language-game'*.

If we want the door to turn, the hinges must stay put.³⁸

To summarize: doubting ordinary empirical propositions that form the frame of our practice is as senseless as doubting the multiplication-table. It is like suggesting that 'a game has always been played wrong.' Acknowledging someone as a competent speaker of a language means that he will make certain judgements as a matter of course. These judgements are not informative. We may only affirm them when we inform someone about a part of the frame that he does not share; e. g., 'My name is Sohrab', or when we teach a child the language. But, in these cases we are either extending or introducing the framework. We could not be more sure of anything than we are of these truisms. In the case of these propositions doubt loses its sense. When doubt loses its sense, we are not concerned with true or false propositions, but with an ungrounded way of acting. It is a practical certainty that comes with the mastery of a technique. Uttering these propositions is a matter of the immediate exercise of our ability to use language, not a matter of expressing opinions.

If I say 'Of course, I know that, that is a towel' I am making an utterance.

I have no thought of verification. For me it is an immediate utterance.³⁹

The epistemic distance that is essential for the concepts of hypothesis and mistake does not arise in the case of these judgements. The idea of being mistaken about them

would mean that we lost our footing completely. This means that our ability to use the language would be undercut and we would be plunged into prelinguistic void. So, being in no doubt about Moore's truisms cannot be construed as *dogmatism*. Used as empirical propositions, Moore's truisms are as much open to doubt as any other empirical proposition. It is for this reason that Moore's refusal of sceptic's doubt is a piece of dogmatism. Moore views our relation to 'This is a hand' as an epistemic relation, whereas it functions as a technique-constituting judgement. Wittgenstein's account of our relation to these truisms shows why the sceptic's doubt is misplaced. It misrepresents our non-epistemic relation to these technique-constituting propositions as an epistemic relation to empirical judgements. On this account, the question of justification of these propositions is not neglected, but it is recognized as irrelevant. Our authority as masters of the practice is all that is involved in our commitment to these propositions. The sceptic's attempt to question them is incoherent, because as we shall see in chapter five, there exists a language just in so far as there exists a practice of employing linguistic expressions. Speaking meaningfully means speaking within a practice and speaking within a practice means speaking within the framework of judgements that constitute the techniques of description. So, a commitment to Moore's truisms is a condition of meaningful use of language. *The sceptic cannot replace commitment to these propositions with doubt, without destroying the meaning of the expressions in terms of which he expresses his doubt.*

If I am uncertain about this being my hand, why not in that case about the meaning of these words as well?⁴⁰

Wittgenstein dissolves the traditional epistemological riddles by exposing the function of the propositions that form the frame of our practice. We see why the epistemic

concepts (truth, falsity, etc.) cease to apply at the level at which our techniques for describing the world are determined. Wittgenstein provides a new understanding of what the absence of justification for Moore's truisms means. He shows that why in not supplying justification, we are not failing to do something that is needed. The possibility of sceptic's attack on ordinary empirical propositions of the frame on the one hand and the impossibility of our feeling the attack as a genuine threat on the other, shows that something is wrong with the way the problem is set up. These contrary facts reveal that we have misunderstood the nature of the judgements that form the frame of our practice and the nature of our certainty concerning them.

Notes

1. This is the sentence that Wittgenstein himself added to what Wisdom wrote about him as an entry for a biographical dictionary in 1944.
2. Wittgenstein, L. *Culture and Value*, P. 17.
3. Russell, B. *The Problems of Philosophy*, P. 6.
4. *Ibid*, P. 10.
5. Quine, W. *From a Logical Point of View*, P. 44.
6. *Ibid*, P. 18 (my emphasis).
7. When we discuss the function of mathematical propositions, we will criticize this view. It does not, anyhow, affect our present argument.
8. Wittgenstein, L. *On Certainty*, Secs. 401-2.
9. *Ibid*, Secs. 96, 98.
10. Schilpp, P. A. *The Philosophy of G. E. Moore*, PP. 346-347.
11. Wittgenstein, L. *On Certainty* Sec 468.

12. *Ibid*, Sec. 622.
13. *Ibid*. Sec. 243.
14. *Ibid*, Sec.250.
15. *Ibid*, Sec.312.
16. *Ibid*, Secs. 613-14.
17. *Ibid*, Sec. 155.
18. Wittgenstein, L. *Philosophical Investigations*, Sec. 241.
19. Wittgenstein, L. *On Certainty*, Secs. 111-112.
20. *Ibid*, Sec.116.
21. *Ibid*, Sec. 151.
22. Wittgenstein, L. *Remarks on Foundations of Mathematics*, P. 44.
23. *Ibid*, P. 82.
24. *Ibid*, P. 96.
25. *Ibid*, P.37.
26. Wittgenstein, L *Philosophical Investigations*, Sec. 199.
27. wittgenstein, L. *On Certainty*, Sec. 534.
28. *Ibid*, Sec. 136.
29. *Ibid*, Sec. 369.
30. *Ibid*, Sec. 370.
31. *Ibid*, Sec. 114.
32. *Ibid*, Sec. 359.
33. *Ibid*, Sec. 559.
34. *Ibid*, Sec. 94.
35. *Ibid*, Sec. 447.
36. *Ibid*, Sec. 340.
37. *Ibid*, Sec. 655-7.

38. *Ibid*, Sec. 343.

39. *Ibid*, Sec. 510.

40. *Ibid*, Sec. 456.

Chapter Two

Russell's Foundationalism

Russell developed his views and changed them throughout his long life. He wrote about seventy books, but I am particularly concerned with the four books which were published between 1910 and 1918 namely *Principia Mathematica* (1910 - 1913), *The Problems of philosophy* (1912), *Our Knowledge of the External World* (1914) and *The Philosophy of Logical Atomism* (1918). The first three works might be thought of as the background to Russell's philosophy of logical atomism and the problem setting context of the *Tractatus*. In *Principia* Russell tried to demonstrate that arithmetic can be reduced to logic; in other words, he tried to show that one can construct arithmetic out of simple logical concepts. *The Problems of Philosophy* is a book that appears to follow straight on from Hume:

Certainly the truest single thing that can be said about Russell's philosophy is that it stands in direct line of descent from Hume's.¹

The book starts with a theory of perception that is very much like Hume's. The

theory is that, what we perceive are not things like tables and chairs but what Locke called simple ideas and Russell following Moore called sense-data. Following the British tradition, Russell asks the old epistemological question: How on the basis of these sense-impressions do we arrive at physical objects? He is concerned to validate our knowledge claims in terms of sense-data. In *The Problems of Philosophy* he starts with sense data but he does not think that all scientific and common sense statements can be reduced to sensory statements. He adopts a causal theory according to which we may *assume* the existence of the physical world as *the best explanation* for our sensory experiences. In other words, he conceives of material objects as postulated entities, the existence of which explains our sense-data. In *Our knowledge of the External World*, on the contrary, he undertakes the logical construction of the 'external world' out of sense-data and unperceived sensibilia. In *The Philosophy of Logical Atomism*, he is under the influence of the young Wittgenstein. The theory of logical atomism is said to reflect the overall unity of Russell's thought.

We may notice that though Russell, in his challenge of scepticism is apparently under the influence of Hume, assimilating Russell's epistemology to Hume's would result in distortion of their thoughts. As we shall discuss shortly, in Russell's theory of knowledge abstract (non-mental, non-physical) entities are postulated to explain the possibility of any sort of assertion. They are invoked, in particular, to explain the truths of logic and mathematics. This is the theme that develops in Quine's epistemology, but we cannot find any trace of it in Hume. So, contrary to the view of David Pears that was quoted earlier, Russell's epistemology shares some elements with the tradition of British empiricism, but

differs from it in a substantial way.

In the following section, we will explain the traditional epistemological deadlock which was inherited and developed by Russell as the main context for the basically different reactions of Quine and Wittgenstein.

Russell's Epistemological Deadlock

The background to Russell's epistemological deadlock is the commonly shared orientation that pervades modern epistemology. It is the contrast between subject and object or the distinction between knowing mind and "the external world". Much of Descartes' philosophy is devoted to examining how to get *outside* the mind, how to establish grounds for belief in "the external world". The British empiricists start from the same subject-object dualism and the same psychological attitude in their epistemology. Berkeley shows that the mind is incapable of achieving any secure knowledge of an independent material world. According to Kant it is a scandal that philosophers cannot prove the existence of the 'external world'. Kant's solution to the epistemological riddle is a milestone in history of modern philosophy, but a careful examination shows that it is itself dominated by the same *subject-object dualism* and is guided by the same model. Kant's solution to the problem of knowledge rests on the distinction between what is given to the mind in the form of unordered data of sense and what the mind contributes, by imposing on the given as its *a priori* forms. So, in a way, the dualist approach of traditional epistemology continues in Kant. He shows

more deeply the difficulties of establishing a relation between ideas as the contents of mind and a world that exists beyond those ideas. The thing-in-itself is for ever unknown to him. Kant's epistemology raises a number of difficulties of its own. How can we give meaning to the very notion of a reality that is in principle unknowable?

Russell, following the British empiricists, concludes that we can be sure neither of the existence of "the external world", nor of its nature.

What can we learn by observation and experiment? Nothing, so far as physics is concerned, except immediate data of sense: certain patches of colour, sounds, tastes, smells, etc. with certain spatio-temporal relations. The supposed contents of the physical world are *prima facie* very different from these: molecules have no colour, atoms make no noise, electrons have no taste and corpuscles do not even smell. If such objects are to be verified it must be solely through their relation to sense-data. They must have some kind of correlation with sense-data, and must be verifiable through their correlation alone. But how is the correlation itself ascertained? A correlation can only be ascertained empirically by the correlated objects being constantly *found* together. But in our case, only one term of the correlation, namely, the sensible term, is ever found: the other term seems essentially incapable of being found. Therefore it would seem the correlation with objects of sense, by which physics was to be verified, is itself *utterly and for ever unverifiable*.²

We see that the thing-in-itself in Kant's philosophy is parallel to Russell's "physical object". The physical object is like noumenon, utterly and for ever unverifiable. ***This is the root of what we later on find in Quine as the myth of physical objects.***

If we follow Russell in the way he has set up the problem, then our search for an indubitable knowledge of "an independent external world" is a confusion. A world, completely independent of my mind, can by no means be inferred. The very notion of our knowledge of such a world is self-contradictory. But if Russell is defeated in his attempts to know even the existence of "the external world", this shows that there is something wrong with the way the problem is set up. We may abandon the very model, paradigm or set of presuppositions that lead to such an outcome. We discard altogether the very model on which the problem is conceived.

One may put the problem this way; for centuries epistemologists following Descartes, based knowledge on doubt. But how can everything be doubtful? Doubt is doubt, only in contrast with genuine knowledge, otherwise it would be meaningless. There is no external point from which to criticise the whole body of our beliefs; the only open way is an internal scrutiny. There may not be a first philosophy. Instead of epistemological riddles, as traditionally advanced, we clarify the language in which we talk about knowledge. Instead of asking whether it is possible to know the "external world" we take this knowledge for granted. The problem is not whether we can achieve knowledge of any sort. It is rather, to describe how we may go from crude beliefs to well-established ones and how we may distinguish sound from unsound beliefs. This is Quine's

reaction to Russell's foundationalism. As we shall see in chapter four, he reoriented and naturalized epistemology. In another front, Wittgenstein rejected Russell's foundationalism both in the *Investigations* and in his last work *On Certainty* which is unique in concentrating on epistemological issues. We will discuss these matters in chapter five.

Russell is sometimes called the father of analysis. He was not, however, concerned with the analysis of language but of something objective which is signified by language. He thought that when analysis terminates in simples or indefinables the task of the philosopher is 'to see clearly and to make others see clearly the entities concerned in order that the mind may have that kind of acquaintance with them which it has with redness or the taste of a pineapple'.³

In this way, He accepted an extreme form of platonist realism. He held that every significant expression stands for something. His ontology included not only material objects, but also relations, universals, classes, logical objects, etc.

Being is that which belongs to every conceivable term, to every possible object of thought -in short to every thing that can possibly occur in any proposition, true or false, and to all such propositions themselves. Being belongs to whatever can be counted. If A be any term that can be counted as one, it is plain that A is something, and therefore that A is. "A is not" must always be either false or meaningless. For if A were nothing it could not be said not to be; "A is not" implies that there is a term A whose being is denied and hence that A is. Thus unless "A is not" be an empty sound, it must be false - whatever A may be ,it certainly is.

Numbers, the Homeric gods, relations, chimeras and four dimensional spaces all have being, for if they were not entities of a kind we could make no propositions about them. Thus being is a general attribute of everything, and to mention anything is to show that it is.⁴

Russell had taken for granted that the linguistic expression of a proposition is a transparent medium through which we may see the real subject-matter of reflection which is a proposition. He thought the bearers of truth and falsehood were propositions, not sentences. He conceived of propositions as mind-independent, non-linguistic objects which contain not words but objective entities. He called these entities 'terms'. However, he later on abandoned the ontology of propositions. This change of view is manifested in the twelfth chapter of *The Problems of Philosophy*. He no longer held that a judgement is a dual relation between a person and a proposition, but rather a multiple-relation between a person and the constituents of a possible fact. He argued that false propositions are not objects and if there are no such entities as false propositions, then there are no such entities as true ones either. For, it cannot be that a true belief is a dual relation between a person and a proposition while a false one is a multiple relation between the person and the terms constituting the proposition. He held that the constituents of a judgement must be objects of acquaintance, but whether one judges truly depends on whether there is a fact to which one's judgement corresponds. He afterwards used the expression 'proposition' to refer to a linguistic entity.

Under the influence of the young Wittgenstein, Russell's conception of

analysis finally evolved into the metaphysics of logical atomism. In Russell's version of logical atomism we clearly see the impact of the earlier Wittgenstein, as Russell himself declares in the preface to his 1918 London lectures:

The following [course of lectures] are very largely concerned with explaining certain ideas which I learnt from my friend and former pupil Ludwig Wittgenstein.⁵

Logical Atomism

Russell adopted the term "logical atomism" to describe his theory of knowledge. It may be thought of as calling our attention to the overall unity of the main body of his epistemology.

The logic which I shall advocate is atomistic, as opposed to the monistic logic of the people who more or less follow Hegel. When I say that my logic is atomistic, I mean that I share the common sense belief that there are many separate things; I do not regard the apparent multiplicity of the world as consisting merely in phases and unreal division of a single indivisible Reality.⁶

According to Russell in a logically perfect language there will be one word and no more for every simple object. Every thing that is not simple will be expressed by a combination of words for the simple things. In such a language the words in a proposition would correspond one by one with the components of the corresponding fact.

Actual languages are not logically perfect in this sense and they cannot possibly be if they are to serve the purposes of daily life.⁷

Russell's theory of logical atomism is closely related to earlier Wittgenstein's picture theory of meaning. However, we shall see in the next chapter that Wittgenstein does not connect his version of logical atomism with factual discourse in the same way as Russell and though he is convinced that the connection could be made somehow, he never succeeds in making it. He believes that it would be made when the analysis of factual propositions has been taken further and elementary propositions has been discovered. Russell on the other hand, officially applies his logical atomism to sense-datum language.

There is a major procedural principle which is a characteristic feature of logical atomism. That is Occam's razor, which says : "Entities are not to be posited without necessity." Russell's project in any type of enquiry is to find the minimum number of premises, logical atoms and entities that might suffice for a complete and consistent account of the domain under investigation. No term belonging to the minimum vocabulary can be defined in terms of the other words.

All definitions are theoretically superfluous and therefore the whole of any science can be expressed by means of a minimum vocabulary for that science.⁸

The basic idea in Russell's adherence to Occam's razor is that in performing logical analysis, in explaining the meaning of any complex symbol, one should try to find out the minimum genuine constituents out of which, that complex is composed. In a perfect language, there will be two basic components. One of

these will be purely formal or syntactical. It will be constructed by the rules of formal logic ,i.e.,the logic of *Principia Mathematica*. The second component is the vocabulary to be used in connection with the subject matter of the specific domain under investigation. This is non-formal or non-logical component of an ideal language. Terms like "or","and" belong to the syntactical part of language and terms such as "red","Socrates" belong to the non-formal vocabulary.

In order to understand a sentence it is necessary to have knowledge both of the constituents and of the particular instance of the form. It is in this way that a sentence conveys information, since it tells us that certain known objects are related according to a certain known form.⁹

It is assumed that the formal questions are satisfactorily dealt with in the logical symbolism set forth in *Principia Mathematica*. So the principal questions for a theory of meaning are directed to the vocabulary of a reconstructed language. The problem is to specify a criterion for establishing the meanings of our non-formal vocabulary. An expression must be either analyzable into a set of terms that are simple or be itself a simple, unanalysable term. Certain features of the philosophy of logical atomism can be seen in Moore's method of analysis:

My point is that "good" is a simple notion, just as "yellow" is a simple notion; that, just as you cannot, by any manner of means, explain to anyone who does not already know it, what yellow is, so you cannot explain what good is. ...You can give a definition of a "horse",because a horse has many different properties and qualities, all of which you can enumerate. But when you have

enumerated them all, when you have reduced a horse to his simplest terms, then you can no longer define those terms...But yellow and good, we say are not complex: they are notions of that simple kind, out of which definitions are composed and with which the power of defining ceases.¹⁰

On Russell's view every simple expression to which analysis leads, if it is going to be meaningful, must designate some real entity. Nowhere in the *Tractatus* Wittgenstein undertook to specify the nature of "the simples". Russell, on the contrary, was influenced by the tradition of British empiricism and his orientation in that way provided the '*epistemological filling*' for his logical atomism. In addition to that Russell adhered, as we discussed earlier, to an extreme form of Platonist realism. He held that among the simples of every atomic proposition, we have to refer to some abstract entity, some universal.

It will be seen that no sentence can be made up without at least one word which denotes a universal.¹¹

To appreciate fully the criteria for determining the meaning of a non-formal expression in a perfect language, we should understand Russell's distinction between *knowledge by acquaintance* and *knowledge by description*.

We shall say that we have *acquaintance* with anything of which we are directly aware, without the intermediary of any process of inference or any knowledge of truths. Thus in the presence of my table I am acquainted with the sense-data that make up the appearance of my table -its colour, shape, hardness, smoothness, etc.; all these are things of which I am immediately conscious

when I am seeing and touching my table. The particular shade of colour that I am seeing may have many things said about it - I may say that it is brown, that it is rather dark and so on. But such statements, though they make me know truths *about* the colour, do not make me know the colour itself any better than I did before: so far as concerns knowledge of the colour itself, as opposed to the knowledge of truths about it, I know the colour perfectly and completely when I see it, and no further knowledge of it is even theoretically possible. Thus the sense-data which make up the appearance of my table are things with which I have acquaintance, things immediately known to me just as they are.¹²

Russell claims that in addition to sense-data there are other examples of things known by acquaintance. Among particulars known by acquaintance are those given through memory and introspection. The immediate knowledge by memory is the source of all our knowledge concerning the past, even the existence of the past. When I desire food, "my desiring food" is an object with which I am acquainted. This kind of acquaintance which is called self-consciousness is the source of all our knowledge of mental things. According to Russell, we have knowledge by acquaintance not only of particulars but of universals.

So, our perfect language has two components: vocabulary and syntax. The syntax is provided by *Principia Mathematica*. The language set forth in *Principia Mathematica* is completely formal without any vocabulary - without any intendment of matter. If we add non-formal vocabulary to it, it will be a perfect language. This non-formal vocabulary - the second component of the ideal

language - is discussed in Russell's account of the distinction between knowledge by acquaintance and knowledge by description.

There are some entities, whether particular or universal, of which we have knowledge by acquaintance. There are also, entities that we know by description. We have two types of description: definite and indefinite or ambiguous. By a description Russell means any phrase of the form "a so and so" or "the so and so". His main interest is with the latter form. The use of the word "the" in the case of a definite description implies that there is one object and no more, having a certain property; like "the author of waverly" or an abstract object like "the least prime number". If we are going to establish that a supposed definite description describes an actual entity, the only way is to rely on knowledge by acquaintance, in other words, it is necessary, according to Russell, to come down at some point from the level of description to the level of acquaintance. There are various stages in the removal from acquaintance with particulars: there is Quine known to himself, to people who know him personally, to those who know of him through his works. When we have a description like "the longest lived man", we know nothing beyond what is *logically* deducible from definition of the man. Russell maintains that there is a similar hierarchy in the region of universals.

Theory of Definite Descriptions

Russell's Theory of Definite Description first appeared in "*On denoting*" in 1905 and various refinements of it were worked out by Russell in *Principia Mathematica*, *The philosophy of Logical Atomism* and *An Introduction to Mathematical Philosophy*. F. P. Ramsey once characterised it as "The paradigm of philosophy".¹³ This theory points the way to solving certain problems in semantics and ontology. It reduces the number of one's ontological commitments and hence carries out Russell's goal in his adherence to Occam's razor. According to Russell, it shows the great power of the techniques of analysis and the merits of symbolic logic as a tool in solving philosophical problems.

Consider the proposition "A differs from B". If this is true, there is a difference between A and B, which fact can be expressed in the form "the difference between A and B subsists."¹⁴ But if it is false that A differs from B, then there is no difference between A and B, which fact may be expressed in the form "the difference between A and B does not subsist". But how can a non-entity be the subject of a proposition?...Hence, it would appear, it must always be self-contradictory to deny the being of anything...Thus if A and B do not differ, to suppose either that there is, or that there is not, such an object as "the difference between A and B" seems equally impossible.¹⁵

How can a non-entity be the subject of a proposition? It seems that it would be self-contradictory to deny the being of anything. So Meinong and his followers differentiate between existence and subsistence. This puzzle is generally known as the problem of negative existential statements. It was from this sort of ontological view that Russell sought to free himself by means of the *Theory of Descriptions*. Not only the dominance of the platonist realism is clear in Russell's thought, we also find a version of it in Quine's reoriented epistemology - as we shall see in chapter four.

Russell, when in prison in 1919, speaks of "a robust sense of reality" . He claims that logic must no more admit a unicorn than zoology does. To say that unicorns have an existence in literature or imagination is a paltry evasion. What exists in literature is not an animal made of flesh and blood, moving and breathing of its own initiative.

Similarly to maintain that Hamlet for example exists in his own world, namely the world of Shakespeare's imagination, just as truly as (say) Napoleon existed in the ordinary world is to say something deliberately confusing or confused to a degree which is scarcely credible. There is only one world, the "real" world: Shakespeare's imagination is part of it and the thoughts that he had in writing Hamlet are real ...A robust sense of reality is very necessary in framing a correct analysis of propositions about unicorns, golden mountains, round squares and other such pseudo-objects.¹⁶

Russell's Theory of Descriptions is best understood against the background of

Frege's works. Frege makes a fundamental distinction between proper names and predicate expressions. Russell adopts this distinction but he uses it for his own purposes. We should not be misled into thinking that Russell's acceptance and use of this broad distinction is precisely the same as Frege's. In Frege's case it is connected with another distinction - that between sense and reference. Russell does not accept Frege's distinction between sense and reference in the treatment of the meaning of singular terms (equivalent to Frege's use of the term "proper name" which includes both our ordinary use of proper names and definite descriptions). *Contrary to Frege, Russell distinguishes proper names from definite descriptions.* He equates the meaning of a proper name with its denotation. According to him definite descriptions do not function like names. They are "incomplete symbols" and do not have any meaning in isolation from the context of a sentence. If Russell had accepted Frege's distinction between sense and reference, he would have recognized the use of singular terms (descriptions and proper names) even though they lacked a referent. Then he would have had to accept a realm of designata for all of them. But Russell seeks to reduce the number of entities in his ontology, to depopulate that realm by eliminating certain expressions altogether from the category of singular terms. This is one of his motivations in developing the Theory of Descriptions. We decompose (analyse) a definite description into several components. These components will perform different logical or semantic roles in the sentence into which they will be rearranged. We will see then, that a definite description does not need a denotation at all. In doing this we *decrease the excesses of a Meinongian ontology, which Frege continued to hold.* The main technique of the

Theory of Descriptions consists in rewriting the sentence, so that the definite description that appears in the original sentence as a *complete singular referring expression* disappears. In this way we bring out the true logical form of the main sentence. We end up with some new predicate expressions, but these are in Russell's terminology *incomplete symbols* (Frege called them "unsaturated expressions".) As incomplete symbols, they are *propositional functions* - expressions with argument places. Once supplied with arguments the propositional functions are transformed into propositions and then, they can be either true or false.

Thus, "The present king of France is bald" is analysed:

$$(\exists x)[Fx \ \& \ (y)(Fy \rightarrow x=y) \ \& \ Bx]$$

That is to say: "There is someone who (1) is the king of France and (2) nobody else is so and (3) he is bald". Now predicate expressions "is bald" and "is the king of France" are incomplete symbols or propositional functions.

Again, "The golden mountain does not exist" is analysed:

$$\sim (\exists x)(Mx \ \& \ Gx)$$

The expression "the golden mountain" is not to be taken as a denoting phrase, nor is "does not exist" to be taken as a predicate.

I confess that until I hit upon the theory of descriptions this [Meinong's] argument seemed to me convincing. The essential point of the theory was that although "the golden mountain" may be grammatically the subject of a significant proposition, such a proposition when rightly analysed no longer has such a subject.¹⁷

In the above sentence "does not exist" appears as a grammatical predicate. But Russell adopts the view that existence is not a predicate that can be meaningfully denied or affirmed, and chooses the use of existential quantifier as conveying the notion of existence. This idea is later on adopted and developed by Quine.¹⁸

There is a vast amount of philosophy that rests upon the notion that existence is, so to speak, a property that you can attribute to things, and that the things that exist have the property of existence and that the things that do not exist do not. *That is rubbish*, whether you take kinds of things or individual things described. When I say, e.g., "Homer existed" I am meaning by "Homer" some description, as the author of the Homeric poems¹⁹

According to the law of excluded middle, of two contradictory statements one must be true. Both cannot be false. Either "The present king of France is bald" or "The present king of France is not bald". Yet if we enumerated the things that are bald and the things that are not bald we will not find the present king of France in either list. The Theory of Descriptions is put forward to solve this puzzle. In order to argue that this is a serious puzzle we should assume that both statements are false.

Peter Strawson argues that Russell's account of the matter as a whole is incorrect. Instead of saying, with Russell, that the statements "The present king of France is bald" and "The present king of France is not bald" are each false, it is more appropriate to say that neither statement can be meaningfully asserted. To make such a statement and allow for an appraisal of its truth, it is

necessary to *presuppose* that there is a referent for the expression "the present king of France". If this presupposition is denied, the sentence is not a genuine statement.²⁰ Strawson's argument seems to be convincing, but one could say that he forgets Russell's intention. Russell is here diametrically opposed to Frege. He wants to depopulate the realm of accepted entities, to decrease his ontological commitments - a theme which later on continues in Quine's philosophy.

Another puzzle put forward by Russell in his paper "*On Denoting*" has to do with the question of how to interpret a definite description used in an identity statement.

If a is identical with b, whatever is true of one is true of the other, and either may be substituted for the other in any proposition without altering the truth or falsehood of that proposition. Now George IV wished to know whether Scott was the author of *Waverly*; and in fact Scott was the author of *Waverly*. Hence we may substitute Scott for "the author of *Waverly*" and thereby prove that George IV wished to know whether Scott was Scott. Yet an interest in the law of identity can hardly be attributed to the first gentleman of Europe.²¹

Scott is the author of *Waverly*.

Or in the language of Symbolic Logic, we have:

$$(\exists x)[Wx \ \& \ (y) (Wy \rightarrow \ x=y) \ \& \ x=s]$$

There is an x, that x wrote Waverly and that for all y if y wrote Waverly then y is identical with x and x is Scott.

The puzzle about George IV's curiosity is now to have a very simple solution. The proposition "Scott was the author of Waverly" which was written in its unabbreviated form in the preceding paragraph does not contain any constituent "The author of Waverly" for which we could substitute "Scott".²²

For Russell a definite description is an incomplete symbol, its meaning is not to be found by considering it in isolation, as designating an object in the way a name does, but only by seeing how the linguistic components into which it gets analysed, contribute to the logical structure of the sentence as a whole.

Proper Names

Russell speaks of an ordinary proper name as a complete symbol which has a meaning consisting of its denotation. This is contrasted with a definite description:

You sometimes find people speaking as if descriptive phrases were names, and you will find it suggested, e.g., that such propositions as "Scott is the author of Waverly" really asserts that "Scott" and "The author of Waverly" are two names for the same person. That is an entire delusion...There are only two

alternatives. If "c" is a name, the proposition "Scott is c" is either false or tautologous. But the proposition "Scott is the author of Waverly" is neither, and therefore is not the same as any proposition of the form "Scott is c" , where "c" is a name. That is another way of illustrating the fact that *a description is quite a different thing from a name.*²³

On the face of it, this paragraph, shows that according to Russell descriptions and ordinary proper names are utterly different. But, opposing Frege, Russell's intention in this context is only *pedagogical*. That is not to be taken as a thorough analysis of the nature of proper names. If we want to display the meaning of a proper name, we must translate it into the definite descriptions with which it may be equated. Only by so doing we can avoid for example the paradox of using an ordinary proper name in a negative existential statement.

The names that we commonly use, like "Socrates" are really abbreviations for descriptions; not only that but what they describe are not particulars but complicated systems of classes or series. A name in a narrow logical sense of the word whose meaning is a particular, can only be applied to a particular with which the speaker is acquainted, because you cannot name anything you are not acquainted with²⁴

Any ordinary proper name, should be replaced, for the purpose of logical analysis, by a definite description.²⁵This would be the case not only for ordinary proper names for which there are no denotations (e.g., Zeus), but for ordinary proper names where we are quite confident of their denotations (e.g., Socrates).

In each case we should replace the ordinary proper name with a definite description and treat it as an incomplete symbol. If for Russell, ordinary proper names are only disguised definite descriptions, are there any proper names that are not so reducible? Russell's reply to this question is positive. He calls these genuine proper names, "*logically proper names.*" Here, his conviction is based on his epistemological view that all descriptions, if meaningful, must rest upon data, which are known immediately by acquaintance. A typical example is provided by a sense-datum. It is had by a particular person at a particular moment of his experience. He can point to this datum by a demonstrative like "this". A logically proper name functions as a pure demonstrative and has *only a denotative role*, it has *no connotations*. It does not express any properties and has no latent predicative components. It just *indicates* something, but *does not describe* anything either explicitly or implicitly. In short, a logically proper name designates *something simple*.

The only words one does use as names in the logical sense are words like "this" or "that". One can use "this" as a name to stand for a particular with which one is acquainted at the moment. We say "This is white". If you agree that "This is white", meaning the "this" that you see, you are using "this" as a proper name. But if you try to apprehend the proposition that I am expressing when I say "This is white", you cannot do it. If you mean this piece of chalk as a physical object, then you are not using a proper name. It is only when you use "this" quite strictly, to stand for an actual object of sense, that it is really a proper name. And in that it has

an odd property for a proper name, namely that it seldom means the same thing two moments running and does not mean the same thing to the speaker and to the hearer. It is an *ambiguous proper name*, it is really a proper name, all the same, and it is almost the only thing I can think of that is used properly and logically in the sense that I was talking of for a proper name.²⁶

We argued that, Russell's conception of analysis was rooted in a Platonist realism which evolved into the metaphysics of logical atomism. Russell conceived of language as a calculus of strict rules. Expressions in a language were thought to be either definable by analytic definitions or indefinable. Indefinable expressions were thought to be linked to objects in reality by ostensive definition. These objects were regarded as the ultimate constituents of facts.

But, as we shall see in chapter five, it is a mistake to think that ostensive definition links language to reality, because a sample belongs to grammar. It does not constitute the foundation of language. The idea that there are simple indefinable names linked to objects in reality by mental acts of meaning is a misconception of what is involved in meaning something by a linguistic expression.

On the other hand, in *Principia Mathematica* Russell tried to reduce mathematics to logic with the intention of establishing a solid foundation for mathematics. But, there is nothing to be gained by reducing mathematics to logic. Russell's foundationalism in mathematical philosophy, as we shall discuss in the penultimate chapter is confused:


What does mathematics need a foundation for? It no more needs one, I believe, than propositions about physical objects - or about sense-impressions, need *analysis*. What mathematical propositions do stand in need of is a clarification of their grammar, just as do those other propositions.²⁷

The driving force behind all these efforts was Russell's epistemological orientation - his desire to establish firm foundations for knowledge. He regarded Cartesian methodological doubt as the essence of philosophy.

Russell's theory of descriptions showed that the grammatical form of an expression may conceal the 'logical form' of the proposition expressed. This had far reaching implications for his conception of logical analysis. Analysis became an instrument for the uncovering of true logical forms of propositions. When Russell invoked the notion of 'fact' instead of proposition, he said that the world is composed of facts and argued that the main task of philosophy is the investigation of the logical forms of the facts of the world. In this way, he thought that the technical apparatus of mathematical logic is the tool of analysis, enabling him to penetrate the misleading feature of ordinary grammar and get to the true structure of the world. Although the theory of description could be regarded as an inter-linguistic operation of sentential paraphrase, Russell considered it as an investigation of the logical structure of reality. As discussed earlier, he used it to reduce his ontological commitments. It strengthened his adherence to the principle of Occam's razor that entities should not be multiplied beyond necessity. In this way, Russell's theory of definite descriptions, combined with his distinction between knowledge by acquaintance and

knowledge by description, made reductive and constructive analysis a powerful tool in *epistemological investigations*.

Russell bargains away the logical necessity

According to the multiple relation theory of judgement, judging is a relation between a person and the constituents of his judgement and their *logical form* i. e., the way these constituents are united. Otherwise there would be no way to distinguish between the judgement that $a R b$ from the judgement that $b R a$. The form of a judgement is identical with the form of the fact that makes it true. Russell thought that forms are themselves entities with which the mind is acquainted. If we replace all the names of particulars, properties and relations in a proposition by real variables we are left with an expression of a pure form, which is a wholly general judgement. Russell could see no essential difference between the judgements of this kind and judgements of logic. He He thought  that logic is concerned with the most general facts of the world. We understand the logical terms such as 'universal', 'dual complex', etc. by means of logical experience or logical intuition which is acquaintance with the logical objects universal, dual complex, etc. Acquaintance with these objects is a prerequisite for understanding the general propositions of logic.

In this way, *Russell's conception of logic as the science of the general, bargained away the necessity of logical propositions*. He gave up the necessity of logical propositions to obtain for them a subject-matter. He thought of

propositions of logic as the most general truths of the world, but if they have a factual content, then they are accidental and contingent. So, Russell could not give a coherent account of the necessity of propositions of logic. We will see in the following chapter that according to Wittgenstein logical tautologies say nothing about the world.

Russell axiomatized logic. The theorems of logic are, in his view, deducible from the axioms by means of stipulated rules of inference. In *Principia*, he argued that the primitive propositions must be *assumed* without proof. They *seem* self-evident, but so are many propositions which are disproved by their contradictory consequences.²⁸ So, he concluded that the proof of a logical system is its adequacy and coherence. Self-evidence is no guarantee of truth, rather the axioms get inductive support from their consequences.



In fact, self-evidence is never more than a part of the reason for accepting an axiom and is never indispensable. The reason for accepting an axiom, as for accepting any other proposition, is always largely inductive, namely that many propositions which are nearly indubitable can be deduced from it and that no equally plausible way is known by which these propositions could be true if the axiom were false and nothing which is probably false can be deduced from it.²⁹

In the *Problems of Philosophy*, he argued by contrast that, the axioms of logic are self-evident. We have intuitive knowledge of them and they may be taken as quite certain. He thought that his earlier view in *Principia* confuted the

necessary and contingent truths. Nevertheless, *he continued to conceive of the laws of logic as the general truths about the ultimate logical forms of reality*. He said, the point is not that we think in accordance with these laws, but that *things* behave in accordance with them.³⁰ They provide the foundations for prescriptive norms of thinking.

As we will see in the next chapter, according to the *Tractatus* logic is *flat*. All judgements of logic are at the same level; saying the same thing, namely nothing. Logical propositions are not related to logical axioms as the theorems of geometry are related to geometrical axioms. Being tautologies, they can be shown to be true independently of any axioms. Unlike the propositions of geometry, logical propositions are not conventions of symbolism. In other words, their truth is based only on their structure - a tautology is unconditionally true. *So, it does not make sense to axiomatize logic with the intention of establishing the truths of logic on the basis of certain axioms as their foundations.*

Russell also misconceived the relation between language and logic. He thought that natural languages are defective, both in syntax and vocabulary. As vehicles of communication they are useful for the daily tasks that they fulfil. But, as a guide to the ultimate structure of reality they are misleading; representing properties of properties in the same form as properties, employing denoting expressions with the grammatical form of singular referring expressions, etc. With respect to the vocabulary, they are logically defective both in containing vague terms and in failing to represent the subject-matter of the truths of logic. So, he thought that natural languages should be replaced by the logically perfect language of the *Principia*. *But, logic is the condition of sense*. There can be no

such thing as an illogical language. If a sign expresses a sense at all, then it is in good logical order. 'All the propositions of every day language just as they stand, are in perfect logical order.'³¹ As we shall see in the following chapter, the propositions of logic have no subject-matter.

In this chapter we expressed Russell's epistemological deadlock and commented that his notion of 'physical object' is parallel to Kant's *noumenon*. This is the root of what we later on find in Quine as the *myth of physical objects*. Then we explained Russell's logical atomism as the main body of his epistemology. In his earlier work, Wittgenstein appealed to the theory of logical atomism, but this whole epistemological approach which is based on the Augustinian conception of language is refuted in Wittgenstein's later philosophy as we shall see in chapter five.

Notes

1. Pears, D. *Bertrand Russell*, P. 268.
2. "The relation of sense-data to physics", in *Mysticism and Logic*, P.140.
3. *Principles of Mathematics*, P. xv.
4. *The principles of Mathematics*, P. 449.
5. Pears, D. (ed.) *Russell's Logical Atomism*, P. 31.
6. Marsh, R.C. (ed.) *Logic and Knowledge*, P.178.
7. *Op. Cit.*, P. 198.
8. Schilpp, P.A. *The Philosophy of Bertrand Russell*, P.14.
9. Russell, B. *Our Knowledge of The External World*, P. 53.

10. *Principia Ethica*, Sec. 7.
11. Russell, *The Problems of Philosophy*, P. 53.
12. *Op. Cit.*, P. 25.
13. Ramsey, F. P. *The Foundations of Mathematics*, P. 263.
14. "Subsistence" as opposed to "existence" usually means possible being contrasted with actual being. According to some philosophers, there is a hierarchy in levels of being and *subsistence* belongs to a deeper level than *existence*. It seems that, in Russell's view, *being* is divided into *subsistence* and *existence*. This point is made clear in the next page.
15. "On Denoting" in *Logic and Knowledge*, P.48.
16. *Introduction to Mathematical Philosophy*, PP.169-170.
17. *My Philosophical Development*, P. 64.
18. See chapter four.
19. *Logic and Knowledge*, P. 252.
20. Strawson, F. P. *On Referring*, Mind, 1950.
21. "On Denoting", in "*Logic and Knowledge*", PP. 47-48.
22. *Logic and Knowledge*, PP. 51-52.
23. *Op. Cit.*, PP. 244, 245-246 (emphasis mine)
25. *Op. Cit.*, PP.200-201.
25. This idea is taken up and expanded by Quine. See chapter four.
26. *Logic and Knowledge*, P.201.
27. Wittgenstein, L. *Remarks on the Foundations of Mathematics*, Third Edition, P. 378.
28. *Pincipia Mathematica*, Vol I, P. 12.
29. *Ibid*, P. 59.
30. *The Problems of Philosophy*, P. 40.
31. *Tractatus*, 5.5563.

Chapter Three

The Picture Theory of the *Tractatus*

In the last chapter we discussed Russell's theory of logical atomism which continues, in Wittgenstein's earlier work. Both Wittgenstein's version of logical atomism and Russell's account of the matter presuppose the Augustinian conception of language which continues to lie behind the naturalized epistemology of Quine, but is finally repudiated in Wittgenstein's later philosophy.

In the preface to the *Tractatus*, Wittgenstein acknowledged his debt to both Frege and Russell. They provided part of the background, out of which Wittgenstein developed his thought. Although the problems with which Wittgenstein was concerned in the *Tractatus* were put forward by Frege and Russell, Wittgenstein denied that any of them could understand the book.

I am afraid you haven't really got hold of my main contention....I also sent my MS to Frege. He wrote me a week ago and I gather that he does not understand a word of it all.¹

We are inclined to take language for granted. Wittgenstein's questions have the

same naïve, fundamental quality of Newton's famous questions. Newton asked seriously, why planets did not charge off in all directions. Wittgenstein asks how is it possible to use language for describing the world? What is the relationship of language to the world? He says in the *Tractatus* that language represents the world by depicting it.

The *Tractatus*, as its full title shows is a work in philosophical logic. It is concerned to draw a demarcation between legitimate and illegitimate uses of language - to draw the line at which sense ends and nonsense begins. The key to understanding the *Tractatus* is the picture theory of meaning. The sentence is in a sense, like a picture of a possible fact. As the elements in a picture correspond to objects in the world and the arrangement of the elements corresponds to a possible arrangement of objects in reality; in the same way, sentences contain names which correspond to objects and the arrangement of names in them represents a possible arrangement of things in the world. If we follow Russellian scepticism, we will conclude that we can neither know the existence, nor the essence of "the external world". But, if we *accept* this mirroring hypothesis, we can read it in the other direction. We can find out the structure of the world by analysing the structure of the language. However, Wittgenstein does not regard it as a hypothesis. He thinks that it could not be otherwise and for this reason he does not defend it. He is captivated by the picture theory as a *dogma*, at this stage of his thought. He says that unless language mirrors reality in some way, it would be impossible for sentences to mean.

The fundamental unit of meaning is not the word, but rather the sentence.

The word has meaning, only, in the context of a sentence. It is the one-to-one correspondence between names in an elementary statement and objects in an elementary fact and also the identity of their structures that makes meaning possible. This picturing relationship cannot itself be pictured - it cannot be represented in language. Nothing can be said about the point at which the connection between language and reality is established. It can only be shown. The whole book has an essential message and that is to draw the limits of what may intelligibly be said. What cannot be said must be passed over in silence.

The programme of finding out what the legitimate uses of language are, had the implied result of rejecting unintelligible uses of language. This followed from the idea that *language is pictorial in character*. Wittgenstein said "This is the essence of language". This conviction put serious constraints on language. Ethics, aesthetics and religion were transcendental. Because, they do not deal with facts whereas the function of language is mirroring facts. According to the picture theory of meaning, we have a three-fold analysis of statements: true, false and meaningless. When we utter a sentence about the world, we arrange names together in a way which corresponds to a possible arrangement of things in the world. If that arrangement is actualised, then the statement is true, otherwise false. If the names are arranged in a way in which it is impossible for things in the world to be arranged, then the statement is meaningless. Now, what about a negative statement, corresponding to which, no fact exists? When I say that "there is not a dog in the room", the sentence is clearly meaningful, but what kind of picture is the absence of a dog? Is it different from the absence of a cat? Wittgenstein says that logical constants are not part of the mirroring

relationship, in other words they do not represent. What the logical words do is to express the truth-functional relationships among elementary propositions. Meaningful discourse about the world can be analysed into elementary propositions which picture possible states of affairs and these propositions are linked together by logical constants, which are not themselves pictorial. The picture theory of meaning is at the same time an account of the nature of thought. For, what cannot be stated cannot be thought either. Thinking is a kind of language.

To say that a state of affairs is conceivable - thinkable - means that we can make a picture of it.²

So, according to the account of meaning given in the *Tractatus*, there is a strict demarcation between meaningful or fact-stating language and other parts of language which are nonsense. By these parts of language, we try to say something about the most important questions of life but we fail. They are *ineffable*. We cannot say anything meaningful about them. Ethics, aesthetics and religion are all in the realm of the unsayable and are the most important things. Wittgenstein once said that the really important part of the *Tractatus* is the part that is *left out*.

This whole theory of meaning presupposes an ontology. According to it, the world must ultimately, consist of simple objects. That is what he says at the beginning of the *Tractatus*, which is supported later on by the thesis that language has to have a definite sense and it can be so only if it has a certain mirroring structure. The essential feature of the doctrine of what can be said, is that *nothing can be said about the relation of language to the world. This is the*

paradox of the Tractatus. Therefore he says: "Anyone who understands my propositions will eventually recognize that they are senseless". We must conceive his remarks as a ladder on which we mount to a certain level of understanding and then we kick it away.

Wittgenstein is, of course, stimulated by Frege and Russell, but he does not follow in their footsteps. He adopts some key suggestions of them for his own purposes. For example, he adopts Frege's distinction between sense and reference and this dictum plays a fundamental role in his earlier system of thought. He agrees with Frege in claiming that the sense of a sentence is the way in which the truth-conditions of that sentence are specified, but contrary to Frege Wittgenstein claims that only sentences have sense; names do not. A name is not a picture of the object it stands for and therefore a name says nothing. It just points to the object.

Tractatus, 3.3 Only propositions have sense, only in the nexus of
a proposition does a name have meaning.

It is because we know how to use names, in sentences that we can use them in non-sentential settings (e.g., as a label). For Wittgenstein a sentence does not have as its referent *Truth* or *Falsity* in a Platonic realm, as Frege maintained. Frege distinguished names from conceptual words and relation expressions. Under the heading of "names" (singular terms) he included both ordinary proper names and definite descriptions. On Wittgenstein's view neither ordinary proper names nor definite descriptions are logically proper names. As discussed in the last chapter, *Russell adopts an epistemological approach to proper names but Wittgenstein's approach is semantical*. A name in Wittgenstein's view is

something logically simple. It cannot be defined. What a proper name stands for is *an object which is metaphysically simple. It cannot be decomposed.* Wittgenstein's logical atomism is correlated with his ontological atomism.

Tractatus, 4.221 It is obvious that the analysis of propositions must bring us to elementary propositions which consist of names in immediate combination.

Wittgenstein claims that "names" stand for simple objects and appear only in elementary propositions. This claim is purely *a priori* and he does not give any instance of it. The assumption that there are such primary elements of reality namely, "objects", is *metaphysical*.

But, in the *Tractatus* Wittgenstein has assumed that the terms "*simple*" and "*complex*" have an absolute sense. In his later work he destroys this *absolutism*. He shows by numerous examples that one and the same thing can be regarded as simple or complex depending on the decisions that one makes for a particular purpose.

What are the simple constituents of a chair?- the bits of wood of which it is made? or the molecules or the atoms? - "simple" means: not composite. And here the point is: *in what sense "composite"?* *It makes no sense at all to speak absolutely of the 'simple parts of a chair'*³

If a chair was built out of little pieces of wood glued together, we might be inclined to call these pieces the simple parts of the chair. For some scientific purposes you might say that the molecules composing these little pieces of wood were elements of the chair. In a bakery loaves of bread are sliced before being

wrapped and sold. A loaf is said to be composed of, say, twelve slices, but in another connection and for a different purpose a loaf is said to be composed of flour, milk, sugar and salt. In his brilliant discussion in section 47 of *Philosophical Investigations* Wittgenstein refutes the conception of simple elements of reality which was advanced in the *Tractatus*.

The Mystical

We may now discuss the negative aspect of the picture theory of meaning. This will steer us towards the difficulties which led Wittgenstein to his later philosophy. What Wittgenstein says in the *Tractatus* about the border-line between sense and nonsense, cannot be factual. It does not fall under his theory of necessary truth either. Nevertheless it purports to give the essence of language. It is a boundary statement. The boundary of language like the boundary of our field of vision is something that we cannot see. Wittgenstein is a complex and many-sided figure. Quite contrary to the logical positivists, he passionately believes that all that really matters in human life is what we should be silent about. This is his fundamental *mystical* orientation to life and to the world.

My work consists of two parts: The one presented here plus all that I have not written. *And it is precisely this second part that is the important one.* My book draws limits to the sphere of the ethical from the inside as it were and I am convinced that this is the only rigorous way of drawing those limits. In short, I believe

that where many others today are just gassing, I have managed in my book to put everything firmly in place by being silent about it⁴.

The expression "limit " in its literal sense means a physical boundary, but when Wittgenstein says ; " the limit to language", "the world as a limited whole" or "the limit to thought", the term should not be taken literally. It would be a fundamental mistake to think of two worlds separated by a boundary. There is only one world and one domain of meaningful discourse. In other words, Wittgenstein uses the term "world" in an ontological sense, not a cosmological one. The limit of language cannot be formulated within language. It is not a proposition in language. We display the limits of what can be said in language, but in doing so we are not using language to give a description of some particular matter of fact - to give factual information.

The main point is the theory of what can be expressed by propositions i. e., by language (and which comes to the same, what can be thought) and what cannot be expressed by propositions but only shown: *which I believe is the cardinal problem of philosophy.*⁵

He says again:

Tractatus, 6.522 There are indeed things that cannot be put into words. *They make themselves manifest.* They are what is mystical.

We may explain the point by means of some examples:

A proposition has a *logical form*, which is exhibited in the way, the words that compose it are related to one another. *The form is not itself another sign*

or element among the signs that compose the total propositional sign. It cannot be represented by a sign of some kind in the proposition. It can only be shown or displayed.

We may notice that, if language is a picture, then *formal* concepts like "fact", "function" and "name" do not picture anything. For this reason, they are labelled ***pseudo-concepts***. These *formal* concepts are only shown in genuine propositions.

If we had a set of completely analysed *genuine* propositions, then in that set, the formal concepts would *not* be explicitly mentioned or talked about. They would be shown in the use of other expressions. We may equate formal concepts with variables of different types. Then each variable (name, object, fact, function, etc.) is defined by its distinctive range of significance i.e., what can serve as argument for it. The use of any expression as an argument for a variable implicitly shows the type of that variable. It would be a misuse of the logic of language to treat a variable (a formal concept) as one of its own arguments. *This is Wittgenstein's version of theory of types*. This kind of logical mistake (treating formal concepts as their arguments) appears in all pseudo-propositions of previous philosophers. There is a confusion in these pseudo-propositions between form and content.

Describing the *Tractatus* Wittgenstein says:

"The book's point is an ethical one."⁶

And he says again :

Tractatus, 6.421 It is clear that ethics cannot be put into words.

Ethics is transcendental.

Tractatus, 6.42 It is impossible for there to be propositions of ethics.

Tractatus, 6.41 In the world everything is as it is, and everything happens as it does happen: in it no value exists.

What can we make of these statements? It is not only the facts of physics but also the facts of psychical research (emotions, etc.) that are independent of value. Of course, for Wittgenstein, ethics is not concerned with analysing or justifying certain rules of conduct. He is not concerned with what we should do. In the *Tractatus* as in the *Lecture on Ethics*, Wittgenstein takes questions about value together with questions about the meaning of life. ✱

Tractatus, 6.52 We feel that even when all *possible* scientific questions have been answered the problem of life remains completely untouched.

Ethics, aesthetics and the meaning of life cannot be put into words. The sense of life cannot be stated, it only shows itself. The heart of ethics, for Wittgenstein, is "*the problem of life*". What is the meaning of life? What makes life worth living? The term "life", here does not refer to biological, psychological or even social dimensions of the phenomenon that is normally meant by it.

I regard it as very important to put an end to all the chatter about ethics - whether there is knowledge in ethics, whether there are values, whether the good can be defined, etc. In ethics one constantly tries to say something that does not concern and can never concern the essence of the matter.⁷

According to Wittgenstein, in order to deal with the problem of the meaning of life

from an absolute ethical point of view, one must ignore life altogether - his own or that of anyone else. The life whose meaning Wittgenstein is concerned with cannot be explained *scientifically*. The search for the meaning of life has nothing to do with *semantic* matters either. If you were to ask "In what sense of 'meaning' are you using the term, when you speak of searching for the meaning of life?" Wittgenstein could not answer your question. He is concerned with the metaphysical *I*. It is not an object of any kind situated in the world along with other objects. ✂

This is the Schopenhauerian aspect of Wittgenstein's earlier philosophy. It is alluded to as Wittgenstein's whistling. Ramsey says: "But what we can't say we can't say and we can't whistle it either"⁸, by which he means that we cannot put it into words. ↓

The outstanding example is the notion of philosophy itself. Philosophical propositions are nonsense, because they do not depict any fact. In other words, since there can be no *genuine* philosophical propositions, *philosophy cannot be said*. Traditional philosophers have mostly undertaken to give us true philosophical propositions. These so-called propositions are not false but *senseless*.

Tractatus, 4.003 Most of the propositions and questions to be found in philosophical works are not false but nonsensical. Consequently we cannot give any answer to questions of this kind, but can only point out that they are nonsensical. Most of the propositions and questions of philosophers arise from our failure to understand the logic of our language.

(They belong to the same class as the question whether the good is more or less identical than the beautiful.)

And it is not surprising that the deepest problems are in fact *not* problems at all.

He says again:

Tractatus, 6.54 My Propositions serve as elucidations in the following way: anyone who understands me eventually recognises them as non-sensical, when he has used them - as steps - to climb up beyond them. (He must, so to speak, throw away the ladder after he has climbed up it.)

He must transcend these propositions, and then he will see the world aright.

Russell in his introduction to the *Tractatus* says: "Mr. Wittgenstein manages to say a good deal about what cannot be said, thus suggesting to the sceptical reader that possibly there may be some loophole through the hierarchy of languages or by some other exit."

Quite contrary to what Russell says Wittgenstein rejects the claim that there is a hierarchy of languages, in one part of which philosophy is to be found. But he acknowledges the other exit from the difficulty that what he has been saying (i.e., philosophical propositions) are nonsense.

Now, one may ask; are the statements of the *Tractatus* utter nonsense or is it the case that they just lack factual sense? The unconventional view on the *Tractatus* is that it ends up in sheer nonsense. By section 6.53 of the *Tractatus*, you cannot say anything about philosophy.

Tractatus, 6.53 The correct method in philosophy, would really be the following: to say nothing except what can be said, i.e. propositions of natural science - i.e. something that has nothing to do with philosophy - and then, whenever someone else wanted to say something metaphysical, to demonstrate to him that he had failed to give a meaning to certain signs in his propositions. Although it would not be satisfying to the other person - he would not have the feeling that we were teaching him philosophy - *this* method would be the only strictly correct one.

In this way, philosophy undermines itself. Philosophy as stated in the *Tractatus* is impossible and Wittgenstein's later philosophy is *an attempt to overcome this reductio*. The conventional view is that the propositions of the *Tractatus* lack factual sense. They are like the propositions of ethics and aesthetics, which are, just unsayable, but they are not gibberish and have a function which could be shown. When one says that the statements of ethics and aesthetics have no sense, one may have accepted that gibberish is not the only alternative to sense. A novel shows something. The moment we describe the aesthetic point of a novel we ruin it. A joke will work best if it requires no explanations. Because if we describe a joke, then the element of surprise will be destroyed and it will not be a joke any more. It is the same in the case of philosophy. Statement of philosophy, on this conventional view, only lack factual content. Though Wittgenstein's use of language in the *Tractatus* itself is not one of fact stating; not even one of setting out empty propositions of logic and mathematics, it is a use that clarifies other uses of language. Philosophy is an activity of

elucidating by which we gain an insight into the workings of our language and after that we can throw away this ladder. This insight itself cannot be stated in genuine propositions. In a scientific problem one searches to find the answer, but in philosophy we are not looking for an answer. Basic problems of philosophy are conceptual confusions and philosophy is conceptual elucidation. In other words, the so called propositions of philosophy are nonsensical but they are not gibberish like say "ha, hoo, hi ". They serve a function, which is elucidating the confused talk. Now, if you ask where does this business about the function of elucidation come in the *Tractatus*, Wittgenstein cannot answer. He throws away the ladder. This is the *paradox* which regarded as a reductio leads Wittgenstein to his later philosophy.

As another example, we may consider the epistemological status of the propositions of logic. According to the picture theory of the *Tractatus* these propositions do not mirror any facts of reality; therefore they are senseless.

Tractatus, 6.1 The propositions of logic are tautologies.

Tractatus, 6.11 Therefore the propositions of logic say nothing.

Tractatus, 6.127 All the propositions of logic are of equal status:

It is not the case that some of them are essentially primitive propositions and others are essentially derived propositions.

In so far as the propositions of logic are tautologies, they are empty; they say nothing. But this is not to be understood as saying that logic is gibberish. We mean that logical laws have nothing to do with the facts of the world, but rather they are only concerned with the symbols we use.

The division of meaningful propositions to factual and conceptual is not

unprecedented and we may find a version of it in Hume. But Wittgenstein made the workings of the tautological or purely repetitive character of the logical laws perspicuous.

Wittgenstein says: "Tautologies and contradictions lack sense".⁹ He claims again that: "Tautologies and contradictions are not non-sensical."¹⁰ This at first sight seems puzzling. How can tautologies and contradictions have and lack sense, at the same time? Wittgenstein means that they lack sense because they say nothing about the world. He says: "I know nothing about the weather when I know that it is either raining or not raining". In other words, if a proposition were true whatever the circumstances, then it pictures nothing i.e., it says nothing.

As mentioned earlier, logical constants used in the formulation of compound propositions do not represent anything in the world. Their role is truth-functional. There is nothing in the world that corresponds to "and", "or", etc.

Tractatus, 4.441 There are no 'logical objects'.

Tractatus, 4.0312 My fundamental idea is that "the logical constants are not representatives.

Quite contrary to Frege he says :

Tractatus, 4.441 It is clear that a complex of signs "F" and "T" has no object (or complex of objects) corresponding to it, just as there is none corresponding to the horizontal and vertical lines or to the brackets.

This discovery of Wittgenstein undermines Russell's and Frege's conception of

logical objects.

We may notice that if Wittgenstein is right as regards the tautologous character of the propositions of logic, then Russell's view that they are concerned with the most general facts of reality, is wrong and his axiomatization of logic with the intention of establishing the foundations of logic in the axioms of a logical system, does not make sense.

How could one know that language necessarily has the structure that Wittgenstein assigns to it in the *Tractatus*? It was difficult to answer this question and it led him to the view that since language is an ordinary human phenomenon it should be studied empirically. An empirical study of language showed that it is not constructed on the simple, framework described in the *Tractatus*. There are many varieties of discourse with different functions. *Tractatus* selected one form of language and projected it on the world. The point is that in the *Tractatus* Wittgenstein tries to plot the boundary of language and he thinks that it could be drawn with a single sweeping line *a priori*. Later on he comes to think that it can only be drawn piecemeal, bit by bit. Now instead of a far out boundary to enclose the whole of meaningful discourse, he is more interested in an *a posteriori*, pluralistic way of looking at the matter. Much of the *Philosophical Investigations* consists of ordinary empirical observations.¹¹ In his later philosophy, Wittgenstein does not any more say that there *must* be a mirroring relationship between language and reality. He rather claims that metaphysics comes from the word "must". Don't say; it must be, look and see! we will go through these matters, in chapter five.

We may here mention that, Wittgenstein's influence on the members of

the Vienna Circle was second to no one. In 1926 the *Tractatus* was read line by line at their weekly meetings. But, as we saw, they misinterpreted the *Tractatus* and rejected the central ideas of that book. Quine was also, briefly a member of the Circle and very much influenced by the positivist movement. What impressed them more than anything else, was Wittgenstein's earlier view on logic and mathematics. They thought that Wittgenstein's most important discovery was that the propositions of logic and mathematics are tautologies.

Many of the logical positivists, conceived of the mathematical propositions as tautologies. For example, they regarded the theorems of Euclidean geometry as tautologies; meaning that these theorems are all contained in the axioms of Euclid. What we do in geometry is to unpack what is already there. In other words, the function of mathematics is to provide us with the techniques for transforming things we have already said, into another form. According to their view, even the most complicated mathematical theorem has such a character, but its very complication makes the explicit formulation of the mathematical truth *practically* invaluable.

Wittgenstein argues in the *Tractatus* that all possible languages share an essential logical syntax, which is isomorphic with the logical form of what can be represented by language. The Circle's view is that; we are free to construct the logical syntax of our languages as we please, because different languages are just different conventions of symbolism and do not share any logical syntax. A language is conceived by the circle as having the structure of a calculus. This calculus is a system of expressions interrelated by definitions, formation rules and transformation rules. In this way, the network of concepts is thought to be

given content by correlating the indefinable primitive terms of the system with entities in the world. We see that the Circle's view is another version of the Augustinian conception of language.

Wittgenstein said that "To understand the sense of a proposition means to know how the issue of its truth or falsity is to be decided".¹² But contrary to the positivists he did not regard the verifiability principle as a *dogma*. In order to get clear how a certain sentence is used, we may ask "How would one try to verify that assertion?" But this is just one way among others. Another very useful question is "How is this sentence learnt?"

Some people have turned this suggestion about asking for the verification into a dogma - as if I had been advancing a *theory* about meaning.¹³

The idea of verification as the *only* way of approaching the problem of meaning became a slogan of positivists. But Wittgenstein's treatment of the issue was completely different.

If I say 'up there on the cupboard there is a book' how do I set about verifying it? Is it sufficient if I glance at it, or if I look at it from different sides, or if I take it into my hands, touch it, open it, turn over its leaves and so fourth?

There are two conceptions of doubt: one of them says that however I set about it, I shall never be able to verify the proposition completely. A proposition always keeps a back door open, as it were. Whatever we do, we are never sure that we were not mistaken. The other conception, the one I want to hold

says, 'No, if I can never verify the sense of a proposition completely, then I cannot have meant anything by the proposition either. Then the proposition signifies nothing whatsoever.'¹⁴

This is, as we shall see, the starting point for dispensing with traditional epistemology altogether. On the other hand, there is a difficulty in the way the positivists treat the principle of verifiability. How could they justify it? If every proposition which does not belong either to logic and mathematics or to empirical sciences is utterly meaningless, how can we regard the positivists' principle of verifiability as a meaningful proposition? If the principle is reduced to a convention, recommendation or a methodological postulate, then it loses its convincing power. Contrary to the positivists, Wittgenstein is consistent in this respect. He does not advance any philosophical principle. As mentioned earlier, he concludes that there are no philosophical propositions. Philosophy is an activity and Wittgenstein's own use of the language for philosophical purposes in the *Tractatus* is nonsense.

Notes

1. Wittgenstein L. *Letters to Russell, Keynes and Moore*, R. 37.
2. *Tractatus*, 3.001.
3. *Philosophical Investigations*, Sec. 47.
4. Englemann, P. *Letters from Wittgenstein*, P.144.
5. Wittgenstein, L. *Letters to Russell*, P.72.

6. Wittgenstein, L. *Letters to Paul Englemann*, P. 96.
7. Waismann, F. "Notes on talks with Wittgenstein", *Philosophical Review*, vol. 74, P.13.
8. *Foundations of Mathematics*, P.238.
9. *Tractatus*, 4.461.
10. *Ibid*, 4.4611.
11. When we say that *Philosophical Investigations* consists of *ordinary* empirical propositions we mean that they tell us what we already know. That is why Wittgenstein sometimes says that he is assembling "reminders".
12. *Philosophical Remarks*, P.77.
13. Fann, K. T. (ed.) *Wittgenstein*, P.54.
14. Waismann, F. *Ludwig Wittgenstein and the Vienna Circle*, P.47.

Chapter Four

Naturalized Epistemology

When we explain the point of view of a philosopher in this thesis, we act as his advocate. This does not mean that we accept what the philosopher says, but it means that we wish to expose the potential weaknesses of his view in seeing how it leads to a change of view by himself or others. We see how each philosopher thinks of the problem, because the question of what is the problem and how are we to approach it, is itself a philosophical problem. Roughly speaking; for Quine philosophy is philosophy of science as he explicitly says: 'Philosophy of science is philosophy enough' and by philosophy of science he means naturalized epistemology. He uses the words 'science' and 'knowledge' synonymously.

Quine is as sceptical about the ordinary empirical propositions such as 'I have two hands' as he is about the most sophisticated propositions of nuclear physics. This is rooted in the epistemological framework that he shares with Russell. It indicates a language / reality dichotomy which lies behind all of Quine's works. Concerning the necessary propositions of logic and mathematics, again, he does not see any genuine difference between mathematical or logical propositions and the empirical propositions of science. As we shall see in the following chapter, Wittgenstein reacts against Russell's foundationalism in epistemology by his private language argument, whereas

Quine's reaction as we are now going to discuss, is through his holism. What they put in place of Russell's foundationalism is strikingly different. Quine views philosophy as continuous with science and denies that there is any distinctive *philosophical* subject or method. He says that there is no *genuine difference between empirical propositions of science and the necessary propositions of logic and mathematics*. Wittgenstein, on the contrary, insists on the genuine contrast between necessary and empirical propositions. Empirical propositions describe possible or actual states of affairs. The role of necessary propositions, according to later Wittgenstein, is not descriptive, but normative. They are what he calls *grammatical propositions*, which express rules for the meaningful use of words.

Reorientation of Epistemology

In his famous paper "*Two Dogmas of Empiricism*" (1951) Quine criticises the analytic / synthetic distinction. His holistic or Duhemian empiricism first appeared in this paper. The vehicle of empirical content is the whole system of sentences; not an isolated individual sentence. The test of a system as a whole, yields a certain leeway as to which individual sentence ought to be revised and this leeway extends even to revising the sentences of logic and mathematics that are part of the system.

Quine's philosophy is a systematic attempt to answer from an empiricist point of view the central question of epistemology, namely, "How do we acquire

our world-picture?" Quine reformulates this question as the question of how we acquire our theoretical talk about the world.

Over the centuries empiricists have been seeking to reduce knowledge of the world to sense experience. The struggle reached its summit in Carnap's program. This brand of empiricism which is called by Quine radical empiricism, had two goals: (1) To deduce the truths of nature from sense data (2) To construct or define the truths of nature by sense data and logico-mathematical auxiliaries. The motivation behind these ambitions was *the desire to attain absolute certainty in our knowledge of the world*. As we discussed in the second chapter, these two goals were exactly what Russell tried to achieve in his *Problems of Philosophy* and *Our Knowledge of the External World* respectively. Empiricists inherited this ambition from the rationalist father of modern philosophy, Descartes. What they sought was a first philosophy or metaphysics and they thought that it should stand outside the body of our knowledge, for otherwise it would be a vicious circle to use that knowledge to justify its foundations. But they failed to establish a successful first philosophy. Regarding the first goal they could not go beyond Hume's position. Hume identified the building blocks of reality with sense-impressions. He held that some singular statements, namely statements about impressions immediately present, were indubitable. But neither general statements of existence, nor statements about the future could achieve any degree of certainty. A modest generalization such as 'Grass is green' covers more cases than we could ever have observed. Consequently the hopelessness of deducing the truths of nature from the immediate data of sense was acknowledged. Quine says that:

"*Humean predicament is human predicament.*" Carnap recognised the impossibility of deducing science from immediate sense experience, but continued to pursue the other goal which is to define the concepts of science and ordinary knowledge claims in sensory and logico-mathematical terms. He thought that such constructions would deepen our understanding of the world and would clarify the sensory evidence for science. If Carnap's program had succeeded, it would have been a great *epistemological* achievement, because we could then translate science into logic, observational terms and set theory. We could claim that the rest of scientific concepts are, at least, *theoretically* superfluous. No such reconstruction of scientific discourse was made available. Carnap failed, because according to Quine, *not every statement about the world has a fund of empirical content that it can call its own*. It is not the case that *every sentence of a scientific theory has a unique empirical meaning*. There is no hope of translating each of the sentences, taken individually into an equivalent sentence, expressed in observational terms and logico-mathematical auxiliaries.

To point to the failure of radical empiricism in achieving either of its two goals is not to deny that whatever evidence there is for knowledge claims is sensory evidence and that, all meanings of words must finally rest on sense experience. Quine says that the goal of the emerging empiricism is the same as that of the old one. It is to provide an account of how we achieve our world-picture, if we are only given the evidence of our senses. The difference between this account and Carnap's program is that the link now sought between *theory and observation* is not one of translation or definition. Given that the

reconstruction of knowledge claims, as advocated by Carnap is impossible, we may study the psychogenesis of our theoretical talk. Of course psychogenesis does not provide the desired translation either. No one grows up learning scientific language in terms of a prior language of set theory, logic and observational terms. So, Quine believes that it would be better to discover how knowledge is in fact developed and learnt than to fabricate a fictitious structure. The primary goal of epistemology, according to Quine, is to provide a factual account of the link between observation and theory, "between the meagre input and the torrential output", and this factual account is to be made within the framework of natural science itself. *This methodological shift to naturalism is what is meant by Quine's reorientation of traditional epistemology.* His naturalism is a departure from the old epistemology, because it abandons the quest for a first philosophy on which to construct the scientific theory. It rather relocates epistemology within the confines of scientific theory itself. What about the charge of circularity? How can the new epistemologist use the findings of natural science to validate science itself?

Neurath has likened science to a boat which, if we are to rebuild it, we must rebuild plank by plank while staying afloat in it.¹

Here, planks are analogous to our beliefs. You cannot repair all the planks of the ship at once while staying afloat in it. But you can repair plank 'A' and stay on the rest of the planks. Again you may replace plank 'B' while staying on the others and so on. In the same way you can replace your beliefs bit by bit.

So, epistemology, in Quine's word, is science self-applied. For centuries philosophers have recognized that knowledge is the offspring of doubt. It is

scepticism that prompts us to develop a theory of knowledge. But it should be noted that doubt is also the offspring of knowledge. Illusions are illusions *only* relative to genuine knowledge. The new epistemologist no longer dreams of a first philosophy firmer than science, on which science can be based, rather he is defending science from within, against its own self doubts. We can grant the truth of natural science and raise the question, within natural science; how man can arrive at his scientific theories on the meagre evidence of his sense-impressions.

The Ghost of *A Priori* Knowledge

The two dogmas in Quine's famous paper of 1951 are: (1) the division of truths into analytic and synthetic (2) the thesis that isolated individual sentences have empirical significance. For logical positivists all *a priori* knowledge is true by virtue of the meanings of the words involved. "2+2=4" is necessarily true because it reflects our conventions for the meanings of the words. When we say "Either it is raining or it is not raining", it is sufficient to understand the language in order to recognize its truth. To find out whether it is raining or it is snowing it does not suffice to understand the meanings of the words involved. We must do more than that and make the appropriate observation. This supposedly clear cut distinction between analytic and synthetic statements became a cornerstone of radical empiricism. Quine accepts Mill's position that there is no analytic, *a priori* knowledge, but his reasons for arriving at this conclusion are quite different

from Mill's.

There are two points in classical empiricism worth mentioning in this connection: (1) classical empiricism is a genetic thesis about the origin of knowledge (2) the unit of empirical content is an impression. For linguistically oriented empiricists the terms and not the impressions had empirical content. Later empiricists shifted the burden of empirical significance from terms to sentences. The most prominent example of this shift was the verifiability principle of the logical empiricists. Pragmatists have, on the other hand, insisted that a hypothesis is justified not by virtue of its origins, but by virtue of its consequences. A hypothesis may be the product of pure imagination, yet its cognitive value will depend on its observable consequences. As James said: "By their fruits you shall know them and not by their roots".

The dogma of reductionism survives in the supposition that each statement, taken isolated from its fellows can admit of confirmation or infirmation at all. My counter suggestion... is that our statements about the *external world* face the tribunal of sense experience not individually but only as a corporate body.²

Quine claims that empirical evidence is always for or against systems of sentences. A whole system of sentences is the unit of empirical significance.

Here is the logical structure of the test of a hypothesis:

Hypothesis
initial conditions

Therefore: Observable consequences

Of course, the principles of logic and mathematics are also included to carry out

the derivation. If as a result of our test, the observable consequences fail to occur, the hypothesis is usually refuted. Quine explicitly claims that we have an option to refute any of the hypotheses, initial conditions, the principles used to derive the consequences or any of our presuppositions. This is what the rule of *reductio ad absurdum* says. We cannot single out one of them and claim dogmatically that it ought to be rejected. There is an indeterminacy as to the test's significance. We may decide to reject or at least reinterpret the observed datum itself. In other words, we may edit the observational data. In a test where the observations rely on instruments which presuppose background theories, the option is open to revise these theories. The testing in which Newtonian physics was replaced by the theory of relativity resulted in the replacement of the Euclidean geometry by the Riemannian variety. In the same spirit it has been suggested that the logical principles used for quantum mechanics should be those of many-valued logic and not of two-valued logic. Quine's principle of conservatism explains why we do not like to revise the principles of logic or the rules of mathematics involved. Their revision would entail changing the largest number of our other beliefs. There are, in principle, no sentences in our system of beliefs which are immune to experimental rejection. Every sentence has some empirical import as part of the system. It is the whole system of our beliefs that has empirical significance and every belief within it shares in this empirical content.

The totality of our so called knowledge or beliefs from the most casual matters of geography and history to the profoundest laws of atomic physics or even of pure mathematics and logic is a man

made fabric which impinges on experience only along the edges, or to change the figure, total science is like a field of force whose boundary conditions are experience. A conflict with experience at the periphery occasions readjustments in the interior of the field. Truth values have to be redistributed over some of our statements. Reevaluation of some statements entails reevaluation of others, because of their logical interconnections - the logical laws being in turn simply certain further statements of the system, certain further elements of the field. Having reevaluated one statement we must reevaluate some others, which may be the statements logically connected with the first or may be the statements of logical connections themselves. But the total field is so undetermined by its boundary conditions, experience, that there is much latitude of choice as to what statements to reevaluate in the light of any simple contrary experience. No particular experiences are linked with any particular statements in the interior of the field, except indirectly through considerations of equilibrium affecting the field as a whole.³

Logic and mathematics and all other purported forms of *a priori* knowledge are parts of our system and are in principle open to revision. If *a priori* knowledge is knowledge that is justifiable independently of experience, then Quine denies that there is any. Our choice of a system of logic or mathematics depends on the same sort of broad empirical considerations as our choice of a system of physics. Should empirical findings require a change in either logic or

mathematics, then we would be obliged to provide such a change.

Quine acknowledges the existence of abstract objects which serve as the ontological basis for the truths of mathematics⁴. So, we may say that he is an empiricist in a Duhemian sense i.e., he is a holist as well as an empiricist. The decision to introduce abstract objects is not different in principle from the decision to introduce other unobservable theoretical objects. Mill sought to establish logic and mathematics on the basis of direct evidence. Quine appeals instead to indirect evidence. Knowledge, on his account, is a web of interrelated sentences. Positivists criticised Mill's view of mathematics and logic as empirical, on the basis that we do not apply empirical methods to these disciplines. Quine says that mathematics and logic are like theoretical physics. They are capable of being tested, but these tests are indirect like those of physical theory. So, Quine is an empiricist, but not in the same way as Mill and he postulates abstract entities, but not as Russell did in his Platonist period.

For logical positivists, the truths of arithmetic are not falsifiable, because they believe that their truths are based on the linguistic conventions. Quine goes one step further than the positivists of the Vienna Circle and notes that in the context of a test situation we have the leeway to save "by convention" any sentence and not just sentences of logic and mathematics. As a thesis accounting for the necessity of certain sentences, conventionalism is bankrupt, because every sentence is equally endowed with the possibility of being saved by repairing the system somewhere else.

"To be" is to be the value of a variable

Existence claims are really particular quantifications and the phrases "some", "there are" and "there exists" are intertranslatable. This reminds us of the slogan that; "existence is not a predicate". We mean by saying this that "exists" differs from ordinary predicates. Existence sentences like "Brown cows exist" mislead us into treating them as sentences like "Brown cows flourish". This is due to a *superficial grammatical resemblance*, because "exist" occurs in the predicate position, but there is a great difference in between. The former is translatable into a quantificational sentence: "Some cows are brown". In this translation the word "exist" disappears from the predicate position and its function is performed by the quantifier. But the word "flourish" is a *genuine predicate* and cannot be disposed of in the same manner. Every existential claim is a covert quantificational claim and therefore "exists" is not a real predicate. Hume had already claimed that we have no ideas or impressions of an object's existence as such. Kant said that being is not a real predicate. "Exists" unlike "brown" adds nothing to our concept of an object. To imagine a cow as brown is to add something to our image of the cow. To conceive a cow as existing does not add anything to our concept of a cow.

Quine adheres to a language in which our existential commitments are overtly present for inspection. This is the language of mathematical logic developed by Frege, Russell and himself. Quine calls this language "The canonical notation". To discover the existence assumptions or the ontological

commitments of a theory, we first state it in this language and then look to the existential quantifications we have made. "Quantification is an ontic idiom par excellence." The logic of $(\exists x)$ is the logic of existence and a notation which makes $(\exists x)$ explicit, will make our existence assumptions or ontology explicit.

In his early essays Quine relied on the notion of designation i.e., naming, to explicate the ontic significance of discourse. Later on he came to believe that naming is not necessary, in order to refer to the world. Predication is a more fundamental semantic relation than naming. There are cases where we know that certain objects exist, but we cannot name all of them. We can reasonably give up the connection between naming an object and making an existential claim about it. If there are only as many names as there are rational numbers, then there is no way of naming the real numbers. The reference and the ontological commitment are performed by the semantic relation of predication:

$$(\exists x)(x \text{ is a real number})$$

We can apply "is a real number" to all the real numbers without naming them individually. Whatever scientific purposes are performed by names, can be carried out by the devices of quantification, variables and predicates. Quine dispenses with names, by extending Russell's theory of definite descriptions. Russell's analysis provides a *contextual definition* of definite descriptions. As discussed in the second chapter, any sentence with a definite description can be paraphrased into another sentence from which the definite description has been eliminated. In other words, Russell's theory provides a way of defining away definite descriptions. Quine's extension defines away names. The idea is that wherever there is a name, we can substitute a corresponding description⁵.

For "Socrates is human", we can supply "The teacher of Plato is human". If we do not have the right description for the name, we can manufacture one in the following way. From a name like "Socrates" we can make the verb "socratizes". Then "Socrates is human" becomes "The one and only x which socratizes is human".

$$(\exists x)[x \text{ socratizes} \ \& \ (y)(y \text{ socratizes} \rightarrow x=y) \ \& \ x \text{ is human}]$$

Thus in this canonical language there are no names. Russell showed us how to eliminate the terminology of definite descriptions from our basic vocabulary. Quine improves on that by showing how to dispense with names by assimilating them to definite descriptions. The importance of eliminating names is that *the ontological significance of language or its referential function is performed without names*. The canonical notation in which we express existential claims contains only variables, predicates, truth functional connectives and quantifiers.

Quine by adhering to the language of mathematical logic and the interpretation of the particular quantifier as an *ontic idiom* gives a precise criterion of our ontological commitments. The slogan, "To be is to be the value of a variable" expresses the essence of his tenet.

To appreciate Quine's ontological commitments more fully, it would be useful to see it in the context of philosophical disputes. For example, the old mind-body problem is an ontological issue. *Are we to adopt a dualistic ontology as did Descartes?* This problem is expressed in Quine's philosophy in the following form: "Can human behaviour be accounted for in a language committed only to an ontology of physical objects?"

Scientific Realism

Different ontologies are, to Quine's mind, different scientific theories. The question of choosing between nominalism and realism, for example, is to be decided by comparing them in a scientific spirit.

As a thesis in philosophy of science, nominalism can be formulated thus: It is possible to set up a nominalistic language in which all of natural science can be expressed. The nominalist, so interpreted, claims that a language adequate to all scientific purposes can be framed in such a way that its variables admit only of concrete objects, individuals, as values - hence only proper names of concrete objects as substituents. Abstract terms will retain the status of syncategorematic expressions, designating nothing, so long as no corresponding variables are used.⁶

We should evaluate different ontological hypotheses according to their explanatory power, simplicity and precision. Quine's notion of simplicity of the hypothesis is related to his pragmatism. Noting that *simplicity* is a relative notion, he contrasts the physicalist hypothesis with the phenomenalist one and concludes that each has its special simplicity in its own way. Each may be said to be more fundamental; one epistemologically, the other physically.

Our acceptance of an ontology is similar in principle to our acceptance of a scientific theory, say a system of physics: we adopt the simplest conceptual scheme into which the disordered

fragments of raw experience can be fitted and arranged. Our ontology is determined once we have fixed upon the overall conceptual scheme which is to accommodate science in the broadest sense...The question what ontology actually to adopt still stands open and the obvious counsel is tolerance and an experimental spirit.⁷

We can trace back "simplicity" as a criterion of choosing an ontology to Occam. He holds that entities should not be multiplied beyond necessity. This principle which is sometimes called the principle of parsimony is adopted by Russell. He says: "Wherever possible, logical constructions should be preferred to inferred [i.e., suggested] entities". Quine subscribes to this methodological maxim. In his canonical notation he provides one of the simplest approaches to the logic of truth functions. We have only a single connective, which is a joint denial. As for the quantifiers, either one can be used to define the other. Then we only need individual variables and predicates. His elimination of names by an extension of Russell's theory of descriptions was already discussed.

Of course, in teaching logic, we abandon the methodological maxim of simplicity. A theory of truth functions that has more connectives may be easier to understand and to work with, but it could be more complex in another sense. One may mean by simplicity of a theory, some psychological trait such as being easily understood. By "the simpler theory", Quine means just the one with the less number of postulates.

Quine has tried to explain as much as he could while assuming as little as possible. Nominalism with its meagre ontology has been an object of

fascination for him.

We do not believe in abstract entities. No one supposes that abstract entities - classes, relations, properties, etc. - exist in space-time; but we mean more than this. We renounce them altogether.⁸

Quine, later on, abandons the nominalist program in favour of his general theory of scientific realism. The motivation for introducing classes into his ontology is no different from other theoretical entities. As a *scientific realist*, Quine has the same kind of commitment in mathematics that he has in natural sciences.

Quine's appeal to scientific methodology to solve the problems of ontology illustrates his famous tenet that philosophy and science constitute a continuum. The adoption of an ontology is tentative in the same sense as is the adoption of any scientific theory.

Physical objects are postulated entities which round out and simplify our account of the flux of experience, just as the introduction of irrational numbers simplifies the laws of arithmetic. From the point of view of the conceptual scheme of the elementary arithmetic of rational numbers alone, the broader arithmetic of rational and irrational numbers would have the status of a *convenient myth*, simpler than the literal truth (namely, the arithmetic of the rationals) and yet containing that literal truth as a scattered part. Similarly, from a phenomenalist point of view, the conceptual scheme of physical objects is a convenient myth, simpler than the literal truth and yet containing that literal truth as

a scattered part.⁹

In the fifties most of logical positivists realised that Carnap's phenomenalist program to reduce physical objects to sense-data did not work.¹⁰ Quine's rejection of sense-data is conspicuous in his theory of naturalised epistemology. But, his physical objects are not those of the naïve realist. *They are theoretical posits*, postulated by common sense as well as modern physics. To Quine's mind, ***common sense is also a theory***, continuous with the systematic theories of the scientific enterprise. If we use canonical notations of mathematical logic and accept *the theory of relativity* we conclude that the objects which serve as the values of our variables are "four-dimensional denizens of space-time"

Physical objects conceived thus four dimensionally in space-time are not to be distinguished from events or in the concrete sense of the term, processes. Each comprises simply the content, however heterogeneous of some portion of space-time¹¹

Theoretical objects are part of Quine's *scientific realism*. According to the phenomenalist, talk of electrons, for instance, serves as a convenient shorthand way of talking of complexes of sense data and has no ontological significance. For the instrumentalist, such a talk is merely a convenient instrument for making predictions. Both of them treat a theoretical predicate as having no existential import. Quine says that scientific discourse, even at its most sophisticated level makes the same claims on reality as our talk of ordinary objects. *So, common sense, natural sciences and philosophy constitute a continuum.*

What is the meaning of "Truth"?

Sentences are true, because of the way in which they reflect reality and the quantificational sentences are the ones which explicitly reflect what there is.

Truth claims are ontological claims.

"To say of what is that it is, or of what is not that it is not, is true."

This is Aristotle's formulation with an intuitive content, but lacking precision and generality. In most cases it would be hard to cast a sentence into this mould, without changing its sense. Various substitutes for this formulation have been offered: e.g., "A sentence is true if it corresponds to some existing state of affairs." It proves that this is less clear than Aristotle's formulation. It is very difficult to clarify the notion of "correspondence". The coherence theory of truth will not do because of the counter example of fairy stories which could be coherent. Common usage of the word "true" is nearer to its Aristotelian notion.

Tarski follows Aristotle's approach:

"Snow is white" is true if and only if snow is white.

Here, "Snow is white" is only a name or a label and therefore the charge of circularity is irrelevant. Tarski, then, makes a strict distinction between the object language (the language which is the object of our discussion and for which we want to construct the definition of truth) and the meta-language (the one in which the definition of truth is formulated). He continues to provide an adequate definition of truth for any sentence of the object-language, in the meta-language. There is no danger of our being confronted by the antinomy of the liar (or

Russell's paradox), because we do not have the word "truth" in our object-language. Of course we do have it in the comprehensive meta-language. We may put forward our question in this way: Can the notion of truth be precisely defined in such a way, that it could be adequate for semantically restricted languages? If the following conditions are fulfilled the answer is positive: The language's full vocabulary should be available and its rules of syntax precisely formulated. The rules of syntax must be purely formal. The meaning of an expression should depend exclusively on its form. Such a language is called a formalized language. By this Tarski does not mean something that is essentially opposed to natural languages. On the contrary, he says that the only interesting formalized languages are those which are fragments of the natural one, or that can be translated into it.

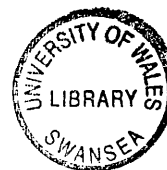
The meta-language should be sufficiently rich to include the object language as a part. For any given sentence of the object-language one can formulate partial definition of truth. If the set of all sentences in the object-language is infinite, we cannot arrive at a general definition, simply by forming the logical conjunction of all partial definitions. What we obtain is in some intuitive sense equivalent to the imaginary infinite conjunction.

An adequate definition of truth for a scientific language does not have a criterion to decide whether a particular sentence is true or false. To decide whether or not a sentence is true is a task of an experimental research and not of logic or the theory of truth. Of course, "'Snow is white' is true if and only if snow is white" *does not* show us how to decide the matter of truth.

We may try to find a partial criterion of truth. We ascertain the truth of

sentences in deductive sciences by axiomatic methods. Mathematicians, previously accepted a sentence as true, either if it seemed intuitively evident or if it was proved on the basis of other intuitively evident sentences. It was realized later on that the criterion of intuitive evidence is far from being infallible. The entire subsequent development in deductive sciences was in effect to *restrict the recourse to intuitive evidence*. That revealed itself, first of all in *minimizing the number of axioms* and besides that these axioms were regarded as postulates, not as something self-evident. If we want to avoid infinite regress, we must accept some primitive sentences and some undefined terms *without any justification*. We may not explain the meanings of primitive terms or prove the primitive axioms.

Until the end of the last century, the notion of proof had a *psychological character*. No restrictions were put on arguments used in proofs, except that they had to be intuitively convincing. Developments in mathematics, especially the discovery of non-Euclidean geometries led mathematicians to introduce the new notion of formal proof instead of the old psychological one. In a formal proof, no complex processes of reasoning are involved. We first list the axioms and primitive terms and then list the rules of formation and derivation - which should be as small as possible in number. Now the theorems are presented in such an order that each one is recognized only by comparing its shape with previous ones. In this way doubts concerning the truths of theorems have not eliminated, but have been reduced to doubts concerning the truths of the axioms and simple rules of derivation. Formal proofs now can be provided for the deepest and the most complicated mathematical theorems. *It was a great*



achievement of modern logic to replace the old psychological notion of proof which was not clear and precise with the new simple notion of formal proof.

Proof is a procedure aimed at acquiring new true sentences. Now, our problem is that whether the set of all provable sentences coincide with the set of all true sentences or not? We may, to be specific, consider this problem for the elementary number theory (i.e., the arithmetic of natural numbers). The definitions of truth and provability belong to a new theory formulated in the meta-language which is called meta-theory or in this case meta-arithmetic. It is within the framework of this meta-theory that we formulate and solve our problem. Godel in his paper on the incompleteness of arithmetic showed that there are sentences formulated in the language of arithmetic that are true but cannot be proved on the basis of the axioms and rules of proof accepted in arithmetic and he further demonstrated that the conclusion does not depend on *specific* axioms and rules of inference chosen for arithmetic. The intrinsic simplicity of the notion of formal proof turned out to be its Achilles heel. The definition of provability can be translated from the meta-language into the object-language, but no such translation can be obtained for the definition of truth, otherwise Russell's paradox would appear.

To summarize; the paradox of self-reference appears in the discussion of truth as a destructive force. We cannot as a result, clarify the notion of truth for natural languages. We restrict our attempts to formalized languages of scientific discourse. We have to distinguish between a language and its corresponding meta-language. In the restricted setting, the paradox disappears, but its basic idea is used to establish a significant meta-logical result with far

reaching philosophical implications. *The notion of provability is not a perfect substitute for the notion of truth.* The belief that formal proof can serve as an adequate instrument for establishing truth is unfounded. The original triumphs of formal methods has a serious setback. In this way, *foundationalism in philosophy of mathematics* with the intention of establishing the truths of mathematical propositions on the basis of a few self-evident axioms lost its original motivating power.

The notion of truth for formalized theories can now be introduced by means of a precise and adequate definition. It can be used without reservations in mathematical discussions. On the other hand proof is still the only method to ascertain the truth of sentences within a theory. But there are sentences formulated in the language of the theory which are *true but not provable*. We may wish to widen the set of provable sentences. We enrich the given theory by new axioms or new rules of proof. This process may be repeated many times, but the notion of a true sentence is an ideal limit which can never be achieved. It can be approximated by gradually widening the set of provable sentences, but there could always be the possibility that some sentences of our interest are true but not provable.

The Disappearance account of Truth

Purely terminological issues are only important because of their power to obscure and mislead. Instead of what we describe as 'redundancy conception' or 'disappearance account' of truth, some writers use the expression 'redundancy *theory* of truth'. But this is just a terminological issue. The term "theory", here, is used as a synonym for "conception" or "notion" and it is not to be confused with a scientific theory. Ramsey has already said that there is not really a separate problem of truth but merely a linguistic muddle.

It is evident that 'It is true that Caesar was murdered' means no more than that Caesar was murdered, and that 'It is false that Caesar was murdered' means that Caesar was not murdered. They are phrases that we sometimes use for emphasis or for stylistic reasons.¹²

"True" adds no conceptual element to a proposition. We could eliminate occurrences of it without loss.

Quine describes "true" as a device for *disquotation*. When we put the sentence "Caesar was murdered" into quotation marks, we get a name of that sentence. We can use the original sentence to make an assertion, but the quoted sentence cannot be used to make an assertion, because it is not a complete sentence, it is merely a name. The utility of the truth predicate is that by adding it to a quoted sentence we undo the effect of the quotation mark. This is just a logico-linguistic discussion.

To say that the statement 'Brutus killed Caesar' is true or that 'The atomic weight of sodium is 23' is true, is in effect simply to say that Brutus killed Caesar or that the atomic weight of sodium is 23.¹³

He says again:

The truth predicate is a reminder that despite a technical ascent to talk of sentences, our eye is on the world. This cancellatory force of the truth predicate is explicit in Tarski's paradigm:

"Snow is white" is true, if and only if, snow is white.

Quotation marks make all the difference between talking about words and talking about snow. The quotation is a name of a sentence that contains a name, namely "snow", of snow. By calling the sentence true, we call snow white. The truth predicate is a device of disquotation.¹⁴

Can we not drop the quotation marks as well as the predicative phrase and get rid of the notion of truth at all? No. The value of this notion emerges when we want to formulate *generalizations*. For example, consider the statement: "Every sentence he uttered was true". We could understand this without knowing which sentences has been uttered. But its paraphrase without explicitly using the truth predicate would be a very complex conjunction and according to Ramsey's famous remark to Wittgenstein¹⁵ it will not grasp the meaning of the general statement; "If he said 'snow is white' then snow is white and if he said 'Snow is green' then snow is green and..." Since there are an infinite number of English sentences, the paraphrase would have no determinate finite length. So, in a particular observation sentence such as 'The book is on the table' we may get

rid of the notion of truth, but this is impossible in the case of a universal theoretical sentence such as 'Pions have no mass'

Quine's Monism versus Carnap's Dualism

Quine denies that the issue of realism can be formulated in terms of truth. The same sentence appears to be true according to one theory and false according to another. The theories are empirically equivalent. ***There is no fact of the matter whether a sentence is true or false. It has a truth value only relative to a theory.***

Have we not lowered our sights as to settle for a relativistic theory of truth? As realists we cannot say that the statements of each theory are only true for that theory.

The saving consideration is that we continue to take seriously our own particular aggregate science, our own particular world-theory or loose total fabric of quasi-theories, whatever it may be. Unlike Descartes, we own and use the beliefs of the moment, even in the midst of philosophizing, until by what is called scientific method we change them here or there for the better. Within our total evolving doctrine, we can judge truth as earnestly or absolutely as can be; subject to correction, but that goes without saying.¹⁶

Carnap held that we employ linguistic frameworks, in order to make sense of our experience. Working within our framework, we make what seem to be objective

discoveries. We answer internal questions, employing criteria which are provided by the framework. We can also step back and survey the framework as a whole, from a transcendental stand point. From this standpoint, we cannot prefer one framework to another on the grounds that it is objectively true. *The preference is justified on pragmatic grounds.* When we are working within a framework, considering internal questions we are "internal realists". When we step back, we are "transcendental pragmatists". *Our internal realism rests on pragmatist or anti-realist foundations.*

Russell's foundationalism in epistemology rests on the possibility of stepping back to an absolute transcendental stand point and questioning our knowledge of the world as a whole. Quine repairs Neurath's boat while it is still afloat. He rejects both the Russellian transcendental stand-point and Carnapian dualism. Our cognitive position is always internal to a body of substantive theory. *To call a statement true is just to reaffirm it within our theory of nature as we now hold it.* There is no point for stepping back and surveying our present theory. We remain within it and construe everything realistically.¹⁷

We do not see the world with a blank mind. We observe it through a web of belief. The web is not absolute but rather relative to our culture. This is what we mean by inscrutability of reference or underdetermination of theory. We may construct contradictory theories, which are all compatible with the same facts. On the other hand, we cannot step out of our present web of belief or world-view. Forgetting this web, we regard ourselves as realists.

Now, if we want to translate a Martian's speech - to do a radical translation in Quine's words - we do not know what his web of belief is. So, we

are faced with two issues: first his world-view which is completely alien to us and then the underdetermination of that world-view with respect to all the available facts. We hypothesize a translation manual. We cannot claim that we are realist here, in the sense that we did in the previous case. So, comparing inscrutability of reference and indeterminacy of translation, we should not misjudge the parallel:

In being able to speak of the truth of a sentence only within a more inclusive theory, one is not much hampered; for one is always working within some comfortably inclusive theory, however tentative....In short, the parameters of truth stay conveniently fixed most of the time. Not so the analytical hypotheses which constitute the parameters of translation. we are always ready to wonder about the meaning of some foreigner's remark without reference to any set of analytical hypotheses.¹⁸

If a theory fits all our data, we regard it as true. Of course, it is still underdetermined. But we are always inside a theoretical framework and we cannot step out. We have no choice. So, the charge of relativism or anti-realism is in a sense, irrelevant. The situation is quite different when we are dealing with translation manuals. In that case we relativize the notion of meaning to a translation manual or an *a priori* hypothesis. For example the following statements, in a radical translation of a Martian's speech are all true:

"Gavagai" means by the first translation manual "rabbit".

"Gavagai" means by the second translation manual "undetached rabbit parts".

"Gavagai" means by the third translation manual "rabbit stage".

When asked what "Gavagai" means, we usually take ourselves to be using a non-relativized notion of meaning. But there is not such a pre-theoretic, non-relativized notion of meaning. We can only make a pragmatic decision to use one of these meaning notions for communicative purposes. Quine explains the problem in the following way:

It is meaningless to ask whether, in general, our terms 'rabbit', 'rabbit part', 'number', etc., really refer respectively to rabbits, rabbit parts, numbers, etc., rather than to some ingeniously permuted denotations. It is meaningless to ask this absolutely; we can meaningfully ask it only relative to some background language. When we ask, "Does 'rabbit' really refer to rabbits?" someone can counter with the question: "Refer to rabbits in what sense of 'rabbits'?" thus launching a regress; and we need the background language to regress into. *The background language* gives the query sense, if only relative sense; sense relative in turn to it, this background language. *Querying reference in any more absolute way would be like asking absolute position, or absolute velocity, rather than position or velocity relative to a given frame of reference.*¹⁹

So, for Quine there is a problem of indeterminacy of translation and a problem of inscrutability of reference. But this must be removed on pain of concluding absurdly that all reference to objects is nonsense. Quine ends up in the *background language* as the most natural frame of reference. For Quine, all revisions of beliefs conform to a single pattern. There is not two distinct

mechanisms; revision of synthetic propositions against the background of an analytic framework and a revision in analytic framework guided by pragmatic considerations. In Quine's monism the philosopher takes for granted a view of the world. So, it seems that he turns every question of knowledge into an internal one. He argues that we are always viewing the world from within a framework. We cannot get out of language to a transcendental point form which to evaluate the relationship of language to reality.

But Carnap does not accept Quine's methodological monism. He distinguishes between the analytic propositions of the framework itself and the internal synthetic propositions. Choice of framework reflects subjective interests, not correspondence to an *objective* reality. When the external questions about the nature of the framework arise, objectivity is missing; on the hand when we attempt to answer an internal question from within a particular framework we are realist. The duality of internal / external problems in Carnap seems to have an advantage on Quine's methodological monism. It apparently enables us to disentangle the subjective and objective elements in the growth of knowledge. The objectivity of knowledge can be viewed in terms of internal questions. When we are in crisis, the pragmatic considerations play a role.

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Notes

1. Quine, W. V. O. *Word and Object*, P. 3.
2. Quine, W. V. O. *From a Logical Point of View*, P. 41.

3. *Op. Cit.*, PP.42-43.
4. This point is expanded in the next section.
5. See the section on proper names in the chapter two.
6. Quine, "Designation and Existence" in Feigl's *Readings in Philosophical Analysis*, PP.50-51.
7. Quine, W. V. O. *From a Logical Point of View*, PP. 16, 19.
8. Quine, W. V. O. and Goodman, N. *Steps Towards a Constructive Nominalism*, in *Journal of Symbolic Logic*, 12 (1947), PP. 105-106.
9. *From a Logical Point of View*, P.18.
10. Wittgenstein had already argued that the program was a confusion from the start. See chapter five.
11. *Word and Object*, P.171.
12. Ramsey, F. P. *Foundations of Mathematics*, P. 44.
13. Quine, W. V. O. *Word and Object*, P. 24.
14. *Philosophy of Logic*, P.12.
15. Ramsey pointed out to Wittgenstein that: 'A very long (even infinite) conjunction does not fully capture the meaning of "Everything is F"'.
16. Quine, W. V. O. *Word and Object*, PP. 24-25.
17. This is surprisingly comparable with Wittgenstein's view that we cannot get out of language. See chapter five.
18. *Word and Object*, PP. 75-76.
19. *Ontological Relativity and other essays*, PP. 48-49 (emphasis mine).

Chapter Five

Rejection of the Augustinian conception

In his later philosophy Wittgenstein abandons the picture theory of meaning in favour of an account of meaning which explains it on the model of a tool or of a use. We have to look at what people *do* with words . "For a large class of cases - though not for all - in which we employ the word 'meaning' it can be defined thus : the meaning of a word is its use in language."¹ This gives us a completely different conception of the role of language in dealing with the world. In his early work fact stating discourse is the only meaningful discourse, but in his later philosophy it is just one type among others - it is just one type of language game along with an indefinite number of other types. He is calling our attention to the *multiplicity*, the *variety* that we find in the use of language. It is in the nature of a picture that it pictures one particular state of affairs, but a tool can be used for a number of tasks. There is not any single feature that runs through all of language to constitute its *essence*. Many words have only a "family resemblance" among their various uses.

Consider for example the proceedings that we call "games". I

mean board-games, card-games, ball-games, Olympic-games and so on. What is common to them all? - Don't say, "There *must* be something common, or they would not be called 'games' " - but *look and see* whether there is anything common to all. - For if you look at them you will not see something that is common to *all*, but similarities, relationships, and a whole series of them at that. To repeat: don't think, but look! - Look for example at board-games, with their multifarious relationships. Now pass to card-games; here you find many correspondences with the first group, but many common features drop out, and others appear.²

Here he gives an example of the word "game" and asks that what do all games have in common? If you consider the enormous variety of different kinds of games, you will not find any single essence of gamehood but rather a series of criss-crossing and overlapping similarities. There is not any single thing that all games have in common, by virtue of which they are called games.

It might seem that what Wittgenstein is saying is common-sensical, but he is in fact militating against a very powerful philosophical tradition. He is attacking his earlier view that words get their meaning by *standing for* objects (whether physical objects or Platonic abstract entities) and also against another tradition that says that words get their meaning by being associated with ideas in the mind. He is fighting against the view, according to which, in order for a word to have a meaning, *there must be some essence* which that word expresses. He says that there need be no single entity that is exclusively associated with a word and which is common to all its uses. The meaning of a

word usually indicates a pattern of family resemblance among the different cases. He does not say that all words in all languages exhibit the phenomenon of family resemblance. There are words that have strict definitions, but many of the important terms in philosophy including the term 'philosophy' itself are not of that type. If we look at the actual uses of words like "good" and "beautiful", we will only see various criss-crossing family resemblances.

Now, if one asks: "What is common to all games?" We may reply: "Nothing, we have just a network of similarities". But does the question, itself, have a clear sense? No, because if someone says, for example, that bull fighting is not a sport, there is no point in reminding him of the similarities among bull fighting and other sports. What you count as similarity depends on the context of what you are talking about. You can claim that anything resembles anything else, for you can always find a pattern of resemblance between them. The notion of family resemblance does not make any sense in the absence of a genuine context. *There is not such a thing as an essential pattern of family resemblances which a word would stand for.* Because, the pattern is purpose-relative and context-dependent.

[T]he original question 'What makes us identifying all the things that we call games as *games?*' is itself a mere confusion. For there is no such class as 'all the things that we call games'. People call certain things games for certain purposes and not for others.³

We may consider Wittgenstein's treatment of the notion of 'philosophy' which is the inevitable outcome of his new conception of language, as another example.

What is the meaning of 'philosophy'. In both the *Tractatus* and the *Investigations* Wittgenstein says that philosophy is an activity of clarification, it is not a discipline with factual claims. But in the *Tractatus* the drive is to uncover a substantial depth-structure which underlies the surface use of ordinary language and determines the limits of thought. That depth-structure reflects the *ontological nature* of the world. In the *Investigations* the quest for an *ontology* is abandoned altogether. Attention is diverted from an alleged structure or essence to the uses of linguistic expressions.

Philosophy may in no way interfere with the actual use of language; It can in the end only describe it. For it cannot give it any foundation either. It leaves everything as it is.⁴

Wittgenstein takes the supply of philosophical problems to be inexhaustible. By rejecting essentialism, Wittgenstein argues that *the concept of philosophy is a family resemblance concept which is concerned with an extendable and open-ended network*. There is no set of determinate essential characteristics which make philosophical problems *philosophical*. "Philosophy" stands for both a set of overlapping questions and their solutions by disparate but overlapping means. In this way, Wittgenstein thought that the battle against the bewitchment of our intelligence by means of language was an *on-going affair*. The difficulty arises only if we assume that there *must* be a single common factor underlying the various instances of the concept of "philosophy". According to later Wittgenstein, philosophy is not a second order study:

One might think: if philosophy speaks of the use of the word "philosophy" there must be a second-order philosophy. But it is

not so: it is, rather, like the case of orthography, which deals with the word "orthography" among others without then being second-order.⁵

If there were an underlying common factor, which united all philosophical problems, reference to that common factor would allow us to *delimit neatly* what is and what is not 'philosophy'. Wittgenstein rejects this essentialism. Now, if philosophy has no essence, if there is no one thing that philosophy is and there is not a single philosophical method, then the definition of philosophy will naturally take the form of a set of examples. We should not expect to find a set of determinate, essential characteristics which make our problems "philosophical". Wittgenstein shows what philosophy is by presenting a series of examples. A series of conceptually overlapping examples can serve to define a pattern of family resemblances. This is the way the later Wittgenstein conceives of philosophy. What connects philosophical problems is a complicated network of similarities, overlapping and criss-crossing. It may be recalled that Wittgenstein's earlier monistic account of language led him to suppose that the whole of philosophy is the attempt to solve a single problem - that of the general form of a proposition. He said in his Notebooks that "his whole task consists in explaining the nature of the proposition."⁶ In *Investigations* he rejected this "super concept" of a proposition:

But haven't we got a concept of what a proposition is, of what we take 'proposition' to mean? - Yes; just as we also have a concept of what we mean by 'game'. Asked what a proposition is - whether it is another person or ourselves that we have to answer - we shall

give examples and these will include what one may call inductively defined series of propositions. *This is* the kind of way in which we have such a concept as 'proposition'.⁷

Philosophy is not anything except philosophical problems, which are particular individual worries. Their common element extends as far as there is a common element in different regions of language.⁸ Of course, in his anti-essentialism, Wittgenstein does not deny that there is a network of similarities that holds *philosophy* together.

The essentialist confusion which leads us to wonder about the nature of 'philosophy' is to be found in the way we wonder about the nature of any concept such as 'game'. We have not a sharply determined notion of 'philosophy' or of what 'philosophical confusions' are. For example, Wittgenstein accuses philosophers of 'overextending models', of 'ignoring the role of background circumstances in their practices' etc. Now, is there a single confusion in which all of these philosophical errors take part? No. Nothing in Wittgenstein's later work plays the role of philosophy's single, characteristic flaw. Of course, this does not mean that we have not characteristic flaws in philosophy. Wittgenstein's later writings are open-ended, multi-faceted and sometimes fragmentary and do not appear to embody a single philosophical method - though there are philosophical methods. *We cannot escape to a metaphilosophy.* The piecemeal approach is the only way of defining 'philosophy', which *may be anything but a clear cut conception.*

The *preconceived idea* of crystalline purity can only be removed by turning our whole examination round. (One might say: the axis

of reference of our examination must be rotated, but about the fixed point of our real need.)⁹

What is the real need?

Wittgenstein's approach is in the way of a gestalt shift. The axis of reference of our examination must be rotated. We are to see that the question of the meaning of philosophy cannot be answered in the way we thought of it. But this is not to say that it cannot be answered at all. The right approach is to stop looking for a kind of final, all-embracing solution to the problem of the meaning of philosophy.

Philosophical Investigations begins with a quotation from Augustine's *Confessions*. Augustine gives a particular account of language. It is roughly this: The individual words in a language name objects. The meaning of a word is the object for which it stands. Sentences are combinations of such names. Augustine's account of language is right, provided that he does not claim that it gives us the essence of all languages. We should take it as a description of one type of language-game. In it a human being would communicate exhaustively by means of names of objects. This simple type of language-game could be played.

Augustine, we might say, does describe a system of communication; only not everything that we call language is this system. And one has to say this in many cases, where the question arises "Is this an appropriate description or not?" The answer is: "Yes, it is appropriate but only for this narrowly circumscribed region, not for the whole of what you were claiming to describe."¹⁰

We may imagine many primitive languages. In the famous example of a builder and his assistant the expressions they use are names for objects. The purpose of the communication is that of giving order to fetch something. We can ~~*~~ *manufacture* more complex languages or study the languages of primitive tribes or investigate how a baby learns and uses the language. These modes of primitive artificial or natural language are simplified language-games. They can help us in analysing our complex many-sided natural language.

The term "language-game" makes it clear that the use of language is part of some wider activity or form of life. Consider the sentence "This is red." We cannot say straight away what its use might be. It could be employed in different language-games. It can be used to describe the colour of some object; to define ostensively the meaning of the word "red" by means of a sample; as an item of instruction in teaching someone English language; as a coded message or password; etc. So the sentence "This is red" has no independent, self-contained real meaning apart *from the setting in which it is used*.

How many kinds of sentences are there? Say assertion, question and command?-There are countless kinds: *countless* different kinds of use of what we call "symbols", "words", "sentences". And this multiplicity is not something fixed, given once for all; but new types of language, new language-games, as we may say come into existence and others become obsolete and get forgotten.... Here the term "language-*game*" is meant to bring into prominence the fact that the *speaking* of language is part of an activity or a form of life.¹¹

Language has no Foundations

In his earlier philosophy, Wittgenstein is in search of a firm foundation for language. The cornerstone of the *Tractatus* is the belief that language *must* have a foundation, an ultimate necessary grounding. Wittgenstein later on uses a metaphor for such a position. He speaks of reaching the bed-rock, *the place where the spade turns*. According to the *Tractatus* the spade would reach such a hard ground, because there could not be an infinite regress. He thinks that language must at some point be grounded in reality. The picture theory, which is a version of the traditional correspondence theory of truth, is presented as a solution to the problem of the connection between language and the world. Wittgenstein is bewitched by the picture theory of meaning at this stage of his thought. Since, most of our ordinary sentences do not seem to be pictures in a clear sense, he concludes that their real nature is to be revealed by logical analysis.

That is, as if our usual forms of expression were, essentially, unanalysed: as if there were something hidden in them that had to be brought to light.¹²

If a sentence of ordinary language does not satisfy the requirement of being a picture, then its true nature is not disclosed and this can be done by showing that the sentence is a truth-function of elementary sentences. For, an elementary sentence is a picture par excellence.

So, the task of logical analysis according to the author of the *Tractatus*

was to discover the hidden structure of ordinary language which reflects the true structure of the world. In the *Tractatus* he had believed that it was impossible to determine *a priori* the forms of elementary propositions, but that they could be specified at a later date. Later Wittgenstein criticised this view in such a way:

The truth of the matter is that we have already got everything and we have got it actually *present*; we need not wait for anything. We make our moves in the realm of the grammar of our ordinary language, and this grammar is already there.¹³

This was a radical change in Wittgenstein's conception of language. Logical analysis, as he had previously conceived it was no longer important. No longer did he assume that if one of our ordinary sentences was not *prima facie* a picture then a future analysis of it into elementary propositions would reveal its real pictorial nature. According to his new method, we take a sentence that puzzles us and remind ourselves of the occasions and purposes of life in which and for which it is actually used. The real method is *descriptive* not *analytic*. we do not need to excavate language to ***get to its alleged foundations***. "Everything lies open to view."¹⁴

We may look at speaking a language on the analogy of playing a game. We cannot think that anything goes in the use of words any more than that anything goes in a game. Once we get rid of the thought that meaning is a matter of words corresponding to the ideas in the mind, or a matter of words *standing for* things in the world; once we see the point of analogy between the use of words and the use of pieces in a game like chess, then we can see that the meaning of a word is entirely given by its use. Just as the "meaning" of the

Queen in chess is exhausted by its role in the game, the meaning of philosophically puzzling words like "true", "good" and "justice" is entirely exhausted by their role in the language-games that are played with them. Wittgenstein insists that we should not look for the foundations of language-games any more than we look for foundations of games such as football. A characteristic philosophical mistake is to think that there must be some foundations, some transcendental justification for each language-game. All we can say, in each case, is that "this language-game is played and this is how it is played". They are different types of human activity. The main point of analogy between games and languages is that they are both social activities and rule-governed.

Can't we extend their use.

We cannot get outside the language. We can never occupy a position which is not embedded in language, from which to think about reality. All our concepts are built up by us in linguistic terms. When we refer to various objects and talk about them, our concepts and the way we divide up the world is already conditioned by the structure of our language. *Reality divides up the way we divide it and we can only think of the world, from within a language. We can only think of one thing as a hand or another thing as a table, because we have the relevant concepts, that is, the relevant words.* To see something as a table we have already to be in possession of the concept "table". What we see as reality, is constituted by a whole conceptual framework which is expressed in language and of which we must already be in possession.

For example, Eskimos have fourteen different names for *snow*; the snow that bears one's weight, the snow which one will fall through it, etc. They do not

have a single word for snow in general, as we do. They do not need it. They talk in the way they do because of the sort of social activities they are engaged in - because of the form of life they lead.

There could not be such a thing as thinking apart from the use of linguistic expressions. Language permeates all thinking and therefore all human experience. Our task as philosophers is not to sit back and contemplate the transcendental nature of reality, but rather to grasp the internal relation of language and reality and to describe how we actually use expressions like "true".

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Our philosophical difficulties arise when *"language goes on holiday"*, when a word is no longer doing the job for which it is properly fitted. We usually take a word out of the language-game where it is at home and then try to think of it as standing for something transcendental. For example we try to inquire into the *intrinsic nature of good, truth and knowledge* instead of looking at *how the words "good", "truth" and "knowledge" are used*.

Following a Rule

Wittgenstein argued that for a language to mean anything at all, it has to be rule-governed. The criteria of what constitutes the following of a rule are inescapably social. To explain this point, we have to say a little bit about his conception of rule-governed behaviour. Language is not everywhere bounded by rules. There are always many gaps left open by any system of rules. The system of rules would never be *complete*. There would always be new possibilities which would

be unaccounted for, by the existing rules. If you could throw a tennis ball, when you serve, fifty feet high and thus delay tennis games, the authorities would have to make a new rule. The next point he makes is that rules are always subject to different interpretations. You can always find some way of interpreting a rule, so that it turns out that your behaviour is in accordance with it. But, if anything can be made to accord with a rule by some interpretation, then anything can also be made to conflict with it, given some other ingenious interpretation. So, you neither accord, nor conflict with a rule. It looks as if the rule would simply drop out and would play no role in explanation of behaviour.

This was our paradox: no course of action could be determined by a rule, because every course of action can be made out to accord with the rule. The answer was: if everything can be made out to accord with the rule, then it can also be made out to conflict with it. And so there would be neither accord nor conflict here.¹⁵

It is worth mentioning that, Wittgenstein advances questions to clarify our concepts and to expose the sources of our confusions. His repetitive and apparently disorganised style can be understood by viewing him as a new Socrates. Some interpreters try to defend the correctness of Wittgenstein's position as if he has a thesis to support. But we may see him as *a new Socrates who is engaging our latent desire to mire ourselves in nonsense*. He tries to make us realize that *philosophical problems are chimeras*.

Then why raise them.

The sceptical interpretation of Wittgenstein's remarks on rule-following found its climax in Kripke. But, Wittgenstein never gave up his belief that *"scepticism is not irrefutable, but obviously nonsensical when it tries to raise*

doubts where no questions can be asked."¹⁶ What Kripke sees here is a sceptic's attack. He concludes that " There can be no such thing as meaning anything by any word. Each new application we make is a leap in the dark."¹⁷ But, if we construe that section of *Philosophical Investigations* as a proof of reductio, then the sceptical dilemma disappears and meaning does not remain unexplained. Wittgenstein's discussion of following a rule ends up in the above paradox. The inescapable consequence of the interlocutor's line of attack is that we cannot even understand what he is saying. That is absurd and therefore the purpose of the reductio is to show that the argument is self-defeating. In other words Wittgenstein argues that any interpretation of a rule hangs in the air. So we are forced to either abandon this picture or conclude that language is impossible. Kripke concludes that we apply the rule blindly because any application of a rule is an unjustified stab in the dark.¹⁸ But Wittgenstein's aim is to clarify the logic of following a rule *in the context of his discussion of meaning*. He first shows that "meaning" is neither an abstract entity nor an object in the mental or physical world. Then he asks "In what does the understanding of a word consist?" Is it that one understands the word by grasping a rule? Then he asks "what does the grasping of a rule consist in?" So, the discussion of rule-following is placed within the context of concept acquisition and *Wittgenstein tries to establish that it only makes sense to speak of meaning or following a rule in practice*.

This could be extended and answered.

What this shows is that there is a way of grasping a rule which is *not an interpretation* but which is exhibited in what we call 'obeying the rule' and 'going against it' *in actual cases*¹⁹

In other words, Wittgenstein's solution to the paradox of rule-following is that obeying a rule is a social practice. Society determines what counts as conforming to the rule.

Wittgenstein discussed the problem of following a rule by the example of instructing a pupil to continue a mathematical series. Despite the mathematical nature of his examples, he intended to explain the application of any rule; for example, the rule for using the word 'red'. By these clear examples, he attacked the idea that there are meaning-bodies underlying the use of linguistic expressions. He concluded that if we wish to understand a language, we should look at its social context; the purpose it serves and the place it has within the activities of a form of life.

One way of putting Wittgenstein's point about rule-following would be this: We may be inclined to say that because any number could be made to accord with the series 1, 2, 3, 4, ...according to some rule or other, then we cannot be certain about the next figure. But this is mistakenly to suppose that our certainty about what comes next relies on there being no alternatives. The truth is that no one ever thinks of alternatives. *Certainty arises from practice i.e., from the way in which we normally act.* The fact that there is an infinite number of possible interpretations of how to follow a rule, does not show that anyone would take one of these interpretations arbitrarily. You could always derive any proposition from any other one. But of course, it does not follow that you do so. You could interpret the gesture of pointing in the direction of finger to wrist, but no one ever does interpret it in this way.

Logical Necessity

Logical inference consists in the derivation of a proposition from another one according to a rule. But we can always find some rule which will approve any derivation that we please. Of course, if you say that the series of natural numbers goes like this: 1, 2, 3, 4, 7, 11, ...I would not understand you. The fact is that no one will interpret it that way. We think of the rules as determining in advance the totality of their applications. We think that we *must* follow the rule in a certain way. But, where does this "must" come from? What constitutes the necessity? The logical or mathematical necessity lies in the fact that everyone will do it that way. The necessity comes from the practice of the community. The "must" is explained by what we do, rather than the other way round. My certainty in how to continue the series of natural numbers, is like my certainty that the floor will support me when I walk into the room. I do not decide and furthermore, I do not even think about an alternative in this case. It is not the case that there are no alternatives, but, it is rather the case of "not considering", "not bothering about" any alternatives. We drive on the left, that is a convention which we have decided to follow. It is the result of reflection on the alternatives. But we carry on the application of an arithmetical rule, without reflection. That is what gives arithmetic its necessity.

Wittgenstein claims that meaning is not prior to the *practice* of the language. Practice itself determines how to apply a rule, what is meaning and what is logic. Meaning is a feature of human life. Logic arises out of ordinary

human practices. We may not establish any logical structure, any standard in advance of human activities. In other words, In the *Investigations* logic is a matter of rules. In formulating a rule, we presuppose a mastery in the use of words which is acquired in *practice*. The rules of logic and mathematics are not the reflection of some transcendental, deep lying structure. They derive their point from what surrounds them - the social life into which they enter. It is not mathematics that makes human practice relevant. Mathematics does not underlie our practice. Rather we, as those who take part in a practice, treat something as relevant which defines mathematics. 'In the beginning was the deed'.

Nothing is Wrong with Ordinary Language

Even in Wittgenstein's earlier view, the purpose of a logical system is not to provide the logic that ordinary language lacks , rather it is to display the logic of ordinary language more perspicuously. One cannot manufacture a language, logically more perfect than the ordinary one. Such a project is incoherent. One thing cannot be more logical than another. A thing is either logical or it is not. In his introduction to the *Tractatus*, Russell writes: "Mr. Wittgenstein is concerned with the conditions for a logically perfect language". But Wittgenstein says:

Tractatus, 5.5563 "All the propositions of our everyday language, just as they stand, are actually in perfect logical order.

The analysis of the logician will not create order, it will show what is already there.

According to later Wittgenstein, nothing is wrong with the ordinary language and it is to be understood *as it is*. It is to be explored in all its varieties and complexities. Wittgenstein insists that it is not the task of the philosopher to *interfere* with language that is used. He says that there is no ideal language, because each language is embedded in a form of life. Language is employed for a variety of purposes which are set against the background of a form of life. If we take language out of this context it will be like an idling wheel - like a tool left unattended.

Why not.

We may compare the variety of uses of linguistic expressions with the lines on a map :

Compare the different parts of speech in a sentence with lines on a map with different functions (frontiers, roads, meridians, contours.) An uninterested person sees a mass of lines and does not know the variety of their meanings. Think of a line on a map crossing a sign out to show that it is void.²⁰

As mentioned earlier, we may also compare the different roles of linguistic expressions to the functions played by different pieces in a game of chess. They move according to different rules in the context of various tactics directed to the purpose of winning the game. Instead of asking for the meaning of linguistic expressions, we should look for their use. Instead of asking "What is number?" we should ask "How are numerical expressions used?" In this way we will not try to find some substance for a substantive. But by trying to find out how

to perform some activity within a relevant language-game we would avoid *the mythology of looking for some object as a correlate for some pseudo-name*.

Pseudo-problems of traditional philosophy arise through the assumption that words carry a *fixed* meaning with them.

Ostensive Definition

To give an ostensive definition of some expression, is to point to some sample. That sample becomes a constituent of the grammatical rule itself. In so far as the sample serves in this way, we are dealing with a matter of grammar, not with an application of a grammatical rule - only in this second case can we speak of truth or falsity.

In order for an ostensive definition to work, *it is necessary that it be part of a wider system of rules and concepts*. It cannot stand by itself or work in a vacuum. If one is to explain by means of an ostensive definition, what the colour *red* is, the person to whom this definition is offered, should understand the concept of colour as well as a network of other concepts and rules. Without this background, the definition will not work.

When one shows someone the king in chess and says "This is king", this does not tell him the use of this piece unless he already knows the rules of the game up to this last point: the shape of the king. You could imagine his having learnt the rules of the game without ever having been shown an actual piece. The shape of

the chessman, corresponds here, to the sound or shape of a word....Consider this further case: I am explaining chess to someone; and I begin by pointing to a chessman and saying: "This is the king; it can move like this,... and so on". - In this case we shall say: the words "this is the king" (or "this is called 'the king' ") are a definition only if the learner already knows "what a piece in a game is". That is if he has already played other games or has watched other people playing and understood - and similar things.²¹

We may think that there is no difficulty in giving a proper name to an object. We correlate a name with the object in question. Wittgenstein says that merely pointing to something and uttering a sound is not naming, because the hearer cannot know what the sound stands for. What is the difference between pointing to an apple and to its colour? It depends on the context. Before we can use names we have to classify. *We can always find a common feature among some objects, to classify them in that respect.* The use of language is splitting things into kinds. *We split up things according to our interests.* The matter of how to split up things - and as a result how to name them - depends on the form of life that we lead. What is usually presupposed is that we only put labels on different types. It is not the case that something is over there, waiting for a label. It is we who split up things and create the categories. We do so in the context of social and cultural institutions. We have to change the nature of social institutions, in order to change the import of commonly used words. Suppose a lion speaks. Even if we could label and decode the words he uses, we would not understand

Quine.

him.²²

In order to see something, it is not enough that I just open my eyes. unless I attend to, pick out, identify, think of; in short unless I engage myself in some activity, I do not see anything. Seeing is not a passive state of mind. Russell was wrong about this. We cannot give a passive account of a mental image just by labelling it, without any reference to language and thought. A static picture of language is a confusion, because a word gets its sense from the context in which it is used. Language reflects a form of life. This implies that we cannot understand it apart from the rest of human activities. It is tied to public social phenomena at every point.

The Private Language Argument

As discussed in the second chapter, the Cartesian conception of mind persisted in epistemology for about three hundred years. It was adopted, in one way or another by all rationalists and empiricists. Wittgenstein attacks that traditional conception by his private language argument. He uses the analogy that a *chess-move* worked out on a chess-board has only significance through its connection with the whole practice of playing chess. Similarly a linguistic expression has meaning only through its connection with a public language game. Of course by private language, he does not mean some specially devised code that a person could use privately. You can obviously have a diary and invent a language for it that you yourself understand. Wittgenstein does not

deny it. But that is just a private code which is parasitic on a public language and can be decoded.

Wittgenstein attacks the private language of Descartes in his *Meditations*, which cannot be made public in principle and is supposed to be *antecedent to the establishment of "the external world" and the existence of other people*. He says that the very notion of such a language is incoherent. He criticises the notion of a private language in many ways:

Could there be a language in which I use words to name my own private sensations, in such a way that no one else could understand the words, because they are defined ostensively in terms of my private experiences? We cannot give a private ostensive definition where we inwardly point to a private experience, name it and then use the name to refer to the same experience in the future. If we try to think of a sensation language on this model, we will not be able to distinguish between actually using a word right and thinking we are using it right. If there is not such a distinction, then we cannot speak of "right" at all. In other words, we cannot justify using a name in new situations, if it is in principle, impossible to recapture the original situation. Yet this impossibility is always the case with a private ostensive definition. The original case can only be captured by memory and there is no way of checking a present memory against the original sensory experience.

I speak or write the sign down and at the same time I concentrate my attention on the sensation - and so, as it were, point to it inwardly. - But what is this ceremony for? for that is all, it seems to be ! A definition surely serves to establish the meaning of a

sign - Well, that is done precisely by the concentration of my attention; for in this way I impress on myself the connection between the sign and the sensation - But "I impress it on myself" can only mean: this process brings it about that I remember the connection *right* in the future. But in the present case I have no criterion of correctness. One would like to say: whatever is going to seem right to me is right. And that only means that here we can't talk about "right".²³

We cannot justify our memory by appealing to itself.

As if someone were to buy several copies of the morning paper to assure himself that what it said was true.²⁴

The rules for using sensation words are public social rules. They are learned and applied in a *social setting*. Wittgenstein says: "An 'inner process' stands in need of 'outward criteria' ". We learn the use of all words, including the words for inner sensations from other people. All these words existed long before we were born and *so did the criteria for their use*. So, existing words and their meaningful use are social phenomena, no matter how *private* the subject matter they are used to talk about. The epistemological implication of this point is that we cannot form our conception of the world by referring to entities which are exclusively private to us. *This is a refutation of Russell's theory of knowledge.*

↑ spell out,

Another argument is that a private language cannot serve as a medium of intersubjective communication. The rules of a private language may not be used by someone else, because its objects are inaccessible to others.

The essential thing about private experience is really not that each

person possesses his own exemplar, but that nobody knows whether other people also have *this* or something else. The assumption would thus be possible - though unverifiable - that one section of mankind had one sensation of red and another section another.²⁵

Another criticism is about the claim that *only* the speaker of a private language has a privileged position to *know* his inner sensations. If I have a private sense-experience, only I *know* it, others can have a *belief* about it. That belief is based on inference from my outward behaviour and can be wrong. But in the way we usually use the term "know", there are cases that we know that someone else has such and such a sense-experience. Not all judgements ascribing a sense-experience to others, are wrong. Of course a person who shows all "outside" criteria of say, anger may be pretending - he may be a skilful actor. *But if the term "anger" is to have any meaning, then pretence of anger cannot be universal.* It is false to say that we never know that someone else is angry. "Pretence of anger" is a meaningful expression only in contrast with its antithesis - a genuine anger. Pretence of anger does not undermine, but underline genuine anger.

Why not?

On the other hand, to say "I know that I am angry" means no more than, "I am angry". *Since the notion of doubt does not have any applicability or foothold in connection with this sentence, neither does any claim to certainty.* Neither doubt, nor certainty has any bearing on the sentence "I am angry". Because "I do not know that I am angry" is senseless, so is its negation.

In what sense are my sensations *private*? Well, only *I* can know

whether I am in pain, another person can only surmise it. - In one way this is false, and in another nonsense. If we are using the word "to know" as it is normally used (and how else are we to use it?) then other people very often know when I am in pain. - Yes, but all the same not with the certainty with which I know it myself!

- It can't be said of me at all (except perhaps as a joke) that I *know* that I am in pain. What is it supposed to mean - except perhaps that I *am* in pain?...

The truth is: It makes sense to say about other people that they doubt whether I am in pain; but not to say it about myself.²⁶

As discussed earlier, Wittgenstein rejects *Cartesian dualism*, both in philosophy of mind and in philosophy of language. How do we decide whether someone intends something by a verbal sign? Is it enough - if we could - to identify some particular physiological process going on in his mind? Would our criteria for that particular neural process establish that there is such an intention?

The understanding of a language, as of a game seems like a background, against which a particular sentence acquires meaning, but this understanding, the knowledge of the language, isn't a conscious state that accompanies the sentences of the language. Not even if one of its consequences is such a state. It is much more like the understanding or *mastery of a calculus*, something like *the ability to multiply*.²⁷

If you want to know whether a child understands the meaning of "division ", you see if he can work out different examples of division. It is not a question of

establishing whether there is some private experience going on in the child's mind. It is rather a matter of giving him fresh examples and seeing whether he can perform the calculation. Meaning is not a mental process which accompanies a word. An explanation of what I mean by a word is a definition of that word. It is a technique-constituting rule, not a description of what goes on in my mind when I utter the word. To explain 'meaning' we appeal to the mastery of techniques for the application of grammatical rules.

Language does not rest on Knowledge

In the investigations, Wittgenstein chose as his starting point a quotation from Augustine and his reaction to Augustine's picture of language was the dominant theme throughout the book. A similar role is played in *On Certainty* by the writings of Moore. Wittgenstein cites Moore's position on doubt and knowledge and much of the book is concerned with his reaction to Moore's position. In his papers; *A Defense of Common Sense* and *Proof of An External World*, Moore claims that the common sense view of the world is basically right. Wittgenstein accepts that view, but on other grounds. To reply the sceptic, Moore says that he proves the existence of the 'external world': "This is one hand and this is another one, so there are at least two 'external objects'; therefore there is an 'external world' ". Wittgenstein says that a philosopher puzzled by the misuse of language would put forward the sceptical questions.

Moore says: 'I know that there is an external world.' His opponent argues

that 'I do not know, because I cannot prove it.' Both Moore and his opponent are equally wrong. They are making the same mistake. They may not claim to know these things.

I am at present, as you all can see, in a room and not in the open air; I am standing up, and not either sitting or lying down; I have clothes on, and am not absolutely naked; I am speaking in a fairly loud voice, and am not either singing or whispering or keeping quite silent; I have in my hand some sheets of paper with writing on them; there are a good many other people in the same room in which I am; and there are windows in that wall and a door in this one.²⁸

Moore declares that he *knows* he has clothes on. If Moore had declared to his audience that he did not have clothes on, the audience would not have regarded him as mistaken, but as mentally disturbed. Being mistaken or being in doubt would be unintelligible in this context. Moore is wrong in saying that he knows that he has two hands, because when a person claims that he *knows* something, we expect him to produce evidence for it. But Moore could not do this. As we discussed in the introductory chapter, if what a person claims is of such a kind that the grounds which he can give are no surer than his assertion, then he cannot say that he knows it.

My having two hands is, in normal circumstances, as certain as anything that I could produce in evidence for it. That is why I am not in a position to take the sight of my hands as evidence for it.²⁹

Wittgenstein is both anti-Cartesian and anti-empiricist. He rejects the

foundationalism, which is a search for knowledge, founded on absolute indubitable truths. His remarks are a criticism both of rationalism and empiricism. In both of these traditions you justify a proposition in terms of another one. This process has to come to an end either in self-evident truth or in sense experience. Wittgenstein says that we end up in neither of them, but rather in certain unreflecting ways of acting, based on a form of life.

The child learns to believe a host of things - he learns to act according to those beliefs. *There forms a system of beliefs*, bit by bit, and in that system some things stand unshakeably fast and some are more or less liable to shift. *What stands fast, does so, not because it is intrinsically obvious. It is rather held fast by what lies around it.*³⁰

'An empirical proposition can be *tested*' (we say). But how? and through what?

What *counts* as its test? - "But is this an adequate test? And if so, must it not be recognisable as such in logic?" - As if giving grounds did not come to an end sometime. *But the end is not an ungrounded presupposition: it is an ungrounded way of acting.*³¹

What is wrong with Moore's claim? Moore's defense of common-sense against the sceptic, has the form "I know with certainty ... to be true", where the blank is to be filled by some proposition like " I have two hands." But this is a misuse of the phrase "I know". The expression "I know" cannot properly be used in connection with such truisms. They play such a fundamental role in our thought that it is a confusion to suppose that we *know* them. They provide the grounds

for determining the truth of other propositions. *They are themselves without grounds and are incapable of being justified.* They are pre-logical in character.

If the true is what is grounded, then the ground is not *true*, nor yet false³²

The truisms that Moore claims to know, belong to a world-picture. Wittgenstein describes a world-picture by various metaphors : the river bed of thought, the inherited background, a system, an axis, hinges and so on.

The *questions* that we raise and our *doubts*, depend on the fact that some propositions are exempt from doubt, are as it were like hinges on which those turn. That is to say, it belongs to the logic of our investigation that certain things are in *deed* not doubted.³³

The river bed of thought is heterogeneous and moving. As already discussed, in his earlier work Wittgenstein was in search of a firm foundation for language - a place where the spade turns. Philosophical analysis was a method for mining down to the bed-rock of language. He always desired to reach the point where digging would be no longer intelligible. In developing the concepts of 'language-game' and 'autonomous grammar' he finally arrived at the central concept of *a form of life* as the foundation of language and thought. There is, however, a shift in Wittgenstein's understanding of the notion of 'foundation' here. He no longer thinks of *foundation* as a solid bed-rock where the spade turns, but rather as a river-bed which is moving.

A world-picture is grounded in a form of life. There are many sources from which we acquire our world-picture. We take many things on authority. For example, we accept Darwin's theory. We actually do not go through the details

of the evidence for that theory. It is not always a matter of deliberately setting out to test the truth of a belief. We take a lot of ordinary or scientific beliefs, for granted. We inherit a host of beliefs and later on we call some of them empirical propositions and some grammatical rules or definitions. The truisms that make up our world-picture have been acquired on trust. They are acted on unreflectingly and uncritically.

At a given stage of human development certain factual claims are subject to doubt. At another stage, the same claims are part of man's conceptual framework - they are fossilized and are part of the river-bed of his thought. In other words, the status of a particular empirical proposition may shift from a free-floating to a fixed one.

It was an empirical discovery that 'Acids are proton donors'. To day, a scientist does not call something 'an acid' unless it is a proton donor and if it is a proton donor, then it is to be called 'an acid' even if it has no effect on litmus paper. The proposition that 'Acids are proton donors' like ' $10+10 = 20$ ' has been withdrawn from being checked by experience and serves as a paradigm for judging experience.³⁴

On the other hand, we cannot determine the status of any proposition in isolation and regardless of its particular context of use. In some contexts, the statement " I have two hands " would be open to empirical verification - e.g., if uttered by an amputee. But the sentence stated by Moore as a truism is taken for granted in our daily *practice*. It is not open to test.

By contrasting those propositions that constitute our world-picture and those that do not have such a role, we see that the label "empirical proposition"

does not show the logical status of a proposition.

"Our 'empirical propositions' do not form a homogenous mass."³⁵

When Moore says: "I am certain that such and such is true", he fails to make the distinction between what belongs to the framework of our beliefs and what does not. The use Moore makes of the phrases like "I know ...is true" is a misuse, because these truisms belong to the framework of our beliefs. They are neither true, nor false and therefore we cannot say that we *know* them. Moore's truisms are pre-logical and it is inappropriate to use "I know" in connection with them.

The game of doubting itself presupposes certainty³⁶

Why do I not satisfy myself that I have two feet when I want to get up from a chair? There is no "why". I simply don't. This is how I act. My judgements themselves characterise the way I judge, characterise the nature of judgement. How does someone judge which is his right and which his left hand? How do I know that my judgement will agree with someone else's? How do I know that this colour is blue? If I don't trust myself here, why should I trust anyone else's judgement? Is there a why? Must I not begin to trust somewhere? That is to say: Somewhere I must begin with not-doubting; and that is not, so to speak, hasty but excusable: It is part of judging.³⁷

Descartes' proposed use of the method of *universal* doubt is a confusion. *Genuine doubt takes place against the background of beliefs that are undoubted.* This background provides the standards, by which we resolve *particular* doubts. If someone doubts that he has a hand, *he must be at least*

certain of the meanings of the words he uses in expressing his doubt.

If you are not certain of any fact, you cannot be certain of the meaning of your words either...But do you know what the word "hand" means? ...And isn't it an empirical fact that *this* word is used like *this*?

Admittedly if you are obeying the order " bring me a book", you may have to check whether the thing you see over there really is a book, but then you at least know what people mean by "book" and if you don't, you can look it up - but then you must know what some other word means. And the fact that a word means such-and-such, is used in such-and-such a way is in turn an empirical fact, like the fact that what you see over there is a book...*Doubt itself rests on what is beyond doubt.*³⁸

Moore's truisms are neither true, nor false. They belong to the river-bed of our thought. Nothing can be more fundamental than that river-bed, it cannot be justified. There may be special circumstances in which we could use the expression "I know" in connection with Moore's truisms. A child learning the names of colours may say "I know this is blue", or an amputee may put forward the claim that he has two hands. But, an ordinary person who is going about his affairs cannot even be said to assume that he has two hands. As to the existence of his hands 'doubt does not come in', it is not an intelligible doubt. It is not that in normal life a person is certain or takes for granted or *presupposes* that he has two hands. He rather makes statements about his hands *without thinking* about their existence. A child responds to requests like "Hold out your

hands" without considering whether he has hands. This immediate unthinking response cannot be said to show that he knows or is certain that he has hands.

"Knowledge" and "certainty" have no application here.

The child, I should like to say, learns to react in such and such a way; and in so reacting it doesn't, so far, know anything. Knowing only begins at a later level.³⁹

He says again:

"It is our acting which lies at the bottom of the language-game."

Certainty manifests itself throughout the normal life of a human being. For example, it appears in advance of any learning in the spontaneous behaviour of reacting to a cause. When one instructs his pupils to continue a mathematical series or any pattern like _..._..._..._..._..._, he could do it in many different ways. It is true that he could, but he does not. We cannot give any rational foundation for this certainty in continuing the series. That is not a product of thinking. I discussed the logic or grammar of our deductive inferences in the opening chapter. It consists in the derivation of a proposition from another one according to a rule. But we can always find some rule or other which will approve any derivation that we please. However, the deductive inference that any one would make is the normal one. The logical necessity lies in the fact that every one will do it that way.

Suppose that a child runs into another child and knocks him down. The latter will react by getting up and hitting the first one. The child would react on the cause of his falling. He would not doubt about what made him fall. Neither could he be said to *assume* it.

Not clear.

Calling something 'the cause' is like pointing and saying: 'He's to blame!' ⁴⁰

We call this reaction to the cause "immediate reaction", because there is no uncertainty, conjecturing or inferring here. The child points in anger at the one who broke his toy. The causal expression "She broke it", is grafted on to this immediate reaction. Later on, there develops a use of causal expressions where doubt, conjecture or theory may enter in. These are second order features.

The primitive form of the language is certainty, not uncertainty.

For uncertainty could never lead to action.⁴¹

The basic form of the game must be one in which we act.⁴² To suppose that, doubting whether this caused that or questioning whether the two events are constantly conjoined, comes in advance of any reactions is putting the cart before the horse. The child who retaliates against the one that crashed into him does not do this because he *knows* or *believes* that this caused his fall. *It is an instant reaction like brushing away an insect that is tickling one's skin.* One does not discuss to determine whether the tickling sensation is caused by the insect or not. This instinctive behaviour is what Wittgenstein calls "reacting to the cause". ***The "certainty" he is talking about, is a certainty in behaviour, not a certainty in propositional thought.*** It is misleading to speak of the concept of "cause and effect" as if there were an essence of causation that lies behind the different uses of causal expressions. Instinctive reactions are the source of learning of causal expressions. Sentences like "He caused me to fall" would be linked to the instant reactions. The child's first learning of causal expressions is by using them along with or in place of *unlearned reactions*.

You may say a child must at least know that the objects exist whose names we teach him by ostensive definition. But Wittgenstein asks "Why should the language rest on knowledge?"⁴³

Children do not learn that there are books, that there are armchairs, etc. etc., but they learn to fetch books, sit in armchairs, etc.⁴⁴

He says again:

Does a child believe that milk exists? or does it know that milk exists? Does a cat know that a mouse exists?⁴⁵

An infant reaches for its milk bottle, but it does not believe, that what is in the bottle is milk. There is this behaviour of reaching for the bottle from which the infant had been fed in the past. The *belief* here is nothing other than this behaviour; it is not the source of behaviour. So, we could presumably call it an instinctive belief.

If I am sitting in a chair and decide to go for a walk, I need first to get out of the chair. Must I infer this? Is it not enough if I simply rise from the chair without inferring that this is the appropriate action? Do I need to form an hypothesis about the way to proceed any more than a dog would do?

A person who is doing an arithmetical calculation might doubt whether he multiplied correctly, but not whether the figures on the paper changed themselves into other figures. This certainty has not been won by any learning.

Not only is one's first learning of words a result of instinctive unthinking behaviour, but something of the same kind permeates all of language. The certainty that exists at so many points of our daily course of life is not hasty or

superficial. It is something animal which lies beyond any explanation. It is too fundamental to be either justified or unjustified and underlies any framework in which a procedure of justification could be carried out. We usually characterize this fundamental thing in mental terms such as "certainty", "assumption" or "belief", but none of these expressions really fit. All of them have their application within various language-games. For example, the language game of doubt may come to an end which is expressed in certainty. This certainty is the result of a procedure of justification. Wittgenstein is trying to call our attention to something that underlies all language-games. These psychological terms lead us away from "the main thing". Do I know or just believe that my name is Sohrab? It is not appropriate to say that "I know" or "I am certain" or "I assume" it. If you look at the practice of language, you will see the unhesitating behaviour with which I sign my name. This unthinking way of acting is the logic of language that cannot be described with psychological words. It is too primitive, too instinctive to be so described. That is why Wittgenstein says it is something animal⁴⁶. We have the inclination to suppose that all mastery of language is based on mental states and is expressible in psychological terms. But it is our ways of acting that provide the foundation for the psychological terms. If a child has not yet begun to speak but has learned to respond with discrimination to the orders; "Sit down on a chair" and "Sit down on a stool", we are inclined to say that he *knows* that a chair is different from a stool. But a dog also reacts in the same way. Here, the word "know", if we are allowed to use it in this context, just refers to that learned discriminative behaviour, not to a mental state.

We could say that the child learns by believing the adult. Doubt comes after belief. You can doubt only against a background that you accept. *This background is finally an instinctive, unreflecting way of acting.* "Language does not emerge from reasoning".⁴⁷ Suppose a dog rushes at a child. The child recoils with fear just as a cat would. It would be absurd to attribute to either child or cat the thought "This beast is dangerous, so I had better avoid it." The child picks up from adults words that are added to its fear expressive behaviour. It is the same in the case of other simple linguistic expressions like pain, surprise, desire, etc. When a child learns linguistic expression of pain it learns "new pain-behaviour".

A child has hurt himself and he cries; and then adults talk to him and teach him exclamations and, later, sentences. They teach the child new-behaviour.

'So you are saying that the word "pain" really means crying? - On the contrary; the verbal expression of pain replaces crying and does not describe it.'⁴⁸

The learned verbal expressions of pain or fear are no more due to reasoning than are the instinctive *preverbal* behaviours. These are immediate expressions of pain, fear, desire and so on. They are not the result of thought, but the replacements for unlearned reactions. According to Wittgenstein these reactions are primitive:

But what is the word 'primitive' meant to say here? Presuming that this way of behaving is *prelinguistic*: that a language-game is based *on it*, that it is the prototype of a way of thinking and not a

result of thinking".⁴⁹

Our language-game is an extension of the primitive behaviour.

The origin and the primitive form of the language-game is a reaction; only from this can the more complicated forms grow.

Language - I want to say - is a refinement; 'In the beginning was the deed'.⁵⁰

Not only does language replace prelinguistic behaviour, but it also serves as an extension, refinement or elaboration of that behaviour. The language of sensation provides finer descriptions of sensation than would be possible with purely non-linguistic behaviour. "The pain is here" can take the place of instinctive behaviour of protecting or comforting the painful part. But when one says "It still hurts but not as much as it did yesterday", the report could not be conveyed in prelinguistic behaviour. The exclamations; "Hot!" or "Cold!" are learned in connection with preverbal reactions and are used as responses to heat and cold. But language provides an expansion and refinement far beyond these simple verbal equivalents of the preverbal behaviour.

Notes

1. *Philosophical Investigations*, Sec. 43.

2. *Op. Cit.*, Sec. 66.

3. Beardsmore, R. W. 'The Theory of Family Resemblances', *Philosophical Investigations*, Vol.15, No. 2 (1992), P.142.

4. *Philosophical Investigations*, Sec. 124.

5. *Philosophical Investigations*, Sec.121.
6. *Notebooks*, P. 39.
7. *Philosophical Investigations*, Sec. 135.
8. Wittgenstein, L. *Philosophical Grammar*, P. 193.
9. *Philosophical Investigations*, Sec.108.
10. *Ibid*, Sec. 3.
11. *Ibid*, Sec. 23.
12. *Ibid*, Sec. 91.
13. Waismann, F. *Wittgenstein and the Vienna Circle*, P. 183.
14. *Philosophical investigations*, Sec. 126.
15. *Ibid*, Sec. 201.
16. *Tractatus*, 6.51.
17. Kripke, S. *Wittgenstein on Rules and Private Language*, P.55.
18. *Ibid*, P.17.
19. *Philosophical Investigations*, Sec. 201.
20. *Philosophical Grammar*, P. 58.
21. *Philosophical Investigations*, Sec. 31.
22. Surprisingly, this idea of Wittgenstein is supported by what Quine, for different reasons, says in his *Indeterminacy of Translation*. See chapter four for a discussion of Quine's example of a Martian uttering "gavagai".
23. *Philosophical Investigations*, Sec. 258.
24. *Ibid* Sec. 265.
25. *Ibid* Sec. 272.
26. *Ibid*, Sec. 246.
27. *Philosophical Grammar*, P. 50.
28. Moore, G. E. *Philosophical Papers*, P. 227.

29. *On Certainty*, Sec. 250.
30. *Ibid*, Sec.144.
31. *Ibid*, Secs.109,110 (emphasis mine).
32. *Ibid* , Sec. 205.
33. *Ibid*, 341-2.
34. See Wittgenstein's *Remarks on the Foundations of Mathematics*, P. 325.
35. *On Certainty*, Sec.213.
36. *Ibid*, Sec.115.
37. *Ibid*, Secs.148-150.
38. *Ibid*, Secs.114, 306, 519.
39. *Ibid*, Sec.538.
40. Wittgenstein L. "Cause and Effect", *Philosophia*, Vol. 6., P.410.
41. *Ibid*, P.420.
42. *Ibid*, P.421.
43. *On Certainty*, Sec.477.
44. *Ibid*, Sec. 476.
45. *Ibid*, Sec.478.
46. *Ibid*, Sec.359.
47. *Ibid*, Sec.475.
48. *Philosophical Investigations* Sec.244.
49. *Zettle*, Sec.541.
50. Wittgenstein L. *Culture and Value*, P. 31.

Chapter six

On the Foundations of Mathematics

The epistemological status of the propositions of logic and mathematics have been a perennial source of philosophical bafflement. We wonder at the source of their necessity. Does it lie in the nature of things or in the structure of human mind? Or is it based on the stipulated meaning of words?

There were three serious schools trying to solve the problem of the foundations of mathematics: logicism, formalism and psychologism (intuitionism). Russell's logicism was an attempt to establish the foundations of mathematics in logic. But, if Wittgenstein is right in the *Tractatus* that the propositions of logic as empty tautologies say nothing, then it does not make sense to reduce mathematics to logic. Because far from being solid, the would-be foundation is vacuous.

The *Tractatus* grew out of initial insights about the nature of logic. To Wittgenstein's mind, logic is flat. This is clear in his claim that:

It is the peculiar mark of logical propositions that one can recognize that they are true from the symbols alone and this fact

contains in itself the whole philosophy of logic.¹

This conception is concerned with two criticisms of Russell's philosophy of logic. First, according to Russell, logical truth is grounded in a set of primitive, self-evident axioms. Now, Wittgenstein says that in logic there are no essentially primitive propositions or essentially derived ones. All logical propositions are of equal status. secondly, contrary to what Russell had thought, there are no primitive concepts of logic, because the logical particles do not designate anything as logical objects. They are not representatives, but rather symbolize operations. In short, we have neither *primitive* terms nor *primitive* propositions in logic. He says:

The fundamental thesis is that the propositions of logic are tautologies.²

The scope of this thesis embraces both the axioms and the theorems of Russell's system of logic. In this way Russell's axiomatization of logic with the intention of establishing the truths of logic on the basis of a few axioms is repudiated. Another flaw in Russell's conception of logic is that, as formulated in *principia* the propositions of logic express generality. The law of non-contradiction, for example, is regarded as a generalization about all propositions. Wittgenstein's truth-table explanations of the logical operators demonstrate that, as tautologies the propositions of logic say nothing.

Now, according to the Vienna Circle's conventionalism, all tautologies are molecular propositions which are fabricated with the aid of logical operators introduced by truth-table definitions. The origin of the necessary propositions of logic are these definitions. But, *if linguistic conventions are the source of*

necessity, then this necessity is created as it were in the void. The picture of creation out of nothing is essential to conventionalism. On this view everything logical is the product of linguistic convention, which being arbitrary might not have been adopted. But Wittgenstein claims that the propositions of logic are *given* in the essential nature of any sign language. Givenness of logic is incompatible with the thesis that logic is the product of arbitrary convention.

Logic is not a field in which we express what we wish with the help of signs, but rather one in which the nature of the natural and inevitable signs speaks for itself.³

Truths of logic are not arbitrary stipulations. Logic belongs to the nature of language. This shows a fundamental clash between conventionalism of the Circle and the *Tractatus* conception of logic. We are inclined to think that atomic propositions are more basic than molecular ones. Wittgenstein says that this conception is incoherent. Bipolarity is an essential feature of every significant proposition. So, an atomic proposition, if significant, is bipolar. In other words negation is given in the nature of any atomic proposition. Compositeness is also inherent in the notion of any significant proposition, because every proposition is, at least, composed of a function and an argument. In this way we arrive at the conception of a joint denial. Since all of the logical constants can be defined in terms of this operation, Wittgenstein says that any language must contain the possibility of formulating any truth-functional combinations of propositions. So, far from the case that the truth table definitions of the logical operators of *Principia* create these combinatorial possibilities, these possibilities belong to the nature of language. All the logical constants are *given* in the nature of language.

Logic comes from the essential bipolarity and compositeness of propositions and that is what a metaphysical distinction between atomic and molecular propositions blurs.

These innovations of Wittgenstein *appeared* to be sympathetic with the Vienna circle's view. Hilbert's formalism was taken to explain the nature of geometrical propositions and Wittgenstein's conception of a tautology was presumed to encompass logic and the rest of mathematics.

Hilbert's meta-mathematical treatment of Euclidean geometry was a turning point in philosophical debates on foundations of mathematics. His book *Foundations of Geometry* (1903) is a formal investigation of the system of propositions that constitute Euclidean geometry. He tried to give an account of the logical relations among them and recommended that we disregard altogether the meaning or content which we take these propositions to have. Instead of trying to clarify the primitive concepts of point, line, etc., we should treat these expressions as lacking any independent meanings. We may consider as points, lines, etc., any system of entities that their relations satisfy the Euclidean axioms. Presumably, that is why Russell wittily says that , *in mathematics we do not know, what it is that we are talking about, neither may we say that it is true or false.*

In this way, an axiomatic system of geometry does not have any factual content. For example in Euclidean geometry, Euclid's axiom of parallels is posited. In newer axiomatic systems of Riemann and Lobachevsky, the axiom of parallels is not included and different conclusions are validly drawn. *Poincare* said that the question of truth or falsity of these different axiomatic systems is

meaningless. We are free to choose any of them. If observations suggested that space was non-Euclidean, *physicists could still retain Euclidean space* by introducing into their theories new forces.

If we deny the relation between the body of axiomatic Euclidean geometry and the practically rigid body of reality, we readily arrive at the following view, which was entertained by that acute and profound thinker, H. Poincare: - Euclidean geometry is distinguished above all other imaginable axiomatic geometries by its simplicity. Now since axiomatic geometry by itself contains no assertions as to the reality which can be experienced, but can do so only in combination with physical laws, it should be possible and reasonable - whatever may be the nature of reality - to retain Euclidean geometry. For if contradictions between theory and experience manifest themselves, we should rather decide to change physical laws than to change axiomatic Euclidean geometry.⁴

It is argued that we may distinguish applied geometry from pure. Pure geometry consists of proofs, which yield tautologies. Applied geometry is an empirical science.

Following Hilbert, other axiomatic systems were advanced. Axioms are completely arbitrary posits which presuppose nothing as known. In these systems, no defining characteristics are specified. In respect of the concept of a point, for instance, it is the whole axiom-structure that gives a complete definition. Each axiom contributes something to the definition and therefore any

new axiom alters the concept. The system of axioms is itself a complete explanation of all the primitive terms. Now, because Euclidean and non-Euclidean geometries are advanced by different sets of axioms, the primitive terms in these systems have different contextual definitions. For example, the concept of a Euclidean point is different from the concept of a Riemannian point. *Alternative pure geometries are not competing theories of space, but different systems of concepts or different ways of speaking.* On the other hand, because Euclidean geometry is merely a *framework* or schema of concepts, the basic elements can be construed as we please. Pure geometry establishes that any system of things that satisfies the axioms must also satisfy the theorems. Now, the question that whether paths of light rays, for instance, constitute such a system is an empirical question and has nothing to do with the understanding of pure geometry. In this way, Hilbert divorced formal systems of geometry completely from their applications.

These ideas were used for attacking Kant's view that Euclidean geometry is a system of synthetic *a priori* truths. Hilbert had shown how to construe the axioms of any formal system as definitions of the primitive terms. The theorems of the system must be analytic propositions, because they are the logical consequences of the axioms. The axioms have the role, but not the form of concrete (orthodox) definitions. They are disguised or implicit definitions of primitive concepts. They are conventions of symbolism. So, contrary to Kant's view they are analytic and *a priori*.

The primitive concepts are defined by the fact that they satisfy the axioms. This seems like the claim that the axioms determine the meanings of the

primitive terms. But Hilbert tried to divorce pure geometry from the questions about the meanings of the primitives. Hilbert's investigations were supposed to belong to proof theory or logical syntax, not to semantics. The term 'syntax', then, was employed to illustrate the fact that a proposition about symbols was independent of their meanings. For example, the axioms of Russell's propositional calculus were claimed to be the disguised definitions of the primitive terms. Even the author of the *Tractatus* said that:

'Logical syntax' can be established independently of the meanings of signs⁵.

This reflects a fundamental confusion about the notion of 'meaning'. The idea is that our ordinary definitions break concepts down ultimately into indefinables which are introduced by ostensive definitions. Only through ostensive definitions is language connected with reality and only what is so connected can be characterized as true or false. *Because truth is conceived as correspondence of a proposition with a fact.* On the other hand implicit definitions remain in the domain of an axiomatic system. A system of pure geometry, for instance, does not at any point rest on the ground of reality. On the contrary, "it floats freely and like the solar system bears within itself the guarantee of its stability".

Hilbert repudiated the view that investigations of pure geometry must begin with connecting geometrical primitives with reality. The axioms and theorems are then treated as propositional functions, not as propositions and the possibilities for turning them into propositions by assigning meanings to the primitives are left open. Calling the axioms conventions, postulates or implicit

definitions was meant to emphasize their autonomy. They are not answerable to reality, because the primitive terms in them are not correlated with entities in the world. We may not say that one geometry is true and another one false, for *these deductive systems are only different games with symbols*. The axioms (and theorems) are implicit definitions of concepts. Knowledge of pure geometry is independent of the world, because all its propositions are arbitrary conventions for the use of symbols. Non-Euclidean geometries are alternative systems of implicit definitions, generating different systems of concepts.

Hilbert's success in analysing geometry opened the way for parallel programmes in arithmetic and logic. The same treatment is advanced for the fundamental axioms of logic. For example, the law of non-contradiction and the law of excluded middle are thought to state jointly that 'not P' is true if and only if 'P' is false. Together, they determine the nature of negation and may be viewed as its definition. The axioms of logic constitute implicit definitions of the logical primitives. No longer need we, following Russell, struggle to get acquainted with an entity corresponding to indefinables of logic. No 'logical experience', no intuition of a 'logical faculty' is needed to justify the primitive propositions of logic. They are arrived at by stipulations. So, Hilbert's conception of geometry opened the way for explaining all systems of necessary truths as networks of conventions. Moreover, some fundamental propositions of metaphysics like the law of universal causation could be treated, in this way, as conventions. We may describe the law of causation as a partial or implicit definition of cause.

We see that the propositions of geometry are held to be autonomous

conventions, because they are laid down independently of correlating primitive terms with anything. This was precisely what Hilbert meant by saying that his investigation of geometry is abstracted altogether from the meaning of the terms 'point', 'line', etc. It is through concrete definitions that we set up the connection between concepts and reality. Implicit definitions have no association or connection with reality at all. A system of implicit definitions create a network of concepts which is nowhere pinned to reality. Here the underlying conception of meaning is based on:

1. A radical distinction between implicit definitions by an axiomatic system and concrete definitions which correlate terms with items in reality by ostension. Concrete definitions exhibit what is to be designated by a concept, but concepts defined by systems of postulates are devoid of any content. The presence or absence of content reflects the difference between concrete and implicit definitions.

2. The divorce between pure mathematics and its applications which was a major goal of Hilbert's formalism. Since pure geometry is divorced from physical geometry and is developed without any explicit definitions of its primitive terms, *it leaves open the possibility of later concrete definitions of these terms.* We may, for example, correlate a 'straight line' with a path of light ray and a 'point' with a star. Such procedures assign particular meanings to previously uninterpreted terms. In doing this a proposition of pure geometry is transformed into an empirical proposition about physical space.

It is claimed that Kant's fallacious doctrine that Euclidean geometry consists of synthetic *a priori* truths arises from conflating propositions of applied

geometry with the propositions of pure geometry. Einstein said:

In axiomatic geometry, the words "point", "straight line", etc., stand only for empty conceptual schemata. That which gives them substance is not relevant to mathematics. Yet on the other hand it is certain that mathematics generally, and particularly geometry, owes its existence to the need which was felt of learning something about the relations of real things to one another. The very word "geometry" which means earth-measuring proves this. For earth-measuring has to do with the possibilities of the disposition of certain natural objects with respect to one another, namely, with parts of the earth, measuring-lines, measuring-wands, etc. It is clear that the system of concepts of axiomatic geometry alone cannot make any assertions as to the relations of real objects of this kind, which we will call particularly rigid bodies. To be able to make such assertions, geometry must be stripped of its merely logical-formal character by the coordination of real objects of experience with the empty conceptual framework of axiomatic geometry. To accomplish this, we need only add the proposition: - Solid bodies are related, with respect to their possible dispositions, as are bodies in Euclidean geometry of three dimensions. Then the propositions of Euclid contain affirmations as to the relations of practically-rigid bodies.

Geometry thus completed is evidently a natural science; we may in fact regard it as the most ancient branch of physics. Its

affirmations rest essentially on induction from experience, but not on logical deductions only. We will call this completed geometry, "practical geometry", and shall distinguish it from "purely axiomatic geometry."⁶

Inspired by Hilbert, Schlick intended to resolve the epistemological puzzles about the necessary truth: What makes a mathematical or logical proposition true? To what does it correspond? It was these questions that Schlick tried to answer by claiming that necessary truths are all conventions about symbolism or implicit definitions. Conventionalism is recommended as the simplest explanation of the possibility of *a priori* knowledge. All mysteries about the nature and source of *a priori* knowledge is dissolved once its content is recognized as conventions of symbolism. According to the logical positivists, mathematical propositions are analytic *a priori*. They argue that, for instance, "4" does not mean anything but "2+2". What does "2" mean but "1+1" ? When we say "2+2=4" we are saying that "1+1+1+1=1+1+1+1" which is just as analytic as "A is A". In dealing with great numbers like '2753 + 3018 = 5771' the procedure is the same. It would only take a longer time to write it down in a series of 1's. This is the "2+2=4" story all over again with more 1's. Kant advocates the thesis that the propositions of mathematics are synthetic *a priori*. His examples in the *Prolegomena to any Future Metaphysics* are: "7+5=12" and "A straight line is the shortest distance between two points". He argues that as the predicates of these propositions are not contained in their subjects, they are synthetic. And as we can realise their truth by a mere intuition without any appeal to experience, they are *a priori*. Albert Einstein - an associate member of the

Circle - said that: "So far as the theorems of mathematics are about reality, they are not certain. And so far as they are certain, they are not about reality"⁷ In Kantian terminology this means that, so far as the theorems of mathematics are synthetic, they are not *a priori*. And so far as they are *a priori*, they are not synthetic. We may notice that, the idea of a fundamental dichotomy between language and reality, is inherent in this view. What lies behind this conception of *a priori* truth is a theory of meaning. To give an expression meaning is to *correlate* it with something in reality and its meaning is the entity correlated with it. All words are conceived of as names and the prototype of explaining a name is pointing at its bearer. *Russell, earlier Wittgenstein, Schlick, Hilbert and Einstein implicitly follow this line of thought.*

What is wrong with Hilbert's Formalism?

Hilbert declared that the propositions of pure geometry are meaningless and the question of truth and falsity arises only in applied geometry. *Now, if the primitive terms of an axiomatic system are left uninterpreted, then the question of what applications of them are correct is open.* As far as implicit definitions are concerned, any applications are legitimate. What are we to make of the idea that these primitive terms express particular concepts? For, concepts are differentiated by differences in what counts as correct applications of them. ***A concept that can be applied to anything whatever has no content at all.*** To call the notions of the Euclidean geometry 'formal concepts' achieves nothing

since it implies that formal concepts are a species of concepts, but this manoeuvre begs the question of the intelligibility of speaking of concepts in such a context.

The same objection applies to formalism in logic and arithmetic. Somebody who is totally ignorant of how to differentiate correct from incorrect uses of number-words or logical particles does not grasp the concepts of logic and arithmetic. Accepting the axioms of *Principia Mathematica* as implicit definitions of the primitive terms contributes nothing to knowing how to use those terms in empirical propositions, therefore these implicit definitions do not constitute explanations of the concepts of logic and arithmetic. *The idea that necessary truths by linking uninterpreted expressions, determine relations among concepts is incoherent.* If we divorce concepts completely from the applications of their expressions, they lose their significance. They will be useless *ornaments*.

There is another difficulty concerning the axiomatic systems of necessary truths. It would be unintelligible to assert that a set of conventions is autonomous and yet deny the possibility of altering it. Conventions of symbolism must always admit of alternatives. This does not imply that a necessary truth is contingent, because a different set of implicit definitions create a network of different concepts and therefore the same sentence will express different propositions in different axiomatic systems. The fact that conventions allow alternatives was what recommended Hilbert's formalist conception of geometry. Because it removed all puzzles about the status of non-Euclidean geometries. Propositions of these geometries are alternative sets of conventions that give

rise to different systems of geometrical concepts.

Now, in many cases it seems that there are no alternatives to these systems. The proposal to create an alternative arithmetic by postulating ' $0=1$ ' or ' $0 \neq 0$ ' seems unintelligible. The uniqueness of logic and arithmetic, is in contrast with alternative geometries. Wittgenstein is taken to have answered this difficulty by an appeal to something that underlies linguistic conventions. It is said that he appeals to certain aspects of the natural history of mankind i.e., human needs, purposes, interests, etc. Here it seems that, Wittgenstein emphasizes on the natural history of mankind as a background to rule-governed practices. Normative activities grow in the soil of human nature. They are steered down predetermined paths and are not the product of free choice. Conventions like counting or measuring are shaped by the general features of the world and human interests. On this interpretation of Wittgenstein's later view, arithmetic is an anthropological phenomenon. It is contingent that calculating is carried out in the way that it is. Human nature imposes severe restraints on the possibility of alternative networks of conventions.

The point is that Wittgenstein *did not attempt to answer this question at all*, but rather tried to dissolve it and thereby to reduce naturalism to absurdity. Conventionalism of the Vienna circle is a sweeping theory for the defence of empiricism. It is advocated as a mystery-free explanation of the possibility of a *priori* knowledge. This whole framework of philosophizing is antithetical to Wittgenstein's approach. He was not in the business of *constructing theories or defending empiricism*. He was not in competition with any philosophical school and his whole discussion of logic and mathematics is different from the

paradigms of conventionalism.

In Hilbert's paradigm, a system of concepts is created out of nothing by human fiat, which is free-floating like the solar system. Its autonomy is held to be based on a radical separation of necessary truths from their applications. The propositions of Euclidean geometry, for instance, are self-contained, because their primitive concepts are understood independently of any knowledge of how to apply them in describing the spatial relations of physical objects. These concepts are supposed to be *just* syntactical and therefore divorced from reality.

Wittgenstein emphasized the autonomy of grammar, but he never isolated rules of grammar from the applications of concepts. He considered Euclidean geometry to be a system of rules for the use of terms like 'point' and 'line' in empirical propositions. ***It is the applications of the symbols that differentiates geometry or arithmetic from mere games or ornaments.*** The sense of a mathematical proposition is its application.⁸ So, Wittgenstein rejected the very contrast that underpinned conventionalism. What Schlick meant in calling arithmetical equations, conventions of symbolism was incoherent, to Wittgenstein's mind.

The meaning-body picture is the very substance of the paradigm of conventionalism of the Vienna Circle. According to the Circle, propositions of logic follow from the meanings of the logical operators. The entire grammar of negation, for example, is held to be contained in the truth-table symbol for negation. ***Precisely this is the target of Wittgenstein's later reflections on logic.*** He used the simile of meaning-body to criticize this mythology of symbolism.

It looks as if one could infer from the meaning of negation that ' \sim
 $\sim P$ ' means 'P'. As if the rules for the negation sign follow from the
nature of negation.⁹

Expand.
A

Wittgenstein refrains from pigeon-holing his ideas under any 'ism'. The term 'conventionalism' is used to call attention to a genus of philosophical theorizing. It is contrasted with the genera labelled 'Platonism' and 'psychologism'. He rejected the framework of thought that generates this set of pigeon-holes for the necessary truths.

Quine's position

According to Quine's holism¹⁰, we have a world-view or web of belief which is a network of statements that are variously linked with one another. Some of these statements, are directly associated with experience. By means of this system, we explain and predict the natural phenomena. When our prediction fails, we have a wide choice as to which statements of the system to preserve and which to revise. Normally the statements directly associated with experience, are to be preserved from revision. It is only by such a priority that we claim empirical content for the system. *There is another opposite priority*: the more fundamental a law is to our conceptual framework, the less we are willing to choose it for revision. When the priority on a fundamental law and the priority on statements verified by experience come into conflict, either is capable of prevailing. Our system of statements has such a *thick cushion of indeterminacy*, in relation to

experience, that vast domains of law can be held immune to revision. We can always turn to other quarters of the system when revision is called for by an unexpected experience. Mathematics and logic, are central to our conceptual framework. So, we tend to accord them immunity in order to have the least disturbance of the whole system. *The necessity which we attribute to the laws of logic and mathematics is associated with this conservative preference.* Quine says that the propositions of logic and mathematics are true by virtue of our conceptual framework. But these propositions are not immune to revision, if it is found that essential simplifications of our whole conceptual framework will result. He continues to say that; there have been suggestions stimulated by perplexities of nuclear and elementary particle physics that we revise the true-false dichotomy of current logic in favour of some sort of n-chorotomy. Logical laws are the most central statements of our conceptual framework and the most protected against revision by the force of *conservatism*. But because of their crucial position, any appropriate revision of them will bring the most sweeping simplification of our whole system of knowledge. This is *not* to deny that laws of logic are true by virtue of our present conceptual framework. These laws are so central that any revision of them is the adoption of a new conceptual framework, the imposition of new meanings on the old words. We may notice that according to Quine, truth is truth and there is no difference between the function of the empirical propositions on the one hand and the propositions of logic and mathematics on the other. This is diametrically opposed to later Wittgenstein's view as we shall see.

Disappearance of the Riddle

Dummett categorizes Wittgenstein as a conventionalist and compares his conventionalism with the theory advocated in the Vienna Circle.



Wittgenstein goes in for a full-blooded conventionalism; for him the logical necessity of any statement is always the direct expression of a linguistic convention.¹¹

But, to classify Wittgenstein as a conventionalist distorts his reflections on necessary truths. He tried to demolish the whole framework that gave rise to the Vienna Circle's perception of the problems about necessary truths. Far from proposing an alternative theory, he condemned Circle's conception of necessary truth as nonsensical. Conventions are held to be subject to inexplicable meta-logical constraints of consistency and completeness. According to Wittgenstein it is a confusion to imagine that meta-mathematics underpins mathematics. This is merely another calculus, alongside mathematics. Apart from that, the Circle did not give, for example, a convincing treatment of the possibility of alternative conventions as a system of logic. Wittgenstein drew the attention to the employment of propositions of logic in the complex pattern of human activities and highlighted the connection between the concepts of *logic* and *thinking, reasoning, inferring, etc.* Limitations on the alternative rules of inference are made intelligible by the way in which the concepts of logic are placed in the context of other fundamental concepts. According to Wittgenstein, the Circle's conception of the autonomy of linguistic conventions is confused. It is based on

a fundamental distinction between ostensive and verbal definitions. Verbal definitions are thought to give rise to analytic truths, which do not correlate words with anything in reality. By contrast, ostensive definitions, allegedly, link language with the world. In showing Circle's misconception of ostensive definition, Wittgenstein *undercut* their whole account of the autonomy of linguistic conventions.

The paradigms of conventionalism are intended to provide an answer to the question; 'what makes *a priori* propositions true?' In relating *a priori* truths to rules of grammar, Wittgenstein does not intend to answer this question. On the contrary he argues that the question is nonsensical. It assimilates *a priori* propositions to empirical ones which describe states of affairs. In other words, *the problem of how a priori knowledge is possible arises out of the mistaken assumption that the role of a priori propositions is parallel to that of empirical ones.* Platonism, conventionalism and psychologism are alternative answers to the riddle of *a priori* knowledge, but complete clarity about *a priori* knowledge consists *in complete disappearance of the question.* The question 'What makes a proposition of logic true?' calls for an answer on the model of how things are in the world that make empirical propositions true. There is no such thing as an answer to this question, since it is not the function of *a priori propositions* to describe anything. The role of *a priori* propositions in the use of language are basically different from the function of empirical propositions. In his remarks on logic and mathematics Wittgenstein pursued the strategy of Hertz in physics. Hertz objected to the claim that the essence of force is mysterious and rejected the suggestion that it is the task of physics to discover the nature of force. Hertz

argued that the solution to the problem of mysterious nature of force consists in its *disappearance*, not in discovering what force really is. Wittgenstein followed the same strategy in clarifying the nature of logic and mathematics. **He attempted to dissolve these questions, not to answer them.** Failure to grasp this aspect of Wittgenstein's methodology leads to pigeon-holing him as a theorist in philosophy of mathematics. This is what Dummett does.

In short, all standard methods for treating the problem of necessary truth are advanced to answer the epistemological question of the source of *a priori* knowledge. Wittgenstein shows that the question is nonsense. In speaking of rules of grammar, he clarifies the *function* of the propositions of logic and mathematics - the role of necessary truths in the use of language.

This section could be extended.

Notes

1. *Tractatus*, Sec. 6.113.
2. *Ibid*, Sec. 6.1.
3. *Ibid*, Sec. 6.124.
4. Einstein, A. *Sidelights on Relativity*, PP.33-34.
5. *Tractatus*, Sec. 3.33.
6. Einstein, A. *Sidelights on Relativity*, PP.31-32.
7. *Op. Cit.*, P.28.
8. *Remarks on Foundations of Mathematics*, P.367.
9. *Philosophical Grammar*, P. 53.
10. See chapter four, for a detailed exposition.
11. *Truth and other Enigmas*, P. 170.

Chapter Seven

Discussion and Comparison

1. Discussion

In this section we shall discuss the logic that lies behind Russell's search for foundations; shall demonstrate that there is no language / reality dichotomy and that the epistemological riddles facing both Russell and Quine collapse into logical (grammatical) insights.

Russell's Search for Foundations is Misguided

We argued in the second chapter that Russell's search for the foundations of human knowledge is partly rooted in Humean scepticism. In *Principia Mathematica* Russell is concerned with deductive reasoning, whereas in the *Problems of Philosophy* and *Our Knowledge of the External World*, his main concern is the nature of inductive inference. We may now inquire into the relation between the "grammar" of our reasoning and the actual inferences that we make. Can we justify the logic or "grammar" of our reasoning? If not, is it arbitrary? Is rejecting it an open option for us?

One may argue that, when we reason deductively from premise to conclusion, our reasoning stands in need of an external sanction which is provided by principles of

inference. If these principles are not justified, then our inferences are not valid. But, what belongs to the "grammar" of our reasoning characterizes the way we judge. It belongs to the framework within which we think and reason. In other words, it characterizes our way of thinking. We may not prove it. Rules of "grammar" and principles of reasoning *do not justify* a way of reasoning. *They define it*. They are not anything over and above the way we actually proceed in our judgements. It is what we do in particular cases that gives them content. The principles of inference which may be used to justify particular inferences are "superfluous". They are abstracted from the practice of drawing inferences.

Can there be uncaused events? Is nature uniform? Russell, following Hume, thinks that there is no reason for believing in the uniformity of nature. He says that there can be no justification for the principle of induction. But, if the principle of induction cannot be justified, then how could our inductive inferences be valid? How could we believe in any of our scientific views or any of our ordinary knowledge claims?

Russell is looking for the *foundations* of inductive reasoning, but the whole attempt to find foundations for a mode of reasoning is misguided. It stems from a misunderstanding about what it is to give reasons for a claim. If there is to be a justification, there must be things that we accept without justification.

If anyone said that information about the past could not convince him that something would happen in the future, I should not understand him. One might ask him: What do you expect to be told, then? What sort of information do you call a ground for such a belief? What do you call 'conviction'? In what kind of way do you expect to be convinced? - If *these* are not grounds, then what are grounds? - If you say these are not

grounds, then you must surely be able to state what must be the case for us to have the right to say that there are grounds for our assumption.¹

According to the above remarks of Wittgenstein, Russell's scepticism about inductive reasoning is unintelligible. Following Hume, Russell says that the experience of the past, is not a ground for what will happen in the future. Wittgenstein is asking Russell to state what must be the case for us to have the right to say that there are grounds for our assumptions. If these are not grounds, then what would be counted as grounds? What makes me say that the colour I see is red? - I have been taught to call it red. This is what we call grounds, in such a case.

Wittgenstein identifies some propositions as "hinge-propositions", around which the rest of the propositions revolve. Hinge-propositions determine the way we think and judge. In their case, doubt does not come in. I cannot, for example, doubt that I have two hands.

But if you are *certain*, isn't it that you are shutting your eyes in face of doubt?" - They *are* shut.²

Are we justified in accepting 'hinge-propositions'? - Here 'justification' loses its meaning. Because, these propositions are embedded in the form of life we lead, in the way we judge, think and speak. Rejecting them is not an open option for us. If there were no hinge-propositions, there could be no justification at all. Strictly speaking, we may not call them 'propositions'. We do so by the way of latitude. A proposition can be doubted, it may be true or false whereas they are beyond any doubt and certainty. They form the river-bed of our practices. We may say that justification of claims is unavailable outside the framework of a practice. Knowledge claims can only be understood as moves within our practices. "In the beginning was the deed".

Wittgenstein's account of philosophy is opposed to any search for foundations. In particular it is opposed to Russell's attempt to establish the foundations of mathematics in logic. The very supposition that mathematics needs foundations is an illusion. It is an attempt to traverse the bounds of sense.

The rigidity in what we count as valid inference or correct calculation is a feature of our practice. Logical and mathematical propositions *define* the techniques of inference and calculation. By viewing logic and mathematics as constitutive of the techniques that are deeply embedded in the form of life that we lead, we see the emptiness of the problem of the foundations of logic and mathematics. There is no foundations for our techniques that could justify the steps we take from the point of view of a non-participant in the practice. That is why it makes no sense to doubt logical or mathematical propositions. It is wrong to regard mathematical proofs as uncovering essential connections in reality that were in a sense already there. Proofs construct patterns that we recognize we can use in our lives.

We may say that the propositions of logic and mathematics are the criteria by means of which we judge whether a logical inference or a mathematical calculation is correct. Our certainty concerning these propositions is pre-epistemic. It is a form of certainty for which the question of justification is out of place. It is the result of our reflection on the grammatical role that they play in the practice of inference and calculation. According to Russell's account in *Principia Mathematica* it is a fundamental law of logic that the proposition 'Q' follows from the proposition 'P & (P → Q)'. But what does this 'following' consist in? There is nothing in reality that provides a foundation for this inference. *We project the grammar of our practice onto the world.*

Russell's total loss of the 'objective world' is the inevitable outcome of his

understanding of the problem. His assessment of Moore's truisms as lacking grounds is a misconception of their nature. Russell construes our relation to Moore's truisms on the model of our epistemic relation to empirical propositions of science. He believes that our relation to any proposition in our system of judgements is epistemic. Consequently, he regards these truisms as lacking justification. But, Moore's truisms form the framework of our practice. *Scepticism concerning these ordinary empirical judgements is against the mastery of a technique in the practice of describing the world. Without that technique we would be unable to think or to use language.* Our certainty concerning these judgements is a practical certainty that shows how the expressions of our language are used. The function of Moore's truisms makes the question of establishing their grounds out of place. Russell's solipsistic conception of experience is the result of his confusion about the nature of these judgements. The difficulty is inherent in the way Russell sets up the problem.

Following Russell, Quine's scepticism concerning Moore's truisms which is explicit in his notion of 'The myth of physical objects' is misplaced. It misrepresents our non-epistemic relation to these technique-constituting propositions as an epistemic relation to empirical judgements. His attempt to question these truisms is incoherent, because there exists a language (and thought) in so far as there exists a *practice* of employing linguistic expressions.

There is no Language / Reality Dichotomy

In both the *Tractatus* and the *Investigations*, Wittgenstein says that philosophy is an activity of clarification, it is not a discipline with factual claims. But in the *Tractatus* the drive is to uncover a substantial depth-structure which underlies the surface use of ordinary language and determines the limits of thought. That depth-structure reflects the ontological nature of the world. In the *Investigations*, the quest for an ontology is abandoned altogether. Attention is diverted from an alleged structure or essence to the uses of linguistic expressions.

So, according to the *Tractatus* the surface grammar of our ordinary language conceals an underlying structure and the task of philosophy is to uncover that depth-grammar. This may be thought of, metaphorically, as a geological excavation, contrasted with Wittgenstein's later topographical investigation.

Consider the geography of a country for which we have no map, or else a map in tiny bits. The difficulty about this is the difficulty about philosophy; there is no synoptic view. Here the country we talk about is language and the geography, **grammar**.³

Philosophers hunt for the map of the treasure island in order to find the treasure and they do not realize that the treasure is the map! *The map of the treasure island - which is itself the real treasure - is nothing but grammar.* Rules of grammar determine the meaning of linguistic expressions. One cannot intelligibly ask whether the rule ' $\sim \sim P = P$ ' is the correct rule of negation or ' $\sim \sim P = \sim P$ '. They are different rules which determine different concepts.

Whoever calls ' $\sim \sim P \equiv P$ ' (or again ' $\sim \sim P \equiv P$ ') a 'necessary proposition of logic' (not a stipulation about the method of presentation that we adopt) also has a tendency to say that this proposition proceeds from the meaning of negation. When double negation is used as negation in some dialect, as in 'He found nothing nowhere', we are inclined to say: *really* that would mean that he found something everywhere.⁴

When Wittgenstein says grammar is arbitrary, he does not mean that it is a matter of individual whim. What he really means is that, we may advance pragmatic *reasons* for adopting new grammatical structures. The point may be clarified in the following way: Einstein in his special theory of relativity employs the words 'space' and 'time' differently from the way in which ordinary speakers do. These terms are then, used according to different grammatical rules and determine different *concepts*. Reasons can be given for this, not in terms of truth but in terms of usefulness of the theories expressed in that grammar. The grammar however is not a theory. It determines what makes sense and asserts nothing about the facts. As another example, following Einstein's general theory of relativity we may give reasons for the employment of Riemannian rather than Euclidean geometry. But it is nonsense to say that the structure of space is *really* Riemannian.

"Language is self-contained and autonomous." This claim of Wittgenstein, in section 55 of *Philosophical Grammar* is a repudiation of the *Tractatus* doctrine of the ineffable isomorphism between language and reality. According to the *Tractatus* elementary propositions depict elementary facts. Language is connected to reality by the assignment of meaning to the simple names or logically proper names which are the final product of logical analysis. We associate each logically proper name with its

meaning which is a simple object in reality. But, as discussed in chapter five, the author of the *Tractatus* has misunderstood the nature of ostensive definition. Later Wittgenstein's claim that 'Language is autonomous' does not mean that there is no connection between language and reality. It just means that what was thought of as 'simple indefinables' do not have a meaning which is a corresponding entity in the world. Because that involves **a confused contrast between 'in the world' and 'in a language'**, whereas the relation of language to reality is *internal*. When we explain what 'red' means by pointing to a patch of colour, we are *not* saying something about the patch, but explaining the meaning of the *word* 'red'. When we say of curtains by pointing to them that they are red, we are using our mode of representation to say something about the *world*. An ostensive definition belongs to grammar. It is a rule for the use of an expression and *the 'red sample' belongs to language*, not to the world. It belongs to what represents and is not what is represented. Whether something is a sample - just as whether something is a sign - is not an intrinsic feature of an object, but a feature of its use. There is not a language / reality dichotomy but there is a distinction between what represents and what is represented. Russell's conception of a language as a network of interconnected signs; which will be given content by means of an interpretation associating each proper name with an object, each monadic predicate with a property and each n-adic predicate with a relation is misguided. This is a version of the **Augustinian concept of meaning** which conceives of the meaning of an expression on the **model of correlation**. But the meaning of an expression is its use according to the rules of grammar in a particular context. We are inclined to take our grammar as a projection of reality. We attempt to vindicate this by reference to facts. For example, we have a colour system as we have a number system. We think that,

these systems reside in the nature of colours and numbers. But, the rules of grammar do not mirror the forms of entities in reality. On the contrary, what are thought of as forms of things in reality are the reflections of grammar. *It is not an empirical fact that a table is an object or that red is a colour.* They are rules of grammar.

Grammar tells us what *kind* of object a thing is.⁵

We may put the point this way: what justifies must be distinct from what is justified.

One cannot justify the grammatical proposition that 'A is red' by pointing at the fact that A is red.

Grammatical conventions cannot be justified by describing what is represented. Any such description already presupposes the grammatical rules⁶

One cannot justify our colour grammar in the same way that one cannot justify the rules of chess.

In the *Tractatus*, grammar or logical syntax is ineffably *justified* by reference to the metaphysical structure of the world. It is assumed that we cannot have alternative grammars. But, different grammatical rules would determine different concepts. In a world in which the colour of everything was changing every moment and from every point of view, our present colour grammar would be useless. Inhabitants of such a world might employ words like 'redding', 'greening', etc. in a manner similar to our employment of colour adjectives. They would not conceive of colour as we do. Colours for them would be activities not properties of objects. *Their grammar would not be correct or incorrect any more than ours is.* It would be just more useful in those circumstances. Given the kind of creatures we are, the purposes we have and certain

general features of the world we inhabit we employ such a grammar that we do.

Grammar cannot come into conflict with reality. Metaphorically we may say that, grammatical rules *determine* a logical space, they do not occupy a place within it. They determine what makes sense, not what is true. Facts of nature do not make concepts correct or true to the facts, but we apply our grammar against a context of normal conditions consisting of general regularities of nature. Our concepts rest upon such normal conditions, not in the sense of being made true or correct by them but *in the sense of having a point only in such contexts*. Our concept of weight, for example, only has application and point in a world with relatively constant gravitational field. It is not only the relative constancy of physical world which conditions our mode of representation, but also the constancy of our common human nature. Without this common nature, we could not have a common vocabulary. A colour-blind man, for instance, cannot distinguish between red and green. So, he cannot employ the samples we employ in ostensive definitions that constitute standards for the correct use of these colour names.

The logic i.e., *the grammar* of our language is very often misconceived. We may make this point clear by means of some examples:

A Newtonian physicist may say that an irregular motion of a planet must have a cause and if there is not a visible mass that accounts for it, then there must be an invisible one. In this way, he is using a Newtonian norm of representation. The apparent necessity of such a metaphysical statement, is not the reflection of the structure of the world. It is rather his commitment to employ it as a norm of representation. *Apparent necessities in the world are shadows cast by grammar*. The law of universal causation, is a norm of representation of Newtonian mechanics, but it

is not a norm of representation of *quantum mechanics*.

The only correlate in language to an intrinsic necessity is an arbitrary rule.

It is the only thing one can milk out of this intrinsic necessity into a proposition.⁷

As another example, one may say that 'Only my pain is real', 'Reality consists of sense-data', 'Material objects are not really solid, because they are composed of elementary particles which fill space so thinly that it is almost empty'. These claims have the form of empirical claims and indeed some of them may be used as empirical propositions. 'Only my pain is real' may be used to suggest that the others are pretending. But our opponent does not mean this. It is no use objecting to him by saying that 'I really do have a pain, I am not pretending'. He is using words differently from us *without an antithesis*. We may say that the table top is solid, but the drawer is empty. He insists that nothing is solid. We say that everyone in the sick-bay is not malingering, but he is not concerned with the contrast between being sick and pretending to be so. What he does is objecting to our conventions for the use of linguistic expressions which gives them their meaning. He is recommending a new grammar - a new form of description. The point is that he does not think of his intellectual remarks as an alternative grammar, a different method of representation. He rather thinks of it as *a more correct description of the world*. *But, his new grammar is not responsible to reality. It is antecedent to truth and determines what it makes sense to say*. A notation is not true to the facts. It is the instrument of representation. Wittgenstein described this confusion in the following way:

He sees a way of dividing the country, different from the one used on the ordinary map. He feels tempted, say, to use the name 'Devonshire' not

for the county with its conventional boundary, but for a region differently bounded. He could express this by saying; 'Isn't it absurd to make *this* a county, to draw the boundaries here?' But what he says is 'The real Devonshire is this.'⁸

Moreover, you cannot coherently say 'Only my pain is real'. Suppose I see someone grimace and double up, I conclude that he is in pain. Now, you may say this criterion does not guarantee the truth of the proposition 'He is in pain', because we have the notion of a 'successful pretence'. He may be pretending, play acting and so on. But, pretence and play acting *underline*, not undermine the concept of pain, since they are parasitic on it. 'My pain' belongs to the same grammatical system as 'your pain' and 'pretended pain'. The traditional philosopher retains elements of our ordinary notation and cuts the grammatical connections which give them their sense. It makes sense to say that the table is not solid, for it also makes sense to say that it is solid. But if being composed of elementary particles is what makes something not to be solid, then nothing is solid and the contrast between 'solid' and 'not solid' is lost. That is not the way we use the word 'solid' in our language which gives it its sense.

The point may still be clarified more fully by advancing a time-honoured problem. We may be reminded that what Kant thought of as synthetic *a priori* truths about the world are norms of representation. *Propositions of mathematics no more hold true of the world than does the proposition '1 kilometre = 1000 metres'. The world does not accord with our mathematical propositions, by a transcendental necessity. It neither accords with them, nor fails to accord with them. We apply our mathematical grammar to the items we encounter in experience.* But the grammar thus applied is neither true nor false. It is true that ' $2+2=4$ ', but *truth* or *falsity* here have a quite different role from

the role these notions fulfill in the case of empirical propositions. True and false mathematical propositions correspond not to mathematical facts, but to sense and nonsense among empirical propositions. For instance, Kant thought that there is only one geometry - Euclidean - and that it is necessarily true of physical space. In the nineteenth century, non-Euclidean geometries were advanced. As we already mentioned, according to Einstein pure geometries are uninterpreted calculi and applied geometries are alternative theories of physical space. *To Wittgenstein's mind, alternative geometries are alternative grammars of space.*

As another example, Wittgenstein denied that what Kant conceived of as synthetic *a priori* truths are true descriptions of *the world*. He insisted that they are grammatical rules or norms of representation. As mentioned earlier, *the principle of universal causation is not a truth of nature, but a norm of representation of Newtonian physics*. Its apparent necessity is not a reflection of mind's 'making nature' as Kant suggested, but a *convention of representation* for the description of nature.

Epistemological Riddles collapse into logical insights

It still remains a scandal to Philosophy and to human reason in general that the existence of things outside us must be accepted merely on *faith* and that if anyone thinks good to doubt their existence, we are unable to counter his doubts by any satisfactory proof⁹

Scepticism about the 'external world' rests upon the idea that our senses inform us of things outside us. They give us *evidence* for the existence of extra-mental objects. The

sceptic says that sometimes we are wrong in our perceptual judgements and concludes that the evidence of our senses is not reliable. If we are sometimes mistaken, then we might always be wrong. Kant thought that we must encounter this argument by proving that the 'external world' does exist. According to Wittgenstein it makes no sense to claim that the world exists or to deny that it exists - the sceptical challenge is nonsensical.¹⁰

The sceptic says that when I look at the desk, what I have is sense-impressions of colour. The desk is not coloured at all, it causes such impressions in me. But if it is so, it also makes no sense to say that the desk is *not* coloured. Only of what it makes sense to say that it is coloured, it also makes sense to deny that it is coloured. It does not make sense to say, for example, that number two is not coloured. So, the sceptic's claim violates our rules for the use of colour words. We say of material objects that they are coloured or colourless. *This is not a factual claim, but a grammatical proposition.* Moreover, the grammar of sense-data is an offshoot of the grammar of physical objects and their perceptual properties. The use of 'red' in the phrase 'It appears to me red' is parasitic upon the ordinary use of colour words. Any attempt to cut this connection requires that the concept of 'appearing red' be defined by private ostensive definition which was demonstrated in chapter five, to be an incoherent requirement. One cannot construct a grammar of sense-data that is independent of the material objects.

We may notice in this connection that the confusions of the metaphysical systems of the past may not be solved by adopting a new grammar. For a new grammar *Will define different concepts which would not make the existing concepts clear.* A different grammar could just be useful for specific purposes. Einstein, for instance, introduced a different grammar and changed the concepts of space and time

for the purposes of relativity physics. But, we should not forget that, this shift of grammar is context-dependent and purpose-relative. In the same way, the idea that logical structure of a natural language can be represented in the form of a logical calculi is chimerical. Artificial calculi can contribute nothing to the solution of our philosophical problems, because these problems cannot be recast in an artificial calculus. They lie in our existing modes of representation. Logical calculi are false idols and ideals according to later Wittgenstein.

2. Comparison

In this section we compare and contrast the intellectual achievements of later Wittgenstein with the standpoints of Russell and Quine. We see that Russell's epistemological deadlock disappears in later Wittgenstein's understanding of the matter, whereas it continues to remain in Quine's naturalized epistemology.

Russell and Wittgenstein

We may illuminate the above discussions by an apparently odd claim of Wittgenstein which, to borrow a metaphor from himself, does indeed condense a whole cloud of philosophy into *a drop of grammar*.¹¹ Wittgenstein insists that I can know whether someone else is in pain or whether she is thinking such and such, but she - the sufferer

or the thinker herself - cannot know. This claim is prima facie bizarre. Wittgenstein sets his face against what is regarded as obvious in the tradition of epistemological debates in the last three hundred years. According to that tradition the 'inner' is accessible directly to the self. Whether I can know that others have experiences is a question that has been debated, but that I know my own states of mind is something that no one has ever challenged. This is Russell's position in his famous paper 'The relation of sense-data to physics'¹². To the traditional epistemologist Wittgenstein's views are counter intuitive. But in Wittgenstein's philosophy the so called 'epistemological claims' are collapsed into grammatical insights. In saying that I cannot know that I am in pain but that you may know that I am in pain, Wittgenstein is not drawing the boundaries of possible knowledge. He is drawing the bounds of sense. He is delineating the use of the epistemic verbs. His claim is that it makes no sense to say 'I know I am in pain'. Of course, here, he does not mean that I am ignorant of something that others know. It makes as little sense to say 'I do not know whether I am in pain' as to say 'I know that I am in pain'. Wittgenstein's claim is that philosophers have misconstrued the grammar of epistemic verbs and constructed a false picture of what they call 'self-consciousness'.

The problem at issue was fundamental to the debates between Realists, Idealists and Solipsists. Wittgenstein did not take sides in these debates, but tried to undermine them. His non-cognitive account of the first person psychological expressions is associated with private language argument which was discussed in chapter five. His analysis of the logical character of these expressions reveals that *the Russellian way of advancing the problem of 'The relation of sense-data to physics' is confused.*

Russell's epistemology is based on the idea that we may construct our knowledge of the world on sense-data which are private experiences. We start with the

private inner sensations and build the public language and our knowledge of the world on that basis. According to Wittgenstein, that is not the way our language works. Our sensation language is not a private language, no matter how private the subject-matter it is used to talk about, because we learn and use the terms of this language in conjunction with public criteria. For example, it is because pain arises in certain situations and produces certain behaviour that we have a special term for it. We may put the problem this way: Do we know what the world is and then go on to check up whether or not words refer to it? One may suppose that there is a world out there, we think about it, know it and then express it in language. That is a fundamental mistake. We categorise and conceptualise by means of language. And this language is embedded in a form of social life. The very concept of reality is built in our various uses of language. Language, itself, makes our experience and understanding possible. This is a refutation of Russell's theory of knowledge and far beyond that, it is opposed to a whole tradition which started with Descartes.

Quine and Wittgenstein

Both Quine and later Wittgenstein react against Russell's foundationalism in epistemology. They deny the reducibility of all propositions to a set of atomic statements which are verifiable by reference to what is immediately given in experience. For Quine, holism displaces foundationalism. In Wittgenstein's case, the private language argument undermines it.

Nevertheless, Quine's philosophical vision is far removed from Wittgenstein's.

We will see in the course of the following discussions that the apparent convergence of their views is misleading. The positive points of their agreement mask their profound disagreements. The negative points on which they agree are genuine, but reasons for them are not the same and the conclusions drawn from them are also different.

I. On Russell's Epistemological Deadlock

If you do know that *here is one hand*, we'll grant you all the rest.

When one says that such and such a proposition can't be proved, of course that does not mean that it can't be derived from other propositions; any proposition can be derived from other ones. But, they may be no more certain than it is itself.¹³

Suppose you say; 'Here is one hand and here is another, so there are two hands' or 'Here is one misprint, here is another, so there are two misprints'. In neither case is anything proved to be true of the material world, unless you take the premises of the argument for granted. But, why should we accept the dogmatic assertion of the premises? That is the point of the discussions in the classical epistemology which continues in Quine. Quine's *naturalized epistemology resembles the traditional epistemology* in the distinction which is made between everything we get through the senses on the one hand and what is true of the 'external world' on the other. Once we have accepted that the grounds of all our beliefs about the world are restricted to what we get through the senses, we may not eliminate the possibility that there is no 'external world' and if there is, it is completely different from what we believe it to be. The dream

possibility as it is advanced by Decartes illustrates the point. So does the following thought-experiment. We may imagine someone limited to some television screens in a locked room. If we suppose that the victim has been raised in the room since birth, then from those television screens *alone* he may never know the 'external world'.

An absolute distinction between what we get through the senses and what is true of the 'external world' would cut us off, for ever, from knowledge of the world. The inevitability of this conclusion makes it look as if we must avoid the idea that our mental world is completely divorced from the physical world. That is how the classical epistemological riddle appeared to Kant.

But, perhaps when the distinction between what is given through the senses and what is true of the world, is viewed from a detached position makes knowledge impossible. Quine's naturalized epistemology rests on this assumption. As we discussed in chapter four, for Quine there is no reason to suppose that the study of human knowledge requires a different sort of investigation from the study of any branch of science. All our attempts to achieve knowledge of the world must be from within our present scientific and conceptual resources.

According to Quine, it is a matter of scientific fact that our only avenue for information about 'external objects' is through the irritation of our sensory surfaces. Our knowledge of the 'external world' is to be understood in the way any piece of theoretical knowledge is to be grasped relative to the data on which it is based. In order to explain the natural phenomena, a physicist may appeal to a theory committed to unperceivable objects. The theory of elementary particles, for example, is not uniquely determined by what we know about the perceivable objects. There are many possible theories that could be used to explain the same data. The existence of elementary particles is a

posit or hypothesis. *For Quine, the existence of 'Physical objects' is to be understood as a hypothesis or posit in just the same way.* Science tells that the only information that reaches us through the senses is provided by irritations at our sensory surfaces. But the truths that we claim to know about the physical world is not determined by these irritations just as the physicist's theory of the elementary particles is not determined by observable physical objects. The *hypothesis* of physical objects remains far in excess of such data. If we can understand how a physicist can come to know there are elementary particles, we can according to Quine, understand how we may come to know that there are any *physical objects* at all. But a physicist does not establish that he is not dreaming when he puts his theory to test. If we arrive at our view of the world by inference of the same kind, we will not have eliminated such possibilities either.

Nowhere in his account does Quine explain, how we eliminate, for example, the possibility that our sensory data are merely the products of a dream or of an evil demon or of some other source incompatible with the physical object 'hypothesis'. This means that whatever Quine's naturalized epistemology could do, it may not answer the very question that proved so difficult to the traditional epistemologist.

According to Quine, the classical epistemological problem may be viewed in two different ways; there is a *conceptual* question of whether statements about the 'external world' could be fully reformulated in purely sensory terms and there is a *doctrinal* question of whether our knowledge of the physical objects could be justified on the basis of our purely sensory knowledge. On the doctrinal question, Quine finds himself where Hume left us. He says:

The Humean predicament is the human predicament.¹⁴

He argues that any justification of statements that goes beyond our sense-impressions

has to come from inductive inference. Such an inference, would take us from what has been experienced to what has not. But the principle of induction could not itself be a report of sense-impressions. Consequently, the doctrinal issue of justifying our knowledge of the physical world in purely sensory terms should be abandoned as a vain hope. With the breakdown of Carnap's programme of answering the conceptual question on the other hand, Quine thinks that we have to concentrate on the project of understanding the relation between the 'meager input' at our sensory surfaces and our 'torrential theoretical output'. *But, the point is that in this way he does not answer the traditional epistemological question. He deals with a different problem.* Quine thinks that since both of the projects of justification and construction of our knowledge of the 'external world' on the basis of sense-impressions have failed, we may simply explain how our 'torrential theoretical output' arises from those events that take place at our sensory surfaces itself. To his mind, what the traditional epistemologist fails to recognize is that the challenge he has raised against our knowledge of the world comes from science. The reasons he has for finding our knowledge unreliable are scientific reasons. In other words, scepticism is an offshoot of science. Quine regards this new understanding of the theory of knowledge, an enlightened epistemology:

It is enlightened in recognizing that the sceptical challenge springs from science itself and that in coping with it we are free to use scientific knowledge. The old epistemologist failed to recognize the strength of his position.¹⁵

He says that knowledge of the world is needed as a spring-board for the scepticism. Illusions are illusions, only relative to a prior acceptance of genuine bodies with which to contrast them. This seems to lead to the conclusion that since some knowledge is

needed to understand what an illusion is; an appeal to the possibility of illusion in order to undermine our knowledge, all at once, is impossible. It would pull out from under us the very support we originally needed to get the undermining project working.

I am not accusing the sceptic, of begging the question; he is quite within his rights in assuming science in order to refute science; this if carried out, would be a straightforward argument by *reductio ad absurdum*.¹⁶

If it is not self-defeating that we start with a piece of knowledge and end up with rejecting it by *reductio*, if the only point Quine is making is that epistemological doubts are scientific doubts; may we conclude that epistemology is a part of science and that the classical epistemological riddle is resolved? No. Because, the fact that we are free to use our knowledge to answer the classical riddle, does not put us in a stronger position. The question is whether Quine whose reasoning falls within the pattern of *reductio* is in a position to use a part of his knowledge to show *how knowledge is possible at all*. If as Quine says, we are restricted to data which underdetermine what we believe, then the challenge of scepticism is as justified to-day as it was in the seventeenth century. Quine says that we must rebuild and repair our ship on the open sea. We must operate from within the theory we find ourselves constantly assessing, revising and expanding as we are carried along by it. But, if the sceptic is arguing that he is restricted to or imprisoned within his sensory experiences and that he may not be provided with any independent knowledge of the 'external world', then the consolation of naturalism will not persuade him.

We may notice that *Quine's conception of knowledge, not only tolerates scepticism, but is committed to it*. According to Quine, whatever we say about the physical objects is a 'hypothesis'. Our talk of the physical world never follows uniquely

from the truths about what is happening at our sensory surfaces.

Relative to these sensory impacts, physical objects are *posits*, something we project from our data.¹⁷

What we do by the method of *reductio* in naturalized epistemology is to verify a belief by a set of other beliefs but, this does not involve any independent information about the world, against which the truth of that belief could be checked. If I believe that a book is in a certain position in the next room, I may go into that room and find out whether I am right. Here, nothing is wrong with saying that I checked my belief against the facts. But, the point is that I cannot check my beliefs against the facts of the world, if all knowledge is restricted to the 'projection from stimulations'. I would have *no* independent information about the world that I could use as check. We see that Quine is following Russell in his challenge of scepticism. In the *Problems of Philosophy* Russell postulated the existence of the physical objects as the best explanation of our sense-data. Quine just modifies this line of thought in his naturalized epistemology.

We may recall Kant's idea that an absolute distinction between everything we get through the senses on the one hand and what is true of the 'external world' on the other, would cut us off, for ever, from knowledge of the world. *This epistemic distinction which is inherent in Quine's naturalized epistemology is fatal to it.* Because, it leaves us with no reason to suppose that any 'hypothesis' concerning the 'external world' is the true one. We argued in the second chapter that, Kant tried to solve the epistemological riddle by saying that the world as it appears to us, is not independent of the structure of the mind. We know nothing about the world as it is in itself. Kant's *noumenon* was suggested to be parallel to Russell's 'physical object'. And this is the root of what we later on find in Quine as the 'myth of physical objects'.

For Quine, ordinary physical objects are posits or hypotheses, but to Wittgenstein's mind, scepticism concerning the existence of the ordinary physical objects does not make sense. He claims that the question 'Do material objects exist?' is nonsense. We may not hypothesize the existence of material world, because the idea that we may have evidence for it is misguided. We may have evidence for the existence of something in the North Pole, but we could not have evidence for the existence of material things in general. Perceiving an object is not evidence for its existence. Footprints are evidence for someone having passed by, but seeing a person walking is not evidence for his walking. Having evidence for the existence of a particular thing is not evidence for the existence of the 'external world'. The inference 'Here is my hand, so there are physical objects' is like saying that 'I see red, so there are colours'. All such arguments amount to are that a hand is a physical thing; red is a colour, etc. *These propositions are grammatical rules, not ontological hypotheses.* The thought that we might have evidence for the existence of an 'external world' presupposes that its existence is a hypothesis which might be refuted. Now, we should be able to give an account of what would constitute evidence against it and what would settle the matter beyond doubt. But, we are unable to do so. Therefore the sentence 'There is an *external world*' is nonsense. However, when we say 'A is a physical object', we put forward a grammatical proposition which explains an aspect of the use of the terms 'A' and 'physical object'. The concept of 'physical object' is not a theoretical concept like neutrino, nor is it a concept on a par with concepts of particular kinds of material things.

'A is a physical object' is a piece of instruction which we give only to someone who does not yet understand either what 'A' means or what

'physical object' means. Thus it is instruction about the use of words, and

'physical object' is a logical concept.¹⁸

We see that, Wittgenstein does not answer the sceptic's quams concerning the existence of the 'external world', he rather shows that what the sceptic says is nonsense. This is not *answer* to the scepticism of the idealist or the assurances of the realist. But one could say that the assertion that there are physical objects or its denial is a misfiring attempt to express something which cannot be thus expressed.¹⁹

II. On the notion of *Truth*

As we mentioned in chapter four, Purely terminological issues are only important because of their power to obscure and mislead. Instead of what we describe as 'redundancy conception' or 'disappearance account' of truth, some writers use the expression 'redundancy *theory* of truth'. But this is just a terminological issue. The term "theory", here, is used as a synonym for "conception" or "notion" and it is not to be confused with a scientific theory.

According to Ramsey there is not really a separate problem of truth but merely a linguistic confusion. Wittgenstein adopts Ramsey's redundancy account of truth.

[W]hat does a proposition's 'being true' mean? 'P' is true =P.

(That is the answer.)²⁰

He says again:

Remember that 'P is true' means simply 'P' ²¹

Quine treats "is true" as a disquotational device:

The truth predicate is a reminder that despite a technical ascent to talk of sentences, our eye is on the world. This cancellatory force of the truth predicate is explicit in Tarski's paradigm:

"Snow is white" is true, if and only if, snow is white.

Quotation marks make all the difference between talking about words and talking about snow. The quotation is a name of a sentence that contains a name, namely "snow", of snow. By calling the sentence true, we call snow white. The truth predicate is a device of disquotation.²²

This
needs
work,

Redundancy account of truth and treating 'is true' as a disquotational device, are roughly the same views. But the point is that Quine's treating 'is true' as a disquotational device is just for a 'semantic ascent', which does not settle the question of what there is. Quine's semantic ascent makes clear how we can formulate the ontological debates. It brings to the open the differences among philosophers, on what they say there is, but it does not provide any means for adjudicating among rival ontologies. Quine clearly says that despite a technical ascent to talk of sentences, our eye is on the world. He says that:

The question of what ontology actually to adopt still *stands open* and the obvious council is tolerance and an experimental spirit.²³

For Wittgenstein language is flat. There is not a hierarchy of languages and therefore there is no ascent to a meta-language.

We may notice here, that the idea of a fundamental dichotomy between language and reality lies behind Quine's debates, whereas to Wittgenstein's mind the relation between language and reality is internal. As we argued earlier, Russell's epistemological deadlock disappears in later Wittgenstein's conception of language,

whereas it constitutes the main difficulty of Quine's philosophy.

III. On the so-called Necessary Truths

What goes under the received jargon of 'necessary truths' is a mixed bag of different kinds of propositions including the statements of logic, mathematics, metaphysics, etc. Wittgenstein explains why we think of them as *necessary*. He does not explain what makes them *true*, because they are unconditionally true i.e., *they are not made true by anything*. For example, in the sense in which 'It is raining' is made true by the fact that it is now raining, the statement 'Either it is raining or it is not raining' or 'Red is a colour' are not made true by anything. In particular, Wittgenstein never argues - as the logical positivists do - that necessary truths are true in virtue of the meanings of their constituent terms. He condemns such a view as a mythology of meaning-bodies.

With respect to the propositions of mathematics, both Quine and Wittgenstein agree that we keep them immune to falsification. Wittgenstein says:

we deposit mathematical propositions in the archives and therefore they are withdrawn from doubt.²⁴

According to Quine's maxim of minimum mutilation of the system we safeguard any purely mathematical truth.

If asked why he spares mathematics, the scientist will perhaps say that its laws are necessarily true; but I think that we have here an explanation, rather, of mathematical necessity itself. It resides in our unstated policy of shielding mathematics by experiencing our freedom to reject other

beliefs instead.²⁵

But, in principle, to Quine's mind everything within the web of belief, even the law of non-contradiction could be rejected. He says:

Logic is in principle, no less open to revision than quantum mechanics or the theory of relativity...If revisions are seldom proposed that cut so deep as to touch logic, there is clear enough reason for that: the maxim of minimum mutilation.²⁶

Quine's invocation of the maxim of minimum mutilation is merely pragmatic. Otherwise, Quine does not regard 'necessary truths' as having a different *role* from empirical propositions. He never raises the question of the role of truths such as ' $2 + 2 = 4$ ', 'I have never been to the stars' or 'I have two hands'. For Quine truth is truth and that is the end of the matter. But, according to Wittgenstein we need to investigate from case to case, what it is for one kind of proposition to be true as opposed to another.

Whether a sentence expresses a 'necessary truths' is a matter of what it is used for and hence it is a feature of the use of token sentences. Two tokens of the same type sentence may be differently used. 'War is war' is rarely used as a tautology. 'This is red' may be used to make an empirical statement about the colour of the curtains or used as a grammatical proposition - an ostensive definition of the word 'red'. A proposition of physics may be taken in one context as an empirical law and in another as a definition. The point is that no proposition may be used simultaneously to state an empirical truth and to express a grammatical rule, just as a ruler cannot be simultaneously used as a measure and as an object measured.

We argued in the introductory chapter that the truth of the proposition 'The chess king moves one square at a time' consists in its being the expression of a rule of

chess. In the same way, the truth of what we call a 'necessary truth' consists in its being an expression of a rule for the use of an expression. The proposition 'This is a hand', when used as an ostensive definition of the word 'hand' is a 'necessary truth'. When so used, such propositions are rules of grammar. Doubting them is not intelligible.

They persist independently of all that happens as the construction of a machine on paper does not break when the machine itself succumbs to external forces. - Or again I should like to say that they are not subject to wind and weather like physical things; rather are they *unassailable like shadows*.²⁷

What appears to be necessities in the world are shadows cast by grammar. What is marked by the 'must' of 'If it is red, then it must be coloured', 'If there are eleven X's in each of eleven rows, then there must be a hundred and twenty one' is the *normative* role of such propositions as 'Red is a colour', ' $11 \times 11 = 121$ '. They are rules, modes of representation or norms of description. If there were more or less than a hundred and twenty one X's in the rows, then we would regard it as a miscount. *Here, What we hold rigid is not a truth about the world, but a rule for describing how things are in the world.*

The hardness of logical 'must' indicates our refusal to depart from a concept.²⁸

Propositions of mathematics are concept-forming rules, licencing inferences among empirical propositions.

Concerning the tautologies of logic Quine argues, for example, that $(x) (x = x)$ can be said to depend for its truths on the self-identity of everything. According to

Wittgenstein 'An object is different from itself' is nonsense, so is its negation. There is no finer example of a *useless* proposition than 'A is identical with itself.'²⁹ So, tautologies of logic are vacuous i. e., senseless. They all say the same thing, namely nothing. But, these tautologies are correlates of the inference rules that constitute the connecting links between the nodes of the web of beliefs. It is the logical relations between beliefs that makes for a difference between a web of beliefs and a collection of beliefs.

It is true that, nothing is allowed to falsify 'necessary truths'. But, unlike Quine Wittgenstein does not hold that we *shield* them from empirical disconfirmation by exercising our freedom to reject other beliefs instead. Their necessity is not explained merely by the fact that we refuse to falsify them, because that would not show the difference between 'necessary truths' and ordinary empirical propositions of our world-picture such as 'The world has existed for many years'. Wittgenstein denies that the ordinary empirical propositions of the world-picture can be rejected. Their repudiation would tear apart the web of belief. *It is these and not the propositions of logic and mathematics that are so deeply embedded in the web of belief that cannot be revised, even though they are not necessary truths.*

Though unassailable, 'necessary truths' are not immutable. If we change them, we change the meaning of their constituent expressions. If we abandon the proposition that red is a colour, we thereby change the meanings of 'red' and 'colour'. If we drop the law of double negation we change the meaning of negation. According to Wittgenstein there is nothing in reality or in human mind that makes the law of non-contradiction or *Modus Ponendo Ponens* true. These are patterns of reasoning that we impose on reality. We may change them, but this revisability is not a matter of

individual whim. Because they are technique -constituting rules that define the way we judge and think. They are deeply embedded in the form of life we lead.

IV. On the role and nature of ostensive definition

Quine says that language learning involves ostensive teaching and that the mere ostensive gesture by itself does not suffice to determine the use of a word:

How do we know how much or what aspect of the ostended region is intended? How do we even recognize pointing as pointing? How do we know that an ostensively defined term is not a term for the pointing finger? How do we ostend ostension?³⁰

This is apparently Wittgenstein's view. But, we may notice the depth of the difference between Quine's causalist view and Wittgenstein's normative account of language, here. According to Quine ostension is a matter of conditioning and induction. He presents a causal explanation of the connection between a given stimulus and an utterance. Wittgenstein argues that an ostensive definition is a rule for the use of a word - a standard for its correct application. The sample employed in ostensive definition belongs to the method of representation - to the language.

V. On Language Learning

Both philosophers invoke radical translation (the translation of the language of a wholly alien people) as a device to illuminate the concept of meaning. Wittgenstein like Quine

approaches the problem from an ethnological point of view.

If we look at things from an ethnological point of view, does that mean we are saying that philosophy is ethnology? No, it only means that we are taking up a position right outside so as to be able to see things *more objectively*.³¹

Although Quine and Wittgenstein agree that all the field linguist or the child have to go on in learning the language is behaviour, that agreement masks a profound disagreement. Quine regards the child as being conditioned in the use of language. The stimulus / response conditioning is said to be aided by induction which is 'animal expectation or habit formation'. For Wittgenstein language learning is not only a matter of conditioned response. Though it begins with training and rests on shared reactive propensities and discriminatory capacities, *what are to be learnt are techniques of normative practice*. These rule-governed techniques are learnt by participating in the practice of using language subject to standards of correction.

VI. On the Behaviourist Conception of Meaning

Quine and Wittgenstein agree that the meaning of words are neither mental images, nor objects (whether physical or abstract). Quine says:

uncritical semantics is the myth of a museum in which, the exhibits are meanings and the words are labels.³²

According to Wittgenstein to say that the truth of " $P = \sim\sim P$ " follows from the meaning of the negation sign is, to be committed to the mythical *meaning-body* conception of

meaning.

'That two negations yield an affirmation must already be contained in the negation that I am using now.' Here I am on the verge of inventing a mythology of symbolism. It looks as if one could *infer* from the meaning of negation that ' $\sim\sim p$ ' means p . As if the rules for the negation sign *follow from* the nature of negation. So that in a certain sense, there is first of all negation, and then the rules of grammar.³³

Both philosophers are behaviourist, but though we see a superficial methodological agreement in their behavioursim, that is a mask for a profound disagreement. What is behaviourist in Wittgenstein's conception of meaning or understanding is that the distinction between the 'inner' and the 'outer' is irrelevant for him. It is true that Wittgenstein says: "Don't ask for the meaning, ask for the use", but for Wittgenstein use of an expression does not only signify behaviour, it is rather a rule-governed or *normative* behaviour subject to standards of correctness. The use of a piece in a game of chess is not merely the mechanical movement of that piece, but the way people move it in accordance with the rules of the game. The use of an expression is not merely the verbal behaviour of users of the expression, but their verbal and non-verbal behaviour in so far as it accords with the acknowledged rules for the correct employment of that expression. The rules, far from being 'explanatorily idle' as Quine suggests, are explanatorily indispensable. Because they determine the difference between correct and incorrect use, as well as the difference between sense and nonsense. A language stripped of normativity is no more language than chess stripped of its rules, is a game. When we go to a foreign land, we come to understand the language of the natives *only* through its connections with their life. An order like 'Fetch

the slab' is recognized as an order by means of the circumstances preceding, following or accompanying it. Speaking a language is part of a form of life. It springs up and grows out of that context.

Wittgenstein insists and Quine denies that rules play a role in the use of language - as standards of correct use. According to Wittgenstein if communication by means of language is to be possible, there must be agreements not only in judgements but also in standards of correct use. There is an internal relation between a rule as an explanation of the meaning of an expression and its application. Understanding an expression is grasping that relation i. e., what counts as applying that expression *correctly*. If you cannot say what you mean by the use of an expression in some way - by ostension, paraphrase, exemplification, etc. - then you do not know what it is that you are talking about.

Conclusions

1. Contrary to the framework of thought of both Russell and Quine, there is no language / reality dichotomy.

According to the *Tractatus* language is connected to reality by the assignment of meaning to the logically proper names which are the final product of logical analysis. We associate each logically proper name with its meaning which is a simple object in reality. But, the author of the *Tractatus* has misunderstood the nature of ostensive definition. Our claim that 'Language is autonomous' does not mean that there is no connection between language and reality. It just means that 'simple indefinables' do not have a meaning which is a corresponding entity in the world. Because that involves *a confused contrast between 'in the world' and 'in a language'*, whereas the relation of language to reality is *internal*. When we explain what 'red' means by pointing to a patch of colour, we are *not* saying something about the patch, but explaining the meaning of the *word* 'red'. The ostensive definition belongs to grammar. It is a rule for the use of an expression and *the 'red sample' belongs to language*. Whether something is a sample - just as whether something is a sign - is not an intrinsic feature of an object, but a feature of its use. Russell's conception of language as a network of interconnected signs; which will be given content by means of an interpretation is misguided. This is a version of the *Augustinian concept of meaning* which conceives of the meaning of an expression on the *model of correlation*. But the meaning of an expression is its use

according to the rules of grammar. These rules do not mirror the forms of entities in reality. On the contrary, what are thought of as forms of things in reality are the reflections of grammar. *It is not an empirical fact that a table is an object or that red is a colour.* They are rules of grammar. 'Grammar tells us what *kind* of object a thing is.' One may suppose that there is a world out there, we think about it, know it and then express it in language. That is a fundamental mistake. We categorise and conceptualise by means of language. The very concept of reality is built in our various uses of language. Language, itself, makes our experience and understanding possible. *Apparent necessities in the world are shadows cast by grammar.* For instance, the law of universal causation, is a rule i. e., a norm of representation of Newtonian mechanics, but not a rule of *quantum mechanics*. Propositions of mathematics no more hold true of the world than does the proposition '1 kilometre = 1000 metres'. The world does not accord with our mathematical propositions, by a transcendental necessity. *It neither accords with them, nor fails to accord with them. We apply our mathematical grammar to the items we encounter in experience.*

2. Epistemological riddles collapse into logical (grammatical) insights.

Scepticism about the 'external world' rests upon the idea that our senses inform us of things outside us. They give us *evidence* for the existence of extra-mental objects. The sceptic says that sometimes we are wrong in our perceptual judgements and concludes that the evidence of our senses is not reliable. If we are sometimes mistaken, then we might always be wrong. Kant thought that we must encounter this argument by proving that the 'external world' does exist. According to Wittgenstein, it makes no sense to claim that the world exists or to deny that it exists - the sceptical challenge is nonsensical.

In saying that I cannot know that I am in pain but that you may know that I am in pain, Wittgenstein is not drawing the boundaries of possible knowledge. He is drawing the bounds of sense. His non-cognitive account of the first person psychological expressions reveals that the way Russell has set up the problem of 'The relation of sense-data to physics' is confused.

We may say that scepticism concerning a proposition like 'I have two hands' in ordinary circumstances, is against the mastery of a technique in the practice of describing the world. Our certainty concerning these judgements is a practical certainty that shows how the expressions of our language are used. The function of Moore's truisms makes the question of establishing their grounds out of place. Russell's solipsistic conception of experience is the result of his confusion about the nature of these judgements.

Following Russell, Quine's scepticism concerning Moore's truisms which is explicit in his notion of 'The myth of physical objects' is misplaced. It misrepresents our non-epistemic relation to these technique-constituting propositions as an epistemic relation to empirical judgements. His attempt to question these truisms is incoherent, because ***there exists a language (and thought) in so far as there exists a practice of employing linguistic expressions.***

3. Russell's very supposition that mathematics needs foundations is an illusion.

What makes the propositions of mathematics true? Different schools of mathematical philosophy have tried to answer this question. By showing the function of the propositions of mathematics in the use of language, Wittgenstein argued that the question is itself, nonsensical. Because it assimilates mathematical propositions to empirical ones. The question 'What makes a proposition of mathematics true?' calls for

an answer on the model of how things are in the world that make empirical propositions true. But, the role of mathematical propositions in the use of language are basically different from the function of empirical propositions.

The absolute certainty of the propositions of logic and mathematics resides in the role that they play in our practice of inference and calculation. Logical and mathematical propositions *define* the techniques of inference and calculation. Our certainty concerning these propositions is pre-epistemic. According to Russell's account in *Principia Mathematica* it is a fundamental law of logic that the proposition 'Q' follows from the proposition 'P & (P → Q)'. But what does this 'following' consist in? There is nothing in reality that provides a foundation for this inference. As participants in the practice of inference, we project the pattern of our reasoning onto the world.

Hilbert's *Foundations of Geometry* (1903) was a turning point in philosophical debates on the foundations of mathematics. By formalizing the axiomatic system of Euclidean geometry, Hilbert tried to divorce it from questions about the meanings of the primitive terms. Following Hilbert, other formalized axiomatic systems were advanced. Russell claimed that the axioms of the *Principia* are implicit definitions of the primitive terms. Even the author of the *Tractatus* said that '*Logical syntax can be established independently of the meanings of signs*'.

This reflects a fundamental confusion about the notion of 'meaning'

The idea is that our explicit verbal definitions break concepts down into indefinables which are introduced by ostensive definitions. Only through ostensive definition is language connected with reality. Axiomatic systems are not answerable to reality. These deductive systems are regarded only as different games with symbols. Since an axiomatic system is developed without any explicit definition of its primitive terms, it leaves open the possibility of later concrete definitions

of these terms. But, if the primitive terms of an axiomatic system are left uninterpreted, then the question of what applications of them are correct is open. Now, what are we to make of the idea that these primitive terms express particular concepts? For, concepts are differentiated by differences in what counts as correct applications of them. A concept that can be applied to anything whatever, has no content at all. *It is the applications of symbols that differentiates mathematics from mere games or ornaments.*

Einstein said that 'so far as the theorems of mathematics are about reality, they are not certain. And so far as they are certain, they are not about reality.' In Kantian terminology this means that, so far as the theorems of mathematics are synthetic, they are not *a priori* and so far as they are *a priori* they are not synthetic.

We may notice that the idea of a fundamental dichotomy between language and reality is inherent in this view. What lies behind this conception of mathematical truth is a theory of meaning: To give an expression meaning is to correlate it with something in reality and its meaning is the entity coorelated with it. Hilbert and Einstein implicitly followed this line of thought.

4. Quine's naturalized epistemology is committed to scepticism.

Whatever Quine's naturalized epistemology could do, it may not answer the very question that proved so difficult to the traditional epistemologist. Quine thinks that since both of the projects of justification and construction of our knowledge of the 'external world' on the basis of sense-impressions have failed, we may simply explain how our 'torrential theoretical output' arises from those events that take place at our sensory surfaces. But, the point is that in this way Quine does not answer the traditional epistemological question. He deals with a different problem. As long as we retain the

idea that all our beliefs about the physical world are projections from the meager impacts at our sensory surfaces, we may not show that what we believe, are true knowledge of the world. *Quine's conception of knowledge, not only tolerates scepticism, but is committed to it.*

We may recall Kant's idea that an absolute distinction between everything we get through the senses on the one hand and what is true of the 'external world' on the other, would cut us off, for ever, from knowledge of the world. *This epistemic distinction which is inherent in Quine's naturalized epistemology is fatal to it.* That leaves us with no reason to suppose that any 'hypothesis' concerning the 'external world' is the true one.

Notes

1. *Philosophical Investigations*, Sec. 481.
2. *Op. Cit.*, P.224.
3. Fann, K. T. (ed.) *Wittgenstein*, P.336.
4. *Remarks on the Foundations of Mathematics*, Third Edition, Blackwell, P.106.
5. *Philosophical Investigations*, Sec.373.
6. *Philosophical Remarks*, Sec. 7.
7. *Philosophical Investigations*, Sec. 372.
8. *The Blue Book*, P. 57.
9. Kant, I. *Critique of Pure Reason*, P. BXL.
10. See PP. 195-196.
11. *Philosophical Investigations*, P.222.

12. See the second chapter.
13. *On Certainty*, P. 1.
14. Quine, W. *Ontological Relativity*, P. 72.
15. Quine W. *Roots of Reference*, P. 3.
16. Guttenplan S. (ed.) *Mind and Language*, P. 68.
17. *Ontological Relativity*, P.83.
18. *On Certainty*, Sec. 36.
19. *Ibid*, Sec. 37.
20. *Remarks on the Foundations of Mathematics*, P.117.
21. Rush Rhees's report in *Philosophical Review*, January 1965, P.24.
22. *Philosophy of Logic*, Prentice Hall, 1970, P.12.
23. Quine, W. *From a Logical Point of View*, P.19.
24. *Remarks on the Foundations of Mathematics*, P.165.
25. *Perspectives on Quine*, P.11.
26. *Philosophy of Logic*, P. 100.
27. *Remarks on the Foundations of Mathematics*, P. 74.
28. *Op. Cit.*, P. 238.
29. *Philosophical Investigations*, Sec. 216.
30. *The Roots of Reference*, P.44.
31. *Culture and Value*, P. 37.
32. *Ontological Relativity*, P.27.
33. *Philosophical Grammar*, P.53.

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