1. Verifiability

The problems of philosophy as usually dealt with are of very different kinds. From the point of view which I am here taking we may distinguish mainly three kinds of problems and doctrines in traditional philosophy. For the sake of simplicity we shall call these parts Metaphysics - Psychology, and Logic. Or, rather, there are not three distinct regions, but three sorts of components which in most theses and questions are combined: a metaphysical, a psychological, and a logical component.

The considerations that follow belong to the third region: we are here carrying out Logical Analysis. The function of logical analysis is to analyse all knowledge, all assertions of science and of everyday life, in order to make clear the sense of each such assertion and the connections between them. One of the principal tasks of the logical analysis of a given proposition is to find out the method of verification for that proposition. The question is: What reasons can there be to assert this proposition; or: How can we become certain as to its truth or falsehood? This question is called by the philosophers the epistemological question; epistemology or the philosophical theory of knowledge is nothing other than a special part of logical analysis, usually combined with some psychological questions concerning the process of knowing.

What, then, is the method of verification of a proposition? Here we have to distinguish between two kinds of verification: direct and indirect. If the question is about a proposition which asserts something about a present perception, e.g. "Now I see a red square on a blue ground," then the proposition can be tested directly by my present perception. If at present I do see a red square on a blue ground, the proposition is directly verified by this seeing; if I do not see that, it is disproved. To be sure, there are still some
serious problems in connection with direct verification. We will however not touch on them here, but give our attention to the question of indirect verification, which is more important for our purposes. A proposition P which is not directly verifiable can only be verified by direct verification of propositions deduced from P together with other already verified propositions. 

Let us take the proposition P1: "This key is made of iron." There are many ways of verifying this proposition; e.g.: I place the key near a magnet; then I perceive that the key is attracted. Here the deduction is made in this way: 

Premises:

P1: "This key is made of iron;" the proposition to be examined.
P2: "If an iron thing is placed near a magnet, it is attracted;" this is a physical law, already verified.
P3: "This object-a bar-is a magnet;" proposition already verified.
P4: "The key is placed near the bar;" this is now directly verified by our observation.

From these four propositions we can deduce the conclusion:

P5: "The key will now be attracted by the bar."

This proposition is a prediction which can be examined by observation. If we look, we either observe the attraction or we do not. In the first case we have found a positive instance, an instance of verification of the proposition P1 under consideration; in the second case we have a negative instance, an instance of disproof of P1.

In the first case the examination of the proposition P1 is not finished. We may repeat the examination by means of a magnet, i.e. we may deduce other propositions similar to P5 by the help of the same or similar premises as before. After that, or instead of that, we may make an examination by electrical tests, or by mechanical, chemical, or optical tests, etc. If in these further investigations all instances turn out to be positive, the certainty of proposition P1 gradually grows. We may soon come to a degree of certainty sufficient for all practical purposes, but absolute certainty we can never attain.

The number of instances deducible from P1 by the help of other propositions already verified or directly verifiable is infinite. Therefore there is always a possibility of finding in the future a negative instance, however small its probability may be. Thus the proposition P1 can never be completely verified. For this reason it is called an hypothesis.

So far we have considered an individual proposition concerning one single
thing. If we take a general proposition concerning all things or events at whatever time and place, a so-called natural law, it is still clearer that the number of examinable instances is finite and so the proposition is an hypothesis.

Every assertion P in the wide field of science has this character, that it either asserts something about present perceptions or other experiences, and therefore is verifiable by them, or that propositions about future perceptions are deducible from P together with some other already verified propositions. If a scientist should venture to make an assertion from which no perceptive propositions could be deduced, what should we say to that? Suppose, e.g., he asserts that there is not only a gravitational field having an effect on bodies according to the known laws of gravitation, but also a levitational field, and on being asked what sort of effect this levitational field has, according to his theory, he answers that there is no observable effect; in other words, he confesses his inability to give rules according to which we could deduce perceptive propositions from his assertion. In that case our reply is: our assertion is no assertion at all; it does not speak about anything; it is nothing but a series of empty words; it is simply without sense.

It is true that we may have images and even feelings connected with his words. This fact may be of psychological importance; logically, it is irrelevant. What gives theoretical meaning to a proposition is not the attendant images and thoughts, but the possibility of deducing from it perceptive propositions, in other words, the possibility of verification. To give sense to a proposition the presence of images is not sufficient; it is not even necessary. We have no actual image of the electro-magnetic field, nor even, I should say, of the gravitation field. Nevertheless the propositions which physicists assert about these fields have a perfect sense, because perceptive propositions are deducible from them. I by no means object to the proposition just mentioned about a levitational field that we do not know how to imagine or conceive such field. My only objection to that proposition is that we are not told how to verify it.

2. Metaphysics
What we have been doing so far is logical analysis. Now we are going to apply these considerations not to propositions of physics as before, but to propositions of metaphysics. Thus our investigation belongs to logic, to the third of the three parts of philosophy spoken about before, but the objects of this investigation belong to the first part.

I will call metaphysical all those propositions which claim to represent knowledge about something which is over or beyond all experience, e.g. about
the real Essence of things, about Things in themselves, the Absolute, and such like. I do not include in metaphysics those theories - sometimes called metaphysical - whose object is to arrange the most general propositions of the various regions of scientific knowledge in a well-ordered system; such theories belong actually to the field of empirical science, not of philosophy, however daring they may be. The sort of propositions I wish to denote as metaphysical may most easily be made clear by some examples: "The Essence and the Principle of the world is Water," said Thales; "Fire," said Hetaklitus; "the Infinite", said Anaximander; "Number", said Pythagoras. "All things are nothing but shadows of eternal ideas which themselves are in spaceless and timeless sphere," is a doctrine of Plato. From the Monists we learn: "There is only one principle on which all that is, is founded"; but the Dualists tell us: "There are two principles." The Materialists say: "All that is, is in its essence material," but the Spiritualists say: "All that is, is spiritual." To metaphysics (in our sence of the wold) belong the principal doctrines of Spinoza, Schelling, Hegel, and - to give at least one name of present time - Bergson.

Now let us examine this kind of proposition: from the point of view of verifiability. It is easy to realise that such propositions are not verifiable. From the proposition: "The Principle of the world is Water" we are not able to deduce any proposition asserting any perceptions or feelings or experiences whatever which may be expected for the future. Therefore the proposition, "The Principle of the world is Water," asserts nothing at all. It is perfectly analogous to the proposition in the fictive example above about the levitational field and therefore it has no more sense than that proposition. The Water-Metaphysician - as we may call him - has no doubt many images connected with his doctrine; but they could have them in the case of the levitational field. Metaphysicians cannot avoid making their propositions non-verifiable, because if they made them verifiable, the decision about the truth or falsehood of their doctrines would depend upon experience and therefore belong to the region of empirical science. This consequence they wish to avoid, because they pretend to teach knowledge which is of a higher level than that of empirical science. Thus they are compelled to cut all connection between their propositions and experience; and precisely by this procedure they deprive them of any sense.

3. Problems of Reality

So far I have considered only examples of such propositions as are usually called metaphysical. The judgment I have passed on these propositions, namely, that they have no empirical sense, may perhaps appear not very astonishing, and even trivial. But it is to be feared that the reader will experience somewhat more difficulty in agreement when I now proceed to...
apply that judgment also to philosophical doctrines of the type which is usually called epistemological. I prefer to call them also metaphysical because of their similarity, in the point under consideration, to the propositions usually so called. What I have in mind are the doctrines of Realism, Idealism, Solipsism, Positivism and the like, taken in their traditional form as asserting or denying the Reality of something. The Realist asserts the Reality of the external world; the Idealist denies it. The Realist - usually at least - asserts also the Reality of other minds; the Solipsist - an especially radical Idealist - denies it, and asserts that only his own mind or consciousness is real. Have these assertions sense? Perhaps it may be said that assertions about the reality or unreality of something occur also in empirical science, where they are examined in an empirical way, and that therefore they have sense. This is quite true. But we have to distinguish between two concepts of reality, one occurring in empirical propositions and the other occurring in the philosophical propositions just mentioned. When a zoologist asserts the reality of kangaroos, his assertion means that there are things of a certain sort which can be found and perceived at certain times and places; in other words that there are objects of a certain sort which are elements of the space-time system of the physical world. This assertion is of course verifiable; by empirical investigation every zoologist arrives at a positive verification, independent of whether he is a Realist or an Idealist. Between the Realist and the Idealist there is full agreement as to the question of the reality of things of such and such sort, i.e. of the possibility of locating elements of such and such sort in the system of the physical world. The disagreement begins only when the question about the Reality of the physical world as a whole is raised. But this question has no sense, because the reality of anything is nothing else than the possibility of its being placed in a certain system, in this case, in the space-time system of the physical world, and such a question has sense only if it concerns elements or parts, not if it concerns the system itself. The same result is obtained by applying the criterion explained before: the possibility of deducing perceptive propositions. While from the assertion of the reality or the existence of kangaroos we can deduce perceptive propositions, from the assertion of the Reality of the physical world this is not possible; neither is it possible from the opposite assertion of the Unreality of the physical world. Therefore both assertions have no empirical content - no sense at all. It is to be emphasized that this criticism of having no sense applies equally to the assertion of Unreality. Sometimes the views of the Vienna Circle have been mistaken for a denial of the Reality of the physical world, but we make no such denial. It is true that we reject the thesis of the Reality of the physical world;
but we do not reject it as false, but as having no sense, and its Idealistic anti-
thesis is subject to exactly the same rejection. We neither assert nor deny
these theses, we reject the whole question.
All the considerations which apply to the question of the Reality of the physical
world apply also to the other philosophical questions of Reality, e.g. the Reality
of other minds, the Reality of the given, the Reality of universals, the Reality of
qualities, the Reality of relations, the Reality of numbers, etc. If any
philosophical thesis answering any of these questions positively or negatively is
added to the system of scientific hypotheses, this system will not in the least
become more effective; we shall not be able to make any further prediction as
to future experiences. Thus all these philosophical theses are deprived of
empirical content, of theoretical sense; they are pseudo-theses.
If I am right in this assertion, the philosophical problems of Reality - as
distinguished from the empirical problems of Reality - have the same logical
character as the problems (or rather, pseudo-problems) of transcendental
metaphysics earlier referred to. For this reason I call those problems of Reality
not epistemological problems - as they usually are called - but metaphysical.
Among the metaphysical doctrines that have no theoretical sense I have also
mentioned Positivism, although the Vienna Circle is sometimes designated as
Positivistic. It is doubtful whether this designation is quite suitable for us. In
any case we do not assert the thesis that only the Given is Real, which is one
of the principal theses of traditional Positivism. The name Logical Positivism
seems more suitable, but this also can be misunderstood. At any rate it is
important to realize that our doctrine is a logical one and has nothing to do
with metaphysical theses of the Reality or Unreality of anything whatever.
What the character of a logical thesis is, will be made clear in the following
chapters.

4. Ethics
One division of philosophy, which by some philosophers is considered the most
important, has not been mentioned at all so far, namely, the philosophy of
values, with its main branch, moral philosophy or Ethics. The word "Ethics" is
used in two different senses. Sometimes a certain empirical investigation is
called "Ethics", viz. psychological and sociological investigations about the
actions of human beings, especially regarding the origin of these actions from
feelings and volitions and their effects upon other people. Ethics in this sense
is an empirical, scientific investigation; it belongs to empirical science rather
than to philosophy. Fundamentally different from this is ethics in the second
sense, as the philosophy of moral values or moral norms, which one can
designate normative ethics. This is not an investigation of facts, but a
pretended investigation of what is good and what is evil, what it is right to do and what it is wrong to do. Thus the purpose of this philosophical, or normative, ethics is to state norms for human action or judgment about moral values.

It is easy to see that it is merely a difference of formulation, whether we state a norm or a value judgment. A norm or rule has an imperative form, for instance: "Do not kill!" The corresponding value judgment would be: "Killing is evil." This difference of formulation has become practically very important, especially for the development of philosophical thinking. The rule, "Do not kill," has grammatically the imperative form and will therefore not be regarded as an assertion. But the value statement, "Killing is evil," although, like the rule, it is merely an expression of a certain wish, has the grammatical form of an assertive proposition. Most philosophers have been deceived by this form into thinking that a value statement is really an assertive proposition, and must be either true or false. Therefore they give reasons for their own value statements and try to disprove those of their opponents. But actually a value statement is nothing else than a command in a misleading grammatical form. It may have effects upon the actions of men, and these effects may either be in accordance with our wishes or not; but it is neither true nor false. It does not assert anything and can neither be proved nor disproved. This is revealed as soon as we apply to such statements our method of logical analysis. From the statement "Killing is evil" we cannot deduce any proposition about future experiences. Thus this statement is not verifiable and has no theoretical sense, and the same thing is true of all other value statements. Perhaps somebody will contend in opposition that the following proposition is deducible: "If a person kills anybody he will have feelings of remorse." But this proposition is in no way deducible from the proposition "Killing is evil." It is deducible only from psychological propositions about the character and the emotional reactions of the person. These propositions are indeed verifiable and not without sense. They belong to psychology, not to philosophy; to psychological ethics (if one wishes to use this word), not to philosophical or normative ethics. The propositions of normative ethics, whether they have the form of rules or the form of value statements, have no theoretical sense, are not scientific propositions (taking the word scientific to mean any assertive proposition).

To avoid misunderstanding it must be said that we do not at all deny the possibility and importance of a scientific investigation of value statements as well as of acts of valuation. Both of these are acts of individuals and are, like all other kinds of acts, possible objects of empirical investigation. Historians,
psychologists, and sociologists may give analyses and causal explanations of them, and such historical and psychological propositions about acts of valuation and about value statements are indeed meaningful scientific propositions which belong to ethics in the first sense of this word. But the value statements themselves are here only objects of investigation; they are not propositions in these theories, and have, here as elsewhere, no theoretical sense. Therefore we assign them to the realm of metaphysics.

5. **Metaphysics as Expression**

Now we have analysed the propositions of metaphysics in a wide sense of this word, including not only transcendental metaphysics, but also the problems of philosophical Reality and lastly normative ethics. Perhaps many will agree that the propositions of all these kinds of metaphysics are not verifiable, i.e. that their truth cannot be examined by experience. And perhaps many will even grant that for this reason they have not the character of scientific propositions. But when I say that they are without sense, assent will probably seem more difficult. Someone may object: these propositions in the metaphysical books obviously have an effect upon the reader, and sometimes a very strong effect; therefore they certainly express something. That is quite true, they do express something, but nevertheless they have no sense, no theoretical content.

We have here to distinguish two functions of language, which we may call the expressive function and the representative function. Almost all the conscious and unconscious movements of a person, including his linguistic utterances, express something of his feelings, his present mood, his temporary or permanent dispositions to reaction, and the like. Therefore we may take almost all his movements and words as symptoms from which we can infer something about his feelings or his character. That is the expressive function of movements and words. But besides that, a certain portion of linguistic utterances (e.g. "this book is black"), as distinguished from other linguistic utterances and movements, has a second function: these utterances represent a certain state of affairs; they tell us that something is so and so; they assert something, they predicate something, they judge something.

In special cases, this asserted state may be the same as that which is inferred from a certain expressive utterance; but even in such cases we must sharply distinguish between the assertion and the expression. If, for instance, somebody is laughing, we may take this as a symptom of his merry mood; if on the other hand he tells us without laughing: "Now I am merry," we can learn from his words the same thing which we inferred in the first case from his laughing. Nevertheless, there is a fundamental difference between the laughter and the words: "I am merry now." This linguistic utterance asserts the
merry mood, and therefore it is either true or false. The laughter does not assert the merry mood but expresses it. It is neither true nor false, because it does not assert anything, although it may be either genuine or deceptive. Now many linguistic utterances are analogous to laughing in that they have only an expressive function, no representative function. Examples of this are cries like "Oh, Oh" or, on a higher level, lyrical verses. The aim of a lyrical poem in which occur the words "sunshine" and "clouds", is not to inform us of certain meteorological facts, but to express certain feelings of the poet and to excite similar feelings in us. A lyrical poem has no assertional sense, no theoretical sense, it does not contain knowledge.

The meaning of our anti-metaphysical thesis may now be more clearly explained. This thesis asserts that metaphysical propositions - like lyrical verses - have only an expressive function, but no representative function. Metaphysical propositions are neither true nor false, because they assert nothing, they contain neither knowledge nor error, they lie completely outside the field of knowledge, of theory, outside the discussion of truth or falsehood. But they are, like laughing, lyrics, and music, expressive. They express not so much temporary feelings as permanent emotional or volitional dispositions. Thus, for instance, a Metaphysical system of Monism may be an expression of an even and harmonious mode of life, a Dualistic system may be an expression of the emotional state of someone who takes life as an eternal struggle; an ethical system of Rigorism may be expressive of a strong sense of duty or perhaps of a desire to rule severely. Realism is often a symptom of the type of constitution called by psychologists extroverted, which is characterized by easily forming connections with men and things; Idealism, of an opposite constitution, the so-called introverted type, which has a tendency to withdraw from the unfriendly world and to live within its own thoughts and fancies. Thus we find a great similarity between metaphysics and lyrics. But there is one decisive difference between them. Both have no representative function, no theoretical content. A metaphysical proposition, however - as distinguished from a lyrical verse - seems to have some, and by this not only is the reader deceived, but the metaphysician himself. He believes that in his metaphysical treatise he has asserted something, and is led by this into argument and polemics against the propositions of some other metaphysician. A poet, however, does not assert that the verses of another are wrong or erroneous; he usually contents himself with calling them bad.

The non-theoretical character of metaphysics would not be in itself a defect; all arts have this non-theoretical character without thereby losing their high value for personal as well as for social life. The danger lies in the deceptive character
of metaphysics; it gives the illusion of knowledge without actually giving any knowledge. This is the reason why we reject it.

6. Psychology

When we have eliminated metaphysical problems and doctrines from the region of knowledge or theory, there remain still two kinds of philosophical questions: psychological and logical. Now we shall eliminate the psychological questions also, not from the region of knowledge, but from philosophy. Then, finally, philosophy will be reduced to logic alone (in a wide sense of this word). Psychological questions and propositions are certainly not without sense. From such propositions we can deduce other propositions about future experiences and by their help we can verify the psychological propositions. But the propositions of psychology belong to the region of empirical science in just the same way as do the propositions of chemistry, biology, history and the like. The character of psychology is by no means more philosophical than that of the other sciences mentioned. When we look at the historical development of the sciences we see that philosophy has been the mother of them all. One science after another has been detached from philosophy and has become an independent science. Only in our time has the umbilical cord between psychology and philosophy been cut. Many philosophers have not yet realized quite clearly that psychology is no longer an embryo, but an independent organism, and that psychological questions have to be left to empirical research.

Of course we have no objection to connecting psychological and logical investigations, any more than to connecting investigations of any scientific kind. We reject only the confusion of the two kinds of questions. We demand that they should be clearly distinguished even where in practice they are combined. The confusion sometimes consists in dealing with a logical question as if it were a psychological one. This mistake - called Psychologism - leads to the opinion that logic is a science concerning thinking, that is, either concerning the actual operation of thinking or the rules according to which thinking should proceed. But as a matter of fact the investigation of operations of thinking as they really occur is a task for psychology and has nothing to do with logic. And learning how to think aright is what we do in every other science as well as in logic. In astronomy we learn how to think aright about stars; in logic we learn how to think aright about the special objects of logic. What these special objects of logic are, will be seen in the next chapter. In any case thinking is not an object of logic, but of psychology. Psychological questions concern all kinds of so-called psychic or mental events, all kinds of sensations, feelings, thoughts, images, etc., whether they are
conscious or unconscious. These questions of psychology can be answered only by experience, not by philosophising.

7. Logical Analysis
The only proper task of Philosophy is Logical Analysis. And now the principal question to be answered here will be: "What is logical analysis?" In our considerations so far we have already practised logical analysis: we have tried to determine the character of physical hypotheses, of metaphysical propositions (or rather, pseudo-propositions), of psychological propositions. And now we have to apply logical analysis to logical analysis itself; we have to determine the character of the propositions of logic, of those propositions which are the results of logical analysis.

The opinion that metaphysical propositions have no sense because they do not concern any facts, has already been expressed by Hume. He writes in the last chapter of his Enquiry Concerning Human Understanding (published in the year 1748) as follows: "It seems to me, that the only objects of the abstract sciences or of demonstration, are quantity and number ... All other enquiries of men regard only matter of fact and existence; and these are evidently incapable of demonstration ... When we run over libraries, persuaded of these principles, what havoc must we make? If we take in our hand any volume, of divinity or school metaphysics, for instance; let us ask, Does it contain any abstract reasoning concerning quantity or number? No. Does it contain any experimental reasoning concerning matter of fact and existence? No. Commit it then to the flames: for it can contain nothing but sophistry and illusion." We agree with this view of Hume, which says - translated into our terminology - that only the propositions of mathematics and empirical science have sense, and that all other propositions are without sense.

But now it may perhaps be objected: "How about your own propositions? In consequence of your view your own writings, including this book, would be without sense, for they are neither mathematical nor empirical, that is, verifiable by expirience." What answer can be given to this objection? What is the character of my propositions and in general of the propositions of logical analysis? This question is decisive for the consistency of the view which has been explained here.

An answer to the objection is given by Wittgenstein in his book Tractatus Logico-Philosophicus. This author has developed most radically the view that the propositions of metaphysics are shown by logical analysis to be without sense. How does he reply to the criticism that in that case his own propositions are also without sense? He replies by agreeing with it. He writes: "The result of philosophy is not a number of 'philosophical propositions,' but to make
propositions clear" (p. 77). "My propositions are elucidatory in this way: he who understands me finally recognizes them as senseless, when he has climbed out through them, on them, over them. (He must so to speak throw away the ladder, after he has climbed up on it.) He must surmount these propositions; then he sees the world rightly. Whereof one cannot speak, thereof one must be silent" (p. 189).

I, as well as my friends in the Vienna Circle, owe much to Wittgenstein, especially as to the analysis of metaphysics. But on the point just mentioned I cannot agree with him. In the first place he seems to me to be inconsistent in what he does. He tells us that one cannot state philosophical propositions and that whereof one cannot speak, thereof one must be silent; and then instead of keeping silent, he writes a whole philosophical book. Secondly, I do not agree with his statement that all his propositions are quite as much without sense as metaphysical propositions are. My opinion is that a great number of his propositions (unfortunately not all of them) have in fact sense; and that the same is true for all propositions of logical analysis.