Aspects of Western Philosophy
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Module - 31
Lecture - 31
Logical Positivism
Against Metaphysics
Scientific Conception of Philosophy
The limitation of logical positivism

Welcome to this lecture series on Aspects of Western Philosophy, Module 31. This lecture we will see the contributions of Logical Positivism, a very important philosophical movement in the 20th Century European thought.

In 1 sense we can say that 20th Century is the century of logical analysis, the century of language analysis primarily. And where philosophers turned their attention to language and instead of a focusing instead of trying to understand venturing in to reality or world philosophers thought that reality or all knowledge about reality or anything for that matter is possible only through language. Or language there are even assertions which would even say that language is reality. The beginning of language for example, in the Hans-Georg Gadamer, German philosopher calls it.

Both continental tradition as well as the analytic Anglo Saxon English tradition of philosophy, they both sort of took a linguistic turn. But what is so peculiar about the analytic philosophers is the kind of logical rigor they exhibited. Or rather they were more fascinated by this logical structure of language and conception of analysis, a conception of language analysis based on this logical structure on the logical form of language which they considered is so central.

And we have already examined some contributions towards this line of thought by Bertrand Russell and Wittgenstein, with particularly Wittgenstein's early philosophy which emphasizes on logical form on logical analysis of language. And here we come across an off shoot of these this kind of an attitude in western philosophy; the turn of 20th Century logical positivism. And we can see that these other thinkers like the works of Wittgenstein which I have already mentioned, Tractatus Logico of Philosophicus and also Bertrand Russell's and many other philosophers work which emphasized on the

logical analysis of language tremendously influenced these people; the logical positive their worst something which they were all trying to commonly advocate, but at the same time each one of them had their own unique approach to philosophy. And we were now trying to isolate or trying to highlight some of those important features which they all commonly advocated.

Apart from the diverse concerns they had with regard to the conception of philosophy and the methodology of philosophy some of these features were so common to all of them right from Moritz Schlick to A. J. Ayer the English, the British representative of logical positivism. So that is they were all against metaphysics. So, a reputation of metaphysics constitutes so central to the concerns of logical positivism as a consequence of this they advocate a kind of scientific conception of philosophy, there is a notion of unified sciences with regard to the conception of knowledge they believed that the only knowledge that is valid is a scientific knowledge which can be ultimately analyzed; the scientific knowledge can be ultimately analyzed in to certain basic propositions which are statements of observation, which are verifiable.

This conception of philosophy and the notion of unified sciences play a very important role in shaping their philosophical thinking. And, again in this context it is very important to mention about verification principle. And then we will see some of the limitations some of the criticism which logical positivism as a movement faced. So, these are the contents which we are going to address in this lecture.

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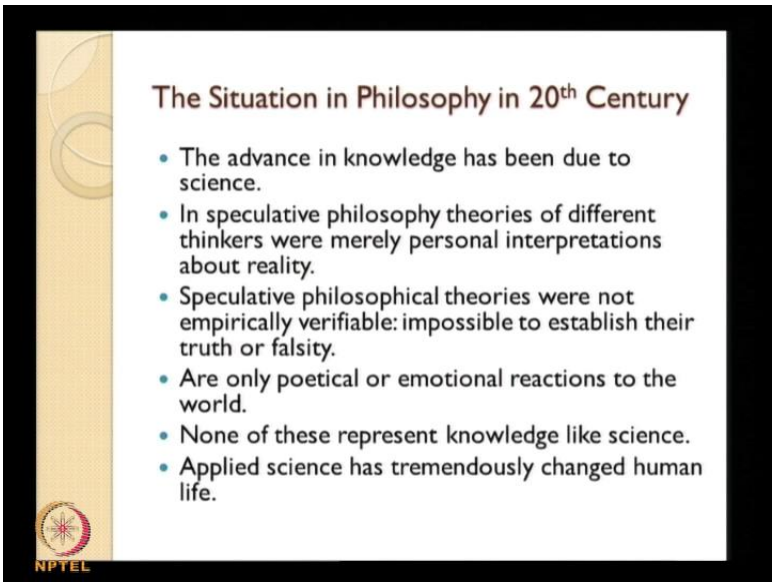

But before we really see the movement called logical positivism and it is contribution. Let us see the background the situation in philosophy in 20th Century, like the advance in knowledge has been due to science. So, this is something which was very influential factor in the 20th Century not just in philosophy, but in all knowledge endeavors all intellectual endeavors were influenced by the developments that took place in modern science, and also in technology. Lot of advancements scientists such had made during this time. And we all know that the two World Wars the kind of weapons people have used and ultimately the atomic bomb which again is the conception of atomic fusion all these things sort of made people to view science and it is advancements from a new perspective.

Philosophers also were sort of attracted towards a kind of a rigor and precision scientific method or sciences in general advocated. In speculative philosophy on the other hand, so if this is the situation in science what is the situation in philosophy particularly the kind of speculative philosophy that was fashion in Europe during these time. The philosophical theories of different thinkers were merely personal interpretations about reality. So, they hardly sort of exhibited the kind of rigor and the kind of analytic precision which was so central to scientific intervals. So, in that sense there is a clear distinction, there is a clear kind of a difference between philosophical enterprises, particularly the speculative philosophical enterprises and modern science.

And speculative philosophical theories were not empirically verifiable they were; so hence it is impossible to establish their truth or falsity. So, naturally people went on speculating about what should be the real nature of reality, what should be, what is good, and how do you define goodness and how do you distinguish it from evil, what is the ultimate destiny of human life, meaning of human life; all kinds of things philosophers have discussed elaborately, extensively, and quarrel with each other, but ultimately these arguments these speculations have never taken us to anywhere, definite. Because these speculative philosophy, the domain of speculative philosophy is not at domain which can be empirically verifiable observable by senses so that we can arrive at kind of a precise a kind of concise domain of knowledge.

They are only poetical or emotional reactions to the world. So, in that sense this is very interesting observation by the logical positivist. That is, they do not reject speculative philosophy as in Toto, they do not say that it is absolutely useless they recognize that there is a value, but the value is confined to emotional and political aspects of life. Beyond that if you try to attribute any cognitive value to the statements of speculative philosophy you are on the wrong track. None of these represent knowledge like science and applied science has tremendously changed human life.

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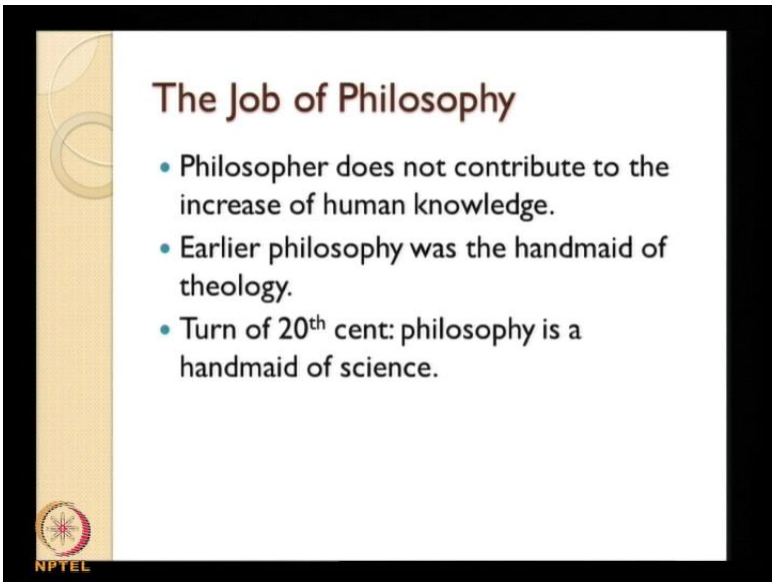

This is what I have just mentioned. And in this context what is the job of philosophy? Philosopher does not contribute to the increase of human knowledge. So, here we can see

the shadow of Wittgenstein or the influence of Wittgenstein. Wittgenstein has categorically stated in his Tractatus that philosophy is not a theory, philosophy is not decides natural sciences, it is different from that it is not a science at all; only scientist can contribute to human knowledge. Hence, since philosophy is a not a science it cannot contribute to human knowledge.

Earlier philosophy was the hand made of theology. So, that was the situation during earlier period where philosophy was always considered as discipline which was very closely linked to theology. In a sense even to consider it has a handmaid of theology but now with the new world where science rather has a very conclusively and very convincingly has replaced religion and theology. So, philosophy here becomes a handmaid of science.

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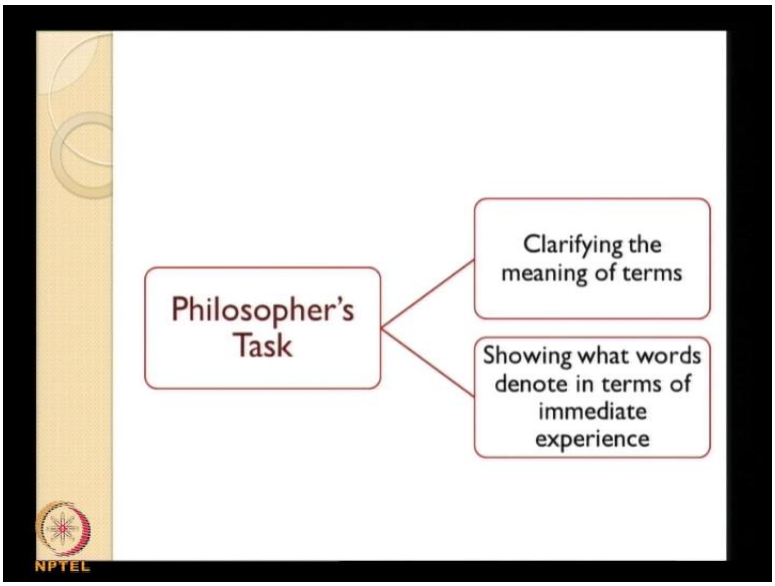

Now in this context what would be the philosopher's task? We have already seen this when we have discussed Wittgenstein and Bertrand Russell to some extent, because in 20th Century with linguistic turn philosophy rather has a very specific task. What is it? Number one, clarifying the meaning of science, meaning of terms like as Wittgenstein says philosophy is a critic of language. So, it analyzes linguistic expressions. And another one is showing that or showing what words denote in terms of immediate experience.

Here again you can see the influence of Wittgenstein, his conception of elementary propositions which corresponds these elementary proposition stand in one to one relationship with reality. There is a kind of structural isomorphic relationship between reality and propositions and language. So, philosopher's task is to analyze language and linguistic expressions and bring out the structure, wherever language linguistic expressions failed to denote the immediate empirical experience such expressions need to be considered as nonsensical.

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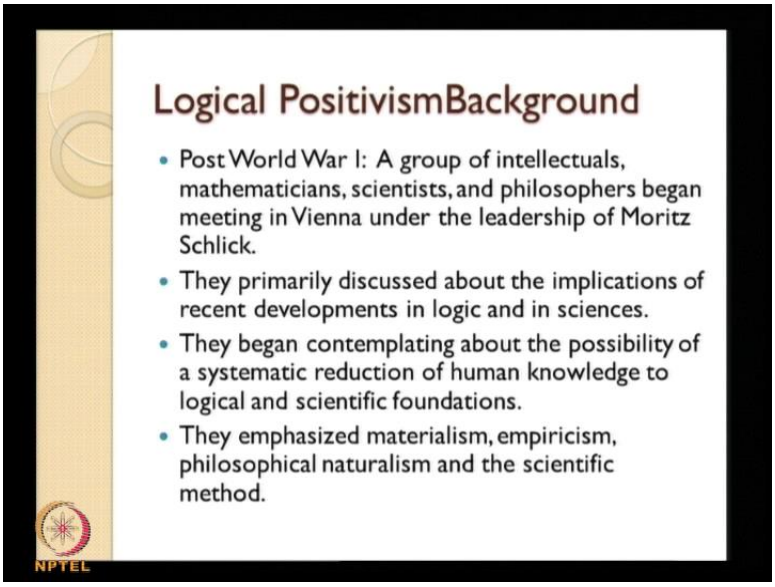

Now again if you consider the background; the logical positivism emerged during the post World War I period. A group of intellectual's mathematician's scientists and philosophers. Even politicians were also part of this painters, artist, they were all part of this movement they all began meeting in Vienna under the leadership of a philosopher Moritz Schlick.

They primarily discussed about the implications of recent developments in logic and in science; particularly the kind of contributions made by Gottlob Frege, Alfred North Whitehead, Bertrand Russell and more importantly Wittgenstein. They began contemplating about the possibility of a systematic reduction of human knowledge to logical and scientific foundations. So, this is one possibility which they explored, whether we can reduce the reduction of human knowledge or human knowledge to a set

of statements which would exhibit the logical foundations of all language. So, that is a prime concern.

They emphasized materialism, empiricism, philosophical, naturalism, and scientific method. So, these are the common temperament shared by all these philosophers who met under the leadership of a Moritz Schlick in Vienna which is famously known as the Vienna Circle Philosophers.

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And they also advocated something called a Principle of Verification which says that any statement that is not inherently verifiable is treated as a nonsensical. And some of the most notable members of the Vienna Circle where Moritz Schlick, Hans Reichenbach, Rudolf Carnap, Herbert Feigl, Philipp Frank, Kurt Grelling, Hans Hahn, Carl Gustav Hempel, Victor Kraft, Otto Neurath and Friedrich Waismann.

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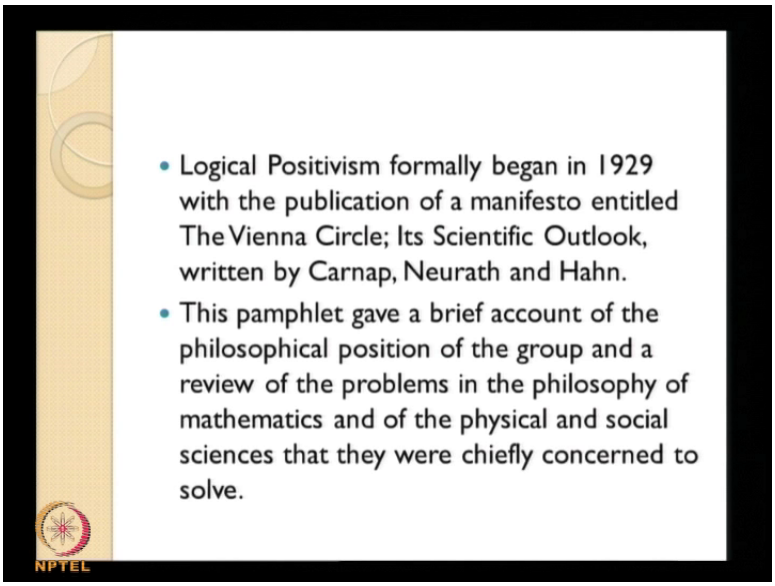

And it began in 1929 formally though they have started assembling and started discussing various issues, there is a formal sort of beginning with the publication of manifesto for logical positivism entitled the Vienna Circle it is scientific outlook written by Carnap, Neurath and Hahn.

This pamphlet gave a brief account of the philosophical position of the group and a review of the problems in the philosophy of mathematics and of physics and social sciences that they were chiefly concerned to solve. So, for according to them all disciplines need to be scientific. So, that is kind of aim they were trying to sort of a perceive.

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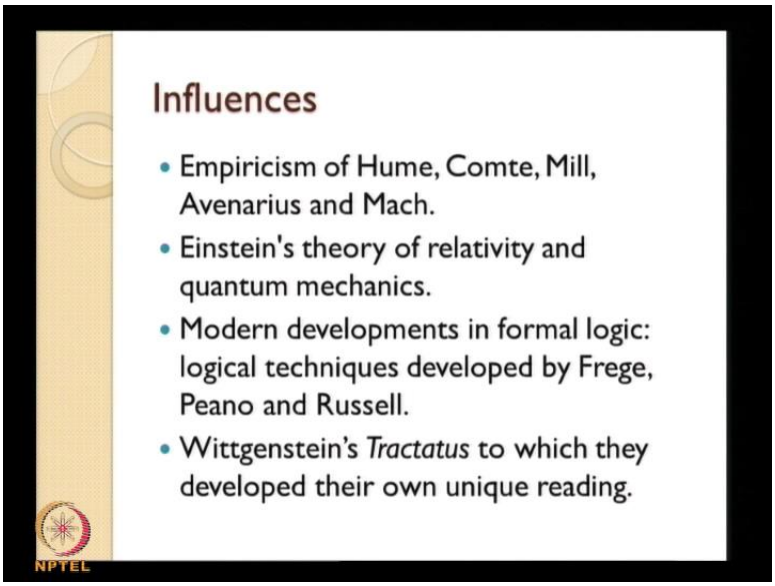

And the influences as I have already mentioned, but I have outlined it once again. These philosophers were primarily influenced by the empiricism of David Hume and Auguste Comte, the positivist Jase Mill and Avenarius and Ernst Mach. So, these are some of the philosopher's traditional thinkers. Then from the side of science of course Einstein's theory of relativity and quantum mechanics were tremendous influences, and some of these people even attended classes on a quantum mechanics and Einstein's theories

Then comes the important contribution or important influence of formal logic; logical techniques developed by Frege, Peano and Russell. And with particularly with Russell's publication of Russell's publication of Russell's book principles of mathematics and Wittgenstein Tractatus to which they developed their own unique reading. So, what it used to happen that during their meetings in the Vienna Circle meetings they used to read aloud Wittgenstein's Tractatus; sentence by sentence, proposition by proposition, and which is followed by long and lengthy discussions on each proposition.

This is one book which they thoroughly analyzed. And of course their interpretations of this book was primarily influenced by Russell's in reduction to Tractatus which was most in line of you know the Russell's introduction of Tractatus is very intresting. He interpreted Tractatus in the line of his philosophy; in the light of his, it was an interpretation from the light of Russell's own philosophy; philosophy of logical atomism.

And when this people read Tractatus they also did the same, they sort of try to see justifications for their philosophical positions in Tractatus.

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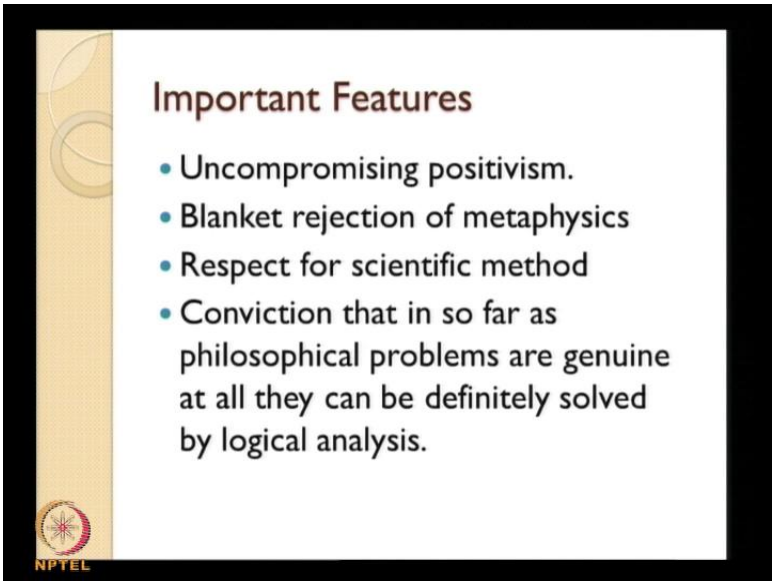

Now, some of the important features of a logical positivism it is; uncompromising positivism, then blanket rejection of metaphysics, respect for scientific method, conviction that in so far as philosophical problems are genuine at all they can be definitely solved by logical analysis.

If at all there is a philosophical problem that needs to be considered as a genuine problem then solution could be found out with logical analysis. So, logical analysis is the key, and if logical analysis leads to sort of conclusions where you fail to find any definite empirical foundation for your statement, for you preparation propositions then those propositions are to be treated as nonsensical.

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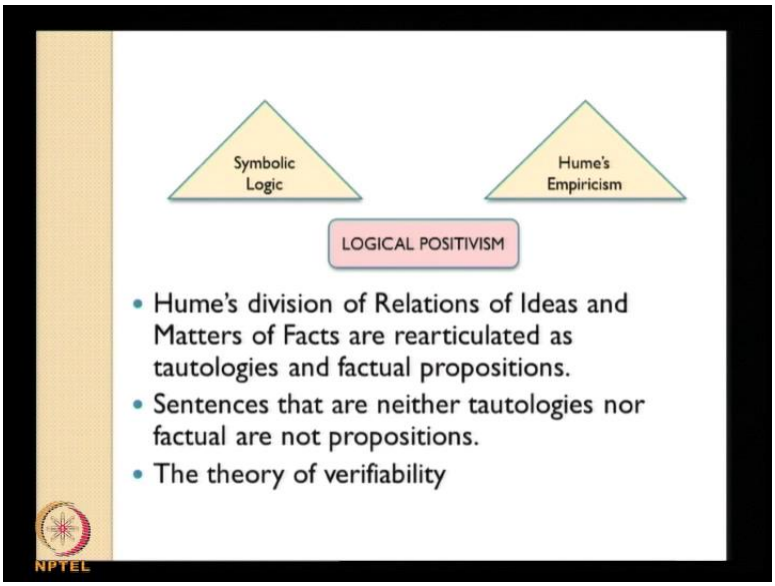

Here comes the symbolic logic on the one hand and the Humean tradition of logical empiricism on the other hand. This has influence the emergence of logical positivism. And particularly it is a very interesting Hume's distinction between two kinds of statements. We have discussed this when we have discussed David Hume's philosophy in this lecture series; that Hume divides propositions in to two classes. The first one is he calls the relations of ideas, where you discuss; I mean for example in mathematics where there is no corresponding reality to sentences are being postulated where he deals with only ideas relations of ideas and matters of fact are rearticulated as tautologies and contradictions. In their language again following Wittgenstein's and Bertrand Russell they call it tautologies and contradictions.

A tautology is a statement which is always true, which is necessarily true under all circumstances, or we can say that it is a priori true. On the other hand contradictions are those statements which are always false, they cannot be true. Similarly, factual propositions are positions which are a posteriori which cannot be a priori true which the truth and falsity of those propositions need to be verified by means experience. So, these are the two types of statements which the logical positivist propositions which they accept as meaningful propositions, either proposition which should be tautologies which means they are mathematical or logical propositions they are factual propositions, they represent matters of fact something in the world. So, that it can be either true or false.

Now, sentences that are neither tautology nor factual are not propositions they are nonsensical, because they cannot be verified. So, from these basic insights, fundamental insights the theory of verifiability is being derived by these thinkers.

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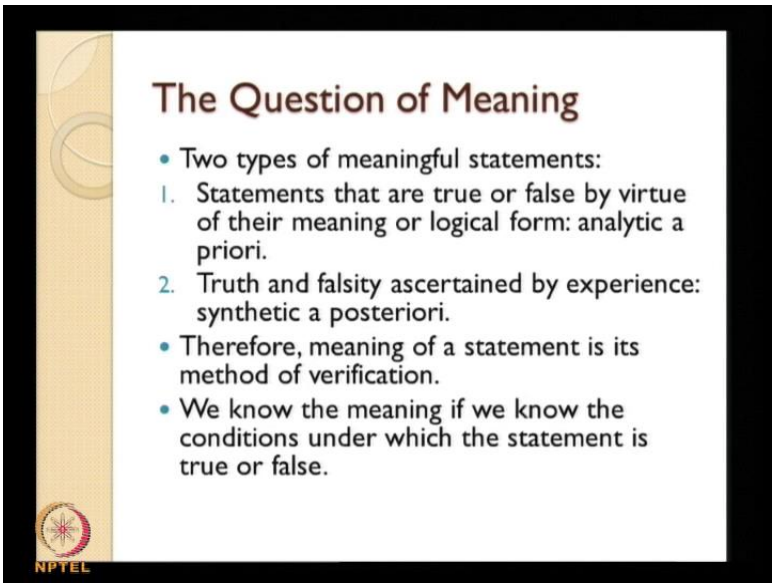

Now, the question of meaning; so it is very interesting that you know all these philosophers of language something which all of them commonly attempted is to develop a theory of language. Of course, Wittgenstein also does it in his Tractatus talks about; today we call it the picture theory of meaning where meaning is identified in terms of correspondence with the world.

Here this I have already mentioned, according to the logical positives there are two types of a meaningful statements; statements that are true or false by virtue of their meaning or logical form analytic a priori and truth and falsity ascertained by experience with this synthetic a posteriori. Therefore, meaning of statement is it is method of verification. So, this probably is one of most important statements, propositions of logical positivism. That meaning of a statement is it is method of verification.

A meaning is sort of understood in terms of verifiability. If a particular statement is verifiable then it is meaningful. And verifiable is again a very definite term, it means empirical observation or empirically verifiable. We know the meaning if we know the conditions under which the statement is true or false. So, when I say there are 20 chairs in this room. If this statement, if there are actually 20 chairs in this state in this room my

statement is true. So I should know in order to know the statement, in order to understand the statement there are 20 chairs in this room what I should know is I should know the condition under which this statement should become true.

And there might not be even 1 chair in this room, but still it is a meaningful statement because I can understand it is meaning because again I know what conditions would make the statement true.

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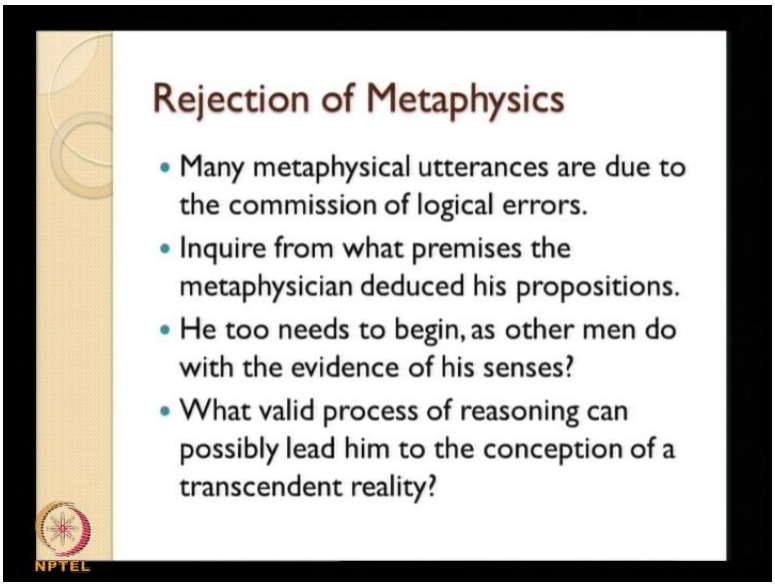

And in this context they develops their rejection of metaphysics, and what the logical positivist argue is that many metaphysical utterances are due to the commission of logical errors. And again inquire from what premises the metaphysician deduced this proposition. So ultimately you know concluding that, inferring that the kind of metaphysical propositions or metaphysical utterances which philosophers have been making since time immemorial they are all due to certain logical errors, certain confusions with regard to the logic of language. This is again an original Wittgenstein idea which these people have modified a little bit. Inquire from what premises the metaphysician. In order to know whether this proposition or any proposition for that matter whether it is meaningful or not we have to see from where it is being deduced.

He too needs to begin, this is what the logical positivist would argue; even the metaphysician would need to begin as other men do with the evidence of his senses. So, it should be seen it should be experienced by since audience. What valid process of

reasoning can possibly lead him to the conception of a transcendent reality? There is a conception of transcendent reality which many metaphysicians advocate, but what is the basis of talking about such a transcendent reality, are they any sent any kind of evidence of the senses that suggest that such a reality exist; the very notion of transcendent reality suggest that senses cannot capture it, then how can you talk about it.

All talk about such transcendent reality is bound to being nonsensical.

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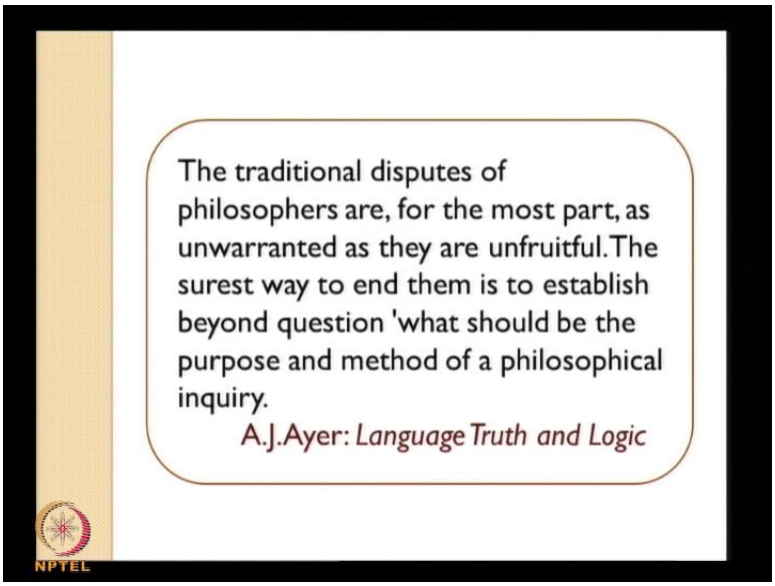

Again this is a quote from A. J. Ayer, a very prominent advocate of logical positivism from the English speaking world. And actually Ayer has attended some of their meetings and also introduced some of the logical positivism to the English speaking world, because basically the developments took place in Vienna and many of them were Germans and they were all reading Wittgenstein's original German addition of Tractatus, and in that sense you know a rest A. J. Ayers contribution is a phenomenal because he is the one who has introduced this new movement to the English speaking world.

He says in his famous book 'Language Truth and Logic' which is actually a preliminary assessment on the contributions of logical positivism. So I read, I quote; the traditional disputes of philosophers are, for the most part as unwarranted as they are unfruitful. The surest way to end them is to establish beyond question 'what should be the purpose and method of a philosophical inquiry.

You need a purpose and you also need to adopt a method, it is like science. So, in the line of science you can see philosophy in the line of science where science as a purpose and also a definite method. So, similarly philosophy should also need method and also a purpose to serve.

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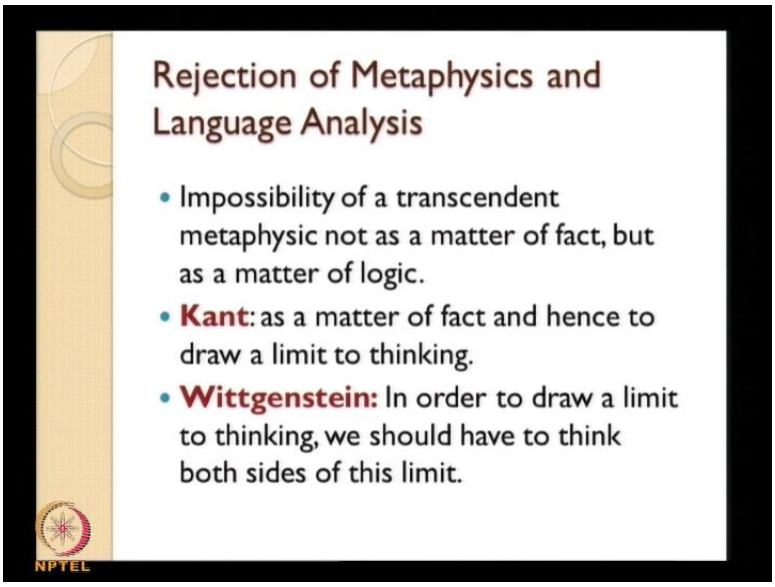

Here a rejection of metaphysics through language analysis; here the impossibility of a transcendent metaphysics is not a matter of fact but a matter of logic. This is something which I have already mentioned that method is language analysis and logical analysis of language. So, if they say that a the conception of transcendent reality is impossible to be advocated, because you cannot say anything about it; and the reason for that is not something which is a matter of fact, but a matter of logic. Logically they say that logically it is not possible, because the logic of language suggest that linguistic expressions when they attempt to transcend the boundaries of sense experience they tend to be nonsensical.

And here it is interesting to have a comparison with a position adopted by or the methodology adopted by a Immanuel Kant who also did something like a you know very similar kind of an exercise, but of course not with an emphasis on logical analysis of language. Rather for Kant it was a matter of fact, the kind of metaphysics the impossibility of metaphysics is a matter of fact affair; and hence to draw a limit to human thinking.

But Wittgenstein on the other hand as we have already seen when we have discussed the Tractatus he says that; in order to draw a limit to thinking we should have to think both sides of the limit which is actually not possible. Since that is not possible the only place where we can draw the limit is language which is nothing but which is assumed as the expression of thinking.

That is the reason why philosophers of language adopt or take a linguistic turn.

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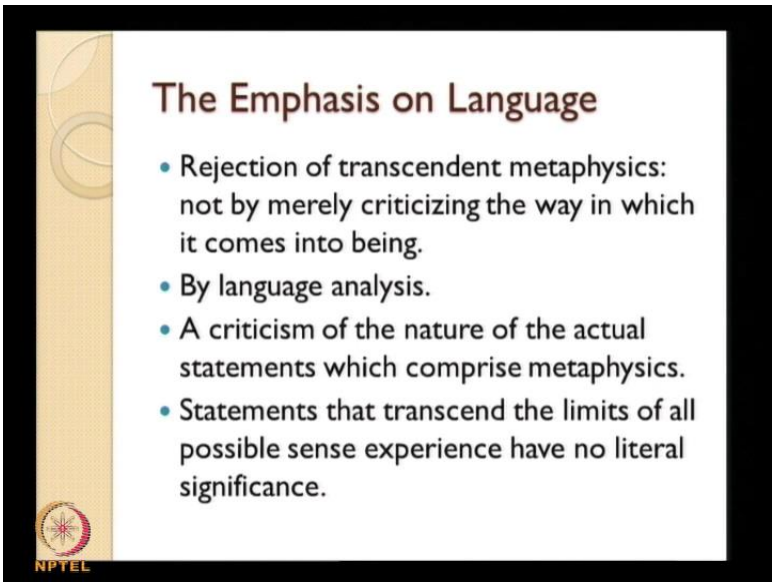

The emphasis on language: the rejection of transcendent metaphysics not by merely criticizing the way in which it comes into being; but by a language analysis. A criticism of the nature of the actual statements which comprise metaphysics; here again metaphysical statements are analyzed, the so called propositions of metaphysicians are taken for analysis and when you apply the Principle of Verifiability they fail to satisfy the criteria and they are treated as nonsensical.

Statements that transcend the limits of all possible sense experience have no literal significance they are nonsensical.

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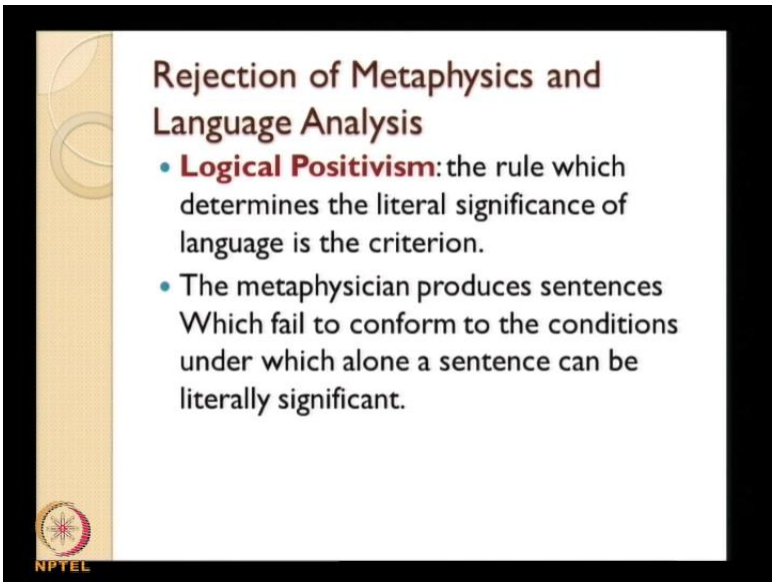

And logical positivism says that the rule which determines the literal significance of language is the criteria and the metaphysician produces sentences which fail to conform to the conditions under which alone a sentence can be literally analyzed. So, what is that condition under which alone as a sentence can be literally significant.

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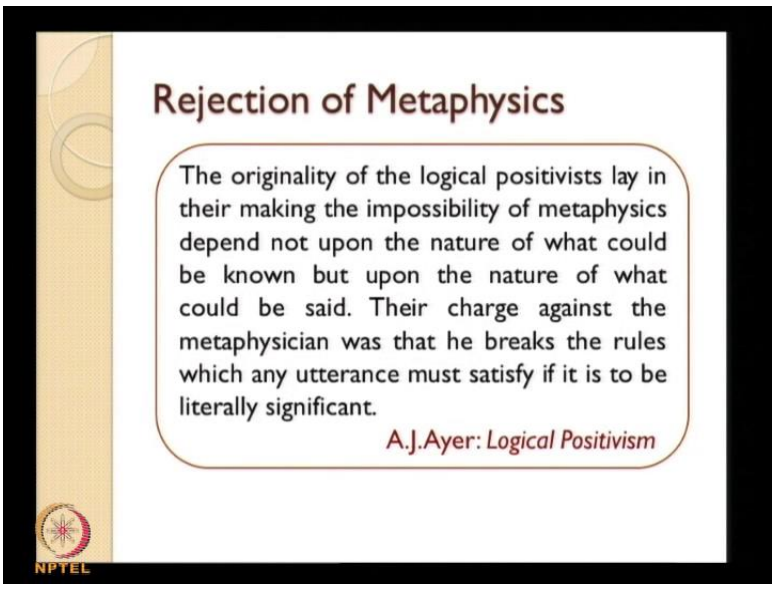

Here comes the Principle of Verifiability and here is a quote from A.J. Ayer's another book 'Logical Positivism' I quote; the originality of the logical positivists lay in their making the impossibility of metaphysics depend not upon the nature of what could be

known but upon the nature of what could be said not what could be known, but what could be said. Again, their charge against the metaphysician was that he breaks the rules which any utterance must satisfy if it is to be literally significant. A.J. Ayer: Logical Positivism.

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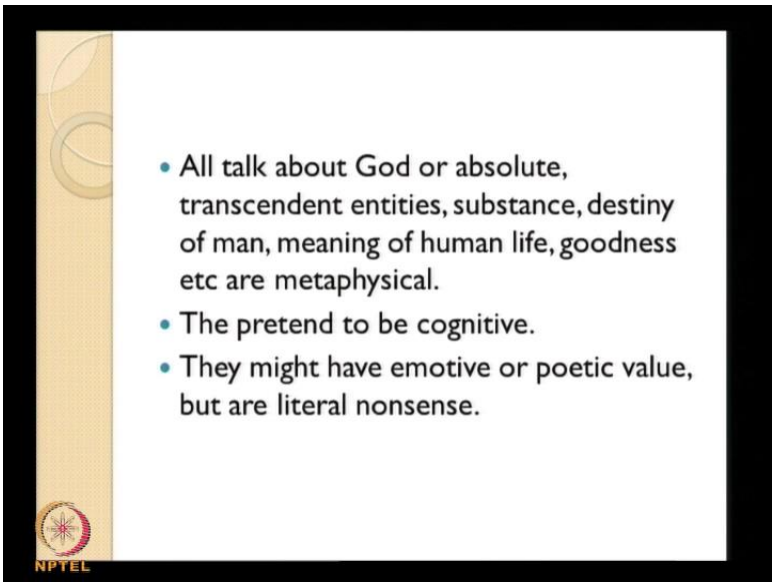

All talk about God or absolute, transcendent, entities, substance, that a destiny of man, meaning of human life, goodness etcetera are metaphysical. Again they pretend to be cognitive, like the statements of metaphysicians look like other ordinary kinds of statements. See when I say God exist or God will punish you for example; God will punish you if you steal money from me. This is one statement I would make. Again I can also make another statement which would say that your father will punish you if you steal money from me. These two statements are grammatically a like, but they are actually not; there is a fundamental difference.

The first statement God will punish you if you steal money from me is a metaphysical statement or rather it is a meaningful statement, it does not signify anything, but the second statement as a definite me, we know what does it mean. Though the logical positivist would say that these statements pretend to be cognitive while they are not; and again they might have emotive or poetic value but are literal nonsense.

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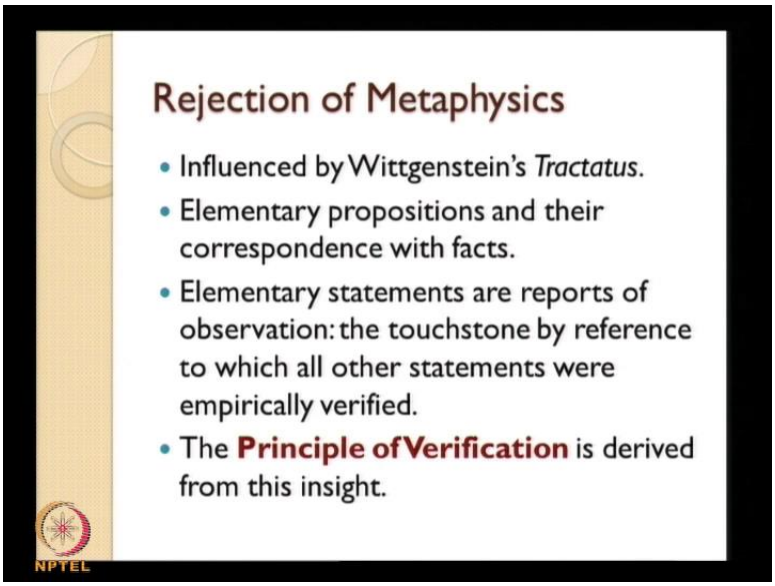

Again as I have already pointed out; they were all influenced by Wittgenstein's Tractatus. This aspect needs to be a little elaborated, because Wittgenstein's Tractatus played a very important role in shaping some of the basic ideas of a logical positivism. As I mentioned earlier this logical positivist whenever then used to meet they would read Tractatus aloud and each sentence each proposition is analyzed.

Particularly the notion of elementary propositions and their correspondence with facts, we can see that a kind of verification principle which they developed is derived from this conception, this original conception of Wittgenstein which talks about which postulates a set of propositions as elementary proposition which directly correspond to reality. So, they are sort of laid against reality. There is a kind of one to one correspondence. They are very close to reality; they sort of directly represent reality.

Postulating a set of such elementary propositions is a very interesting and very important for logical positivist. So, they would say that these statements are reports of observation, the touchstone by reference to which all other statements were empirically verified. So, you can basically analyze your entire linguistic apparatus, you make it you subject it for logical analysis and finally you can reach these elementary propositions. If you succeed in reaching these elementary propositions which are direct observation statements then your statement or your propositions are considered as meaningful.

This is the kind of derivation which the logical positivist made from Wittgenstein's original position.

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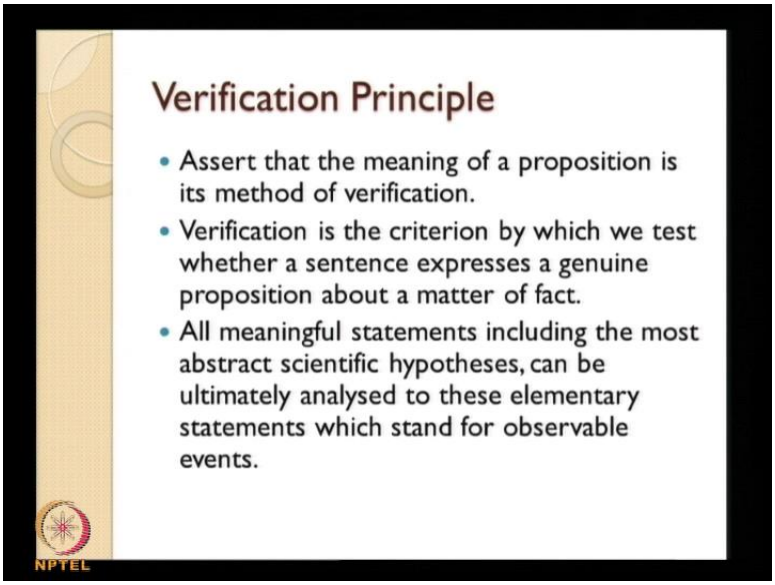

Again the principle of verification is derived from this; now let us see the verification principle a little in detail. It asserts that the meaning of a proposition is it is method of verification; meaning is the method of verification. Verification is the criterion by which we test whether a sentence expresses a genuine proposition about a matter of fact. So, if a particular statement does not express a genuine proposition which means that it does not represent a fact in the world. Actual representing and possible representing, this is sort of taken care of because for them it is the method of verification which is important. I should only know whether that particular statement can be verified by adopting certain methods.

For instance, if I say that there is no life in the moon or there is no water in the moon; this is a meaningful statement for the logical positivist, though at present in the case of moon of course we have now gone to moon and that may be possible, but there is make the same statement about Saturn, a planet which we have never been successful in reaching or sending things which we have already send to mars and other places in the moon or as well. So, when I make a statement about there is no water in Saturn. This is a meaningful statement because this can be verified.

Or rather I know the method by means of which I can verify for that I have to go to Saturn and observe it. But if I say, there are two gods or there are many gods or absolute is one; these are statements where I do not know the method by means of which I can verify them, since I do not know this method these statements are to be treated as not verifiable and hence nonsensical.

All meaningful statements including the most abstract scientific hypothesis can be ultimately analyzed to these elementary statements which stand for observable events. So, this is what the emphasis on logical analysis would yield too, because you can everything statement there are certain very abstract scientific theories which cannot be directly verified, but yet they are meaningful because they can be analyzed. They can be analyzed into simple elementary propositions which correspond to reality which are directly verifiable.

This fact of logical analysis would reveal that even such abstract statement which do not apparently stand directly in correspondence with reality are meaningful.

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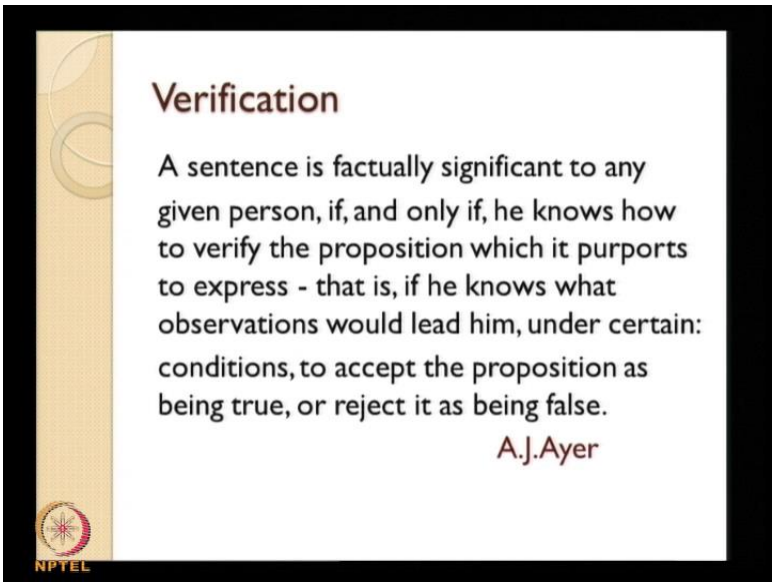

Again A.J. Ayer I quote; a sentence is factually significant to any given person, if, and only if, he knows how to verify the proposition which it purports to express - that is, if he knows what observations would lead him under certain conditions; to accept the proposition as being true, or reject it as being false: unquote.

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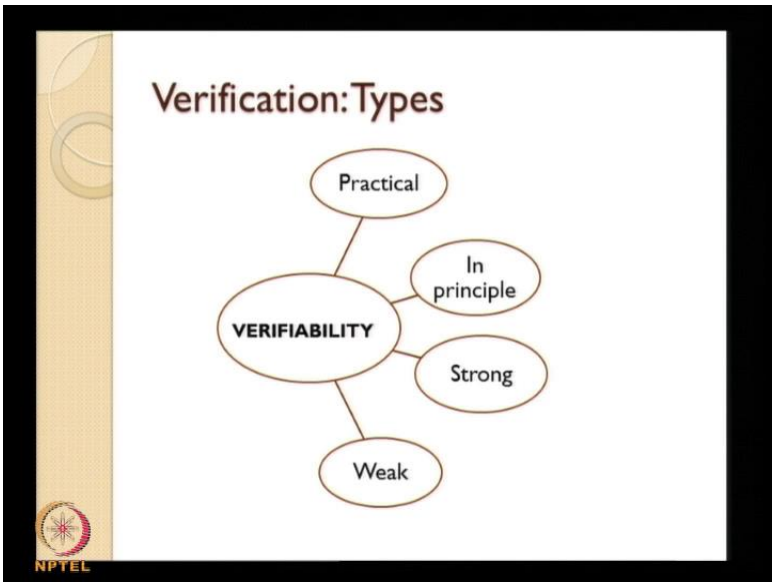

And here when you talk about verification; actually this is something which A.J. Ayer has enumerated. He would say that there are basically four types of verification. There is practical verification which is practical. I can verify it there are 20 chairs in this classroom is something which I can verify by observation right now. But there are certain statements which are not so easily and verifiable in this way in the practical sense of the term, but they are in principle we can verify them. We know that if certain conditions are met I can verify them. Then there is a strong verification and weak verification, we will very briefly see what are they?

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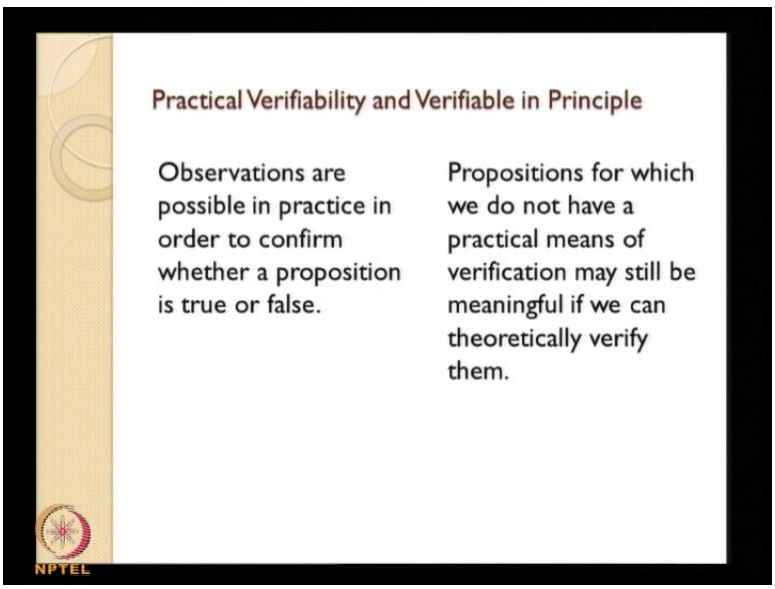

Observations are possible in practice in order to confirm whether a proposition is true or false. In practice it is possible; that I can see, I can count whether there are 20 chairs here or not; in practice I can do that.

In the other verifiable in principle means propositions for which we do not have a practical means of verification that may still be meaningful if we can theoretically verify them.

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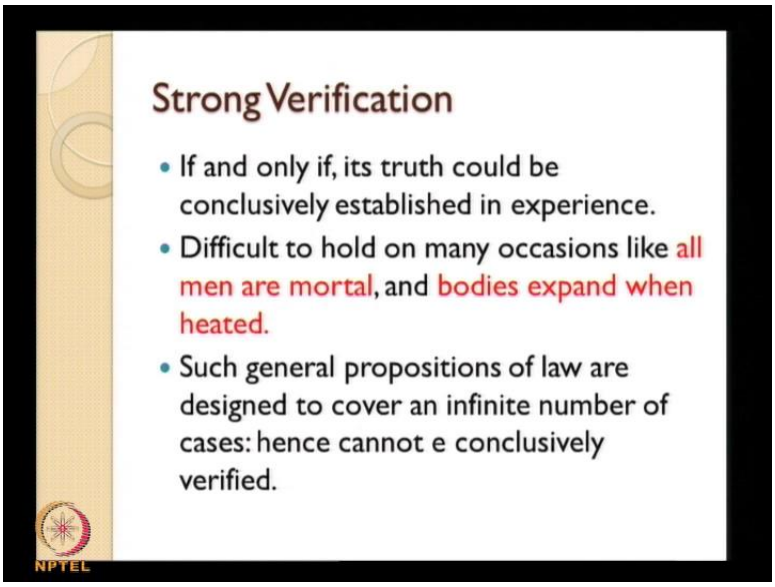

Then comes the strong verification; if and only if, it is truth could be conclusively established in experience. Difficult to hold on many occasions like all men are mortal for example, bodies expand when heated. All these bodies expand when heated for instance or all men are mortal where there is a reference to all. These are statements which we all know are sort of verifiable, they are meaningful statements.

But at the same time if you apply the criteria of strong verifiability which means that statement should be conclusively established in experience, if I make such statements directly stand they may not pass the test of these criteria, the strong verifiability. Such general propositions of law are designed to cover an infinite number of cases, hence cannot be conclusively verified. For example, when I say all men are mortal I include under this all men, every human being who are born, died and yet to be born.

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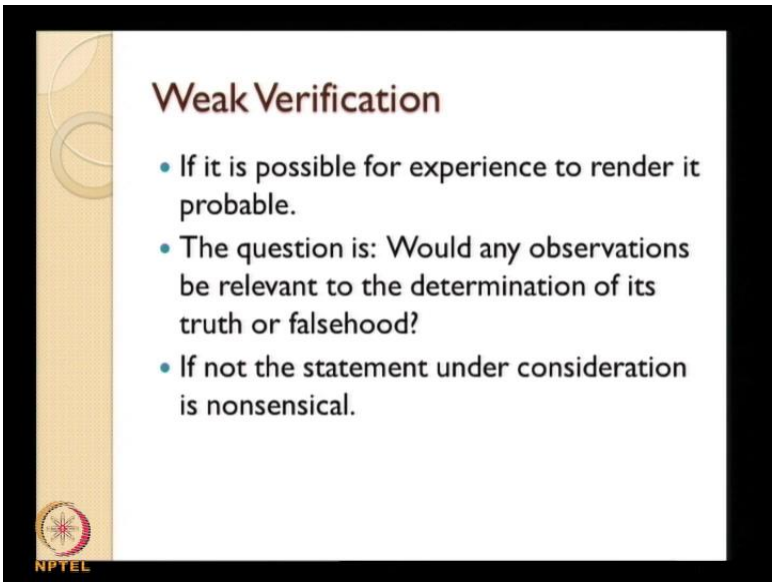

And weak verification is a if it is possible for experience to render it probable there is no strong conclusive verifiability asserted here. The question is: would any observations be relevant to the determination of it is truth or falsehood? If not the statement under consideration is nonsensical.

It is very modest, that is the only requirement it has to meet.

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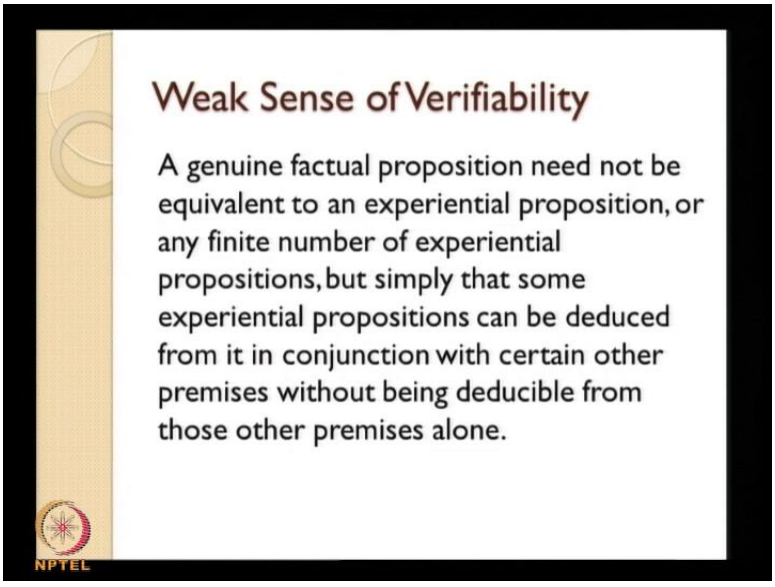

What is weak sense of verifiability little bit elaboration by A.J. Ayer his acts; a genuine factual proposition need not be equivalent to an experiential proposition, or any finite

number of experiential propositions, but simply that some experiential proposition can be deduced from it in conjunction with certain other premises without being deducible from those other premises alone.

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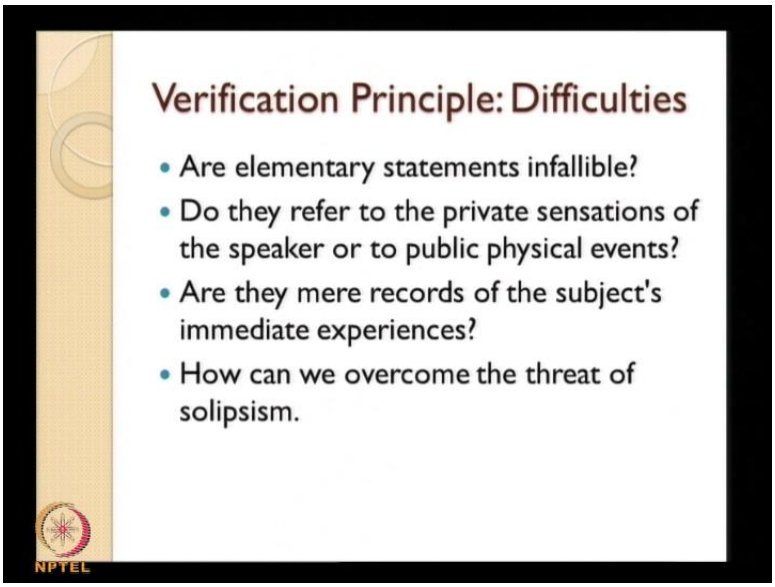

But as like all of us would have by now understood some of the important points which the logical positivists were trying to assert. They started out with the concept of I mean their fundamental purpose is the rejection of metaphysics, the negative side. And on the positive side to arrive at a scientific conception of knowledge; how a universal science is possible. So, that all knowledge is scientific there is no confusion. So, that is the kind of purpose with which the logical positivist actually began their enterprises.

And then in that process they thought that it is important to reject refute metaphysics. And they adopted the methodology of language analysis and also the Principle of Verifiability there are different ways in which this is understood, this is what we have seen. But this Principle of Verifiability has got certain difficulties. For example, we can say that you know as we have seen they depend on a lot on the availability on the possibility of elementary propositions. The apprendre propositions which stand directly in touch with reality, they are directly in contact with reality.

But the question is; are elementary statements infallible? You say that they are directly in touch with reality, but to what extent they are infallible; you probably are mistaken. Then again do they refer to the private sensations of the speaker or to the public physical

events? Again like when I say the temperature of this room is 28 degree centigrade this is something which a statement which I make about the world. And whether this statement is about a private sensation or a public physical event: are they mere records of the subject's immediate experience? How can we overcome the threat of solipsism, if that is the case?

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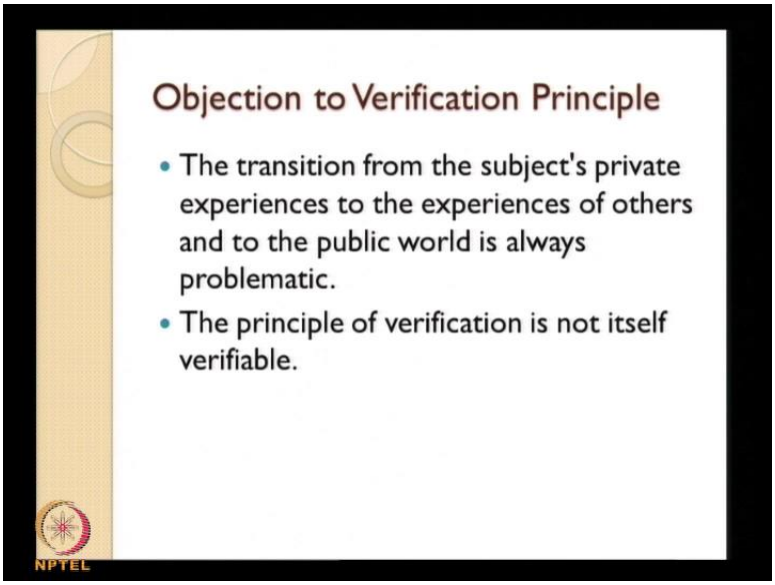

Again the transition from the subject's private experience to the experiences of others and to the public world is always a problematic thing. And again the principle of verification is not itself verifiable. So, logical positivist seems to be assuming the validity of the verifiability principle.

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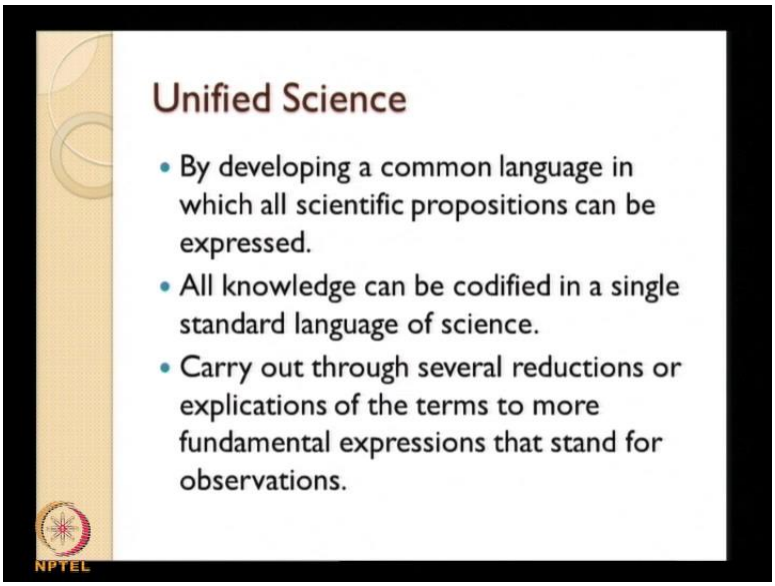

Now comes the notion of unified sciences. As I already mentioned, the logical positivist were trying to develop notion of unified science where by developing a common language in which all scientific propositions can be expressed. There again the approach of language analysis. They thought that they can actually create a language, a common language which all scientific propositions can express through that language. Many of these logical positivist actually attempted at developing such languages; artificial language, common language. See for example, Carnap's endeavored in doing something very similar to this.

All knowledge can be codified in a single standard language of science which ultimately shows the one to one correspondence between language and reality. Then again carry out through several reductions or explications of the terms to more fundamental expressions that stand for observations. So this is analysis, there you can have reductions or explications of the terms to more fundamental expressions that stand directly in correspondence with reality. Actually it is not right to say that it is correspondence with reality, it is something which we observe. Again the emphasis is on observation. So, the problem is that whether it is an observation is a private or not is a question like what we have reached just before this.

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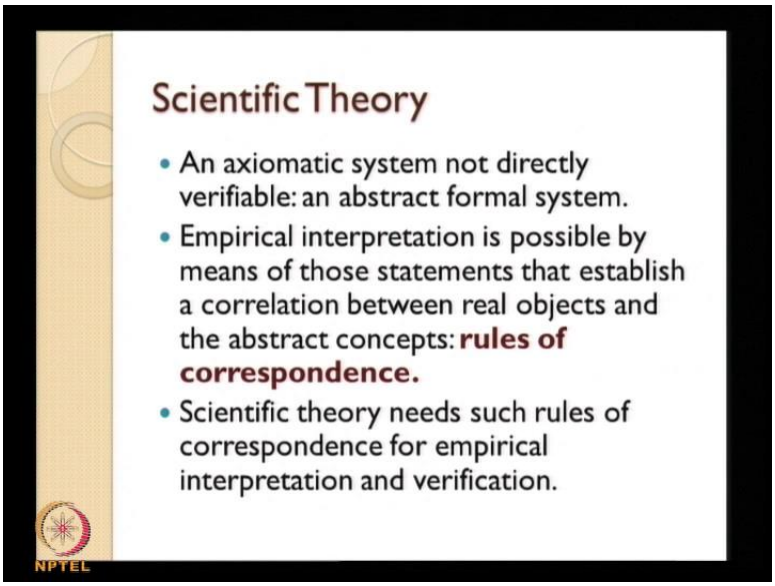

Now scientific theory is also a kind of as I have already mentioned a very abstract network of knowledge; an axiomatic system not directly verifiable, because it is an abstract formal system. But, empirical interpretation of these abstract systems is possible. By means of those statements that establish a correlation between real objects and the abstract concepts. So, there is something called rules of correspondence. So, we can analyze these abstract theoretical formal state system into empirical statements and finally to elementary statements which directly are in touch with reality.

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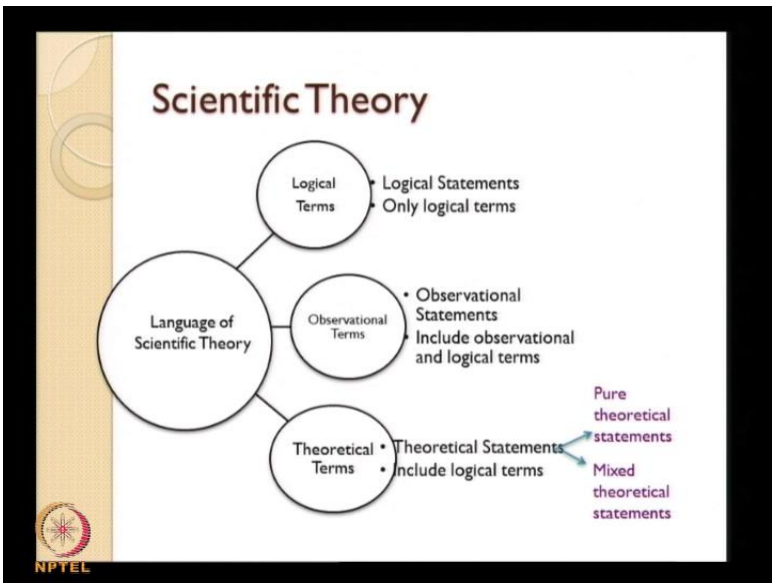

And scientific theory needs such rules of correspondence for empirical interpretation and verification. We can see the summary of scientific theory, how scientific theory theories are constituted. So, you can see that there are logical terms of out of which science would have certain logical statements and only logical terms would be there. Then you have a observational terms were out of which you make observational statements which include observational and logical terms.

And then you have theoretical terms where the theoretical statements which include logical terms and observational and logical terms, which include both. So, the pure theoretical statements and mixed theoretical statements out of which the theoretical statements are composed off. So, this is the picture of scientific theory where again ultimately this can be reduced into statements which directly corresponds to reality.

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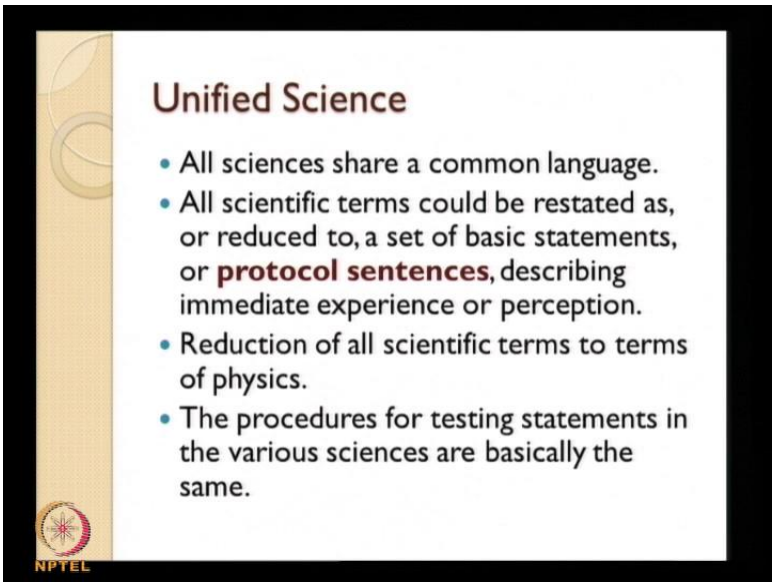

All sciences share a common language. So this seems to be the most important, most fundamental assumption of this notion of unified science. All scientific terms could be restated as or reduced to a set of basic statements or protocol sentences describing immediate experience of perception. So, they are called protocol sentences. They directly stand in correspondence with reality.

Reduction of all scientific terms to terms of physics is possible that is according to the logical positivist. And the procedures for testing statements in the various sciences are

basically the same. That is analysis; there is a logical analysis of language based on the Principle of Verifiability.

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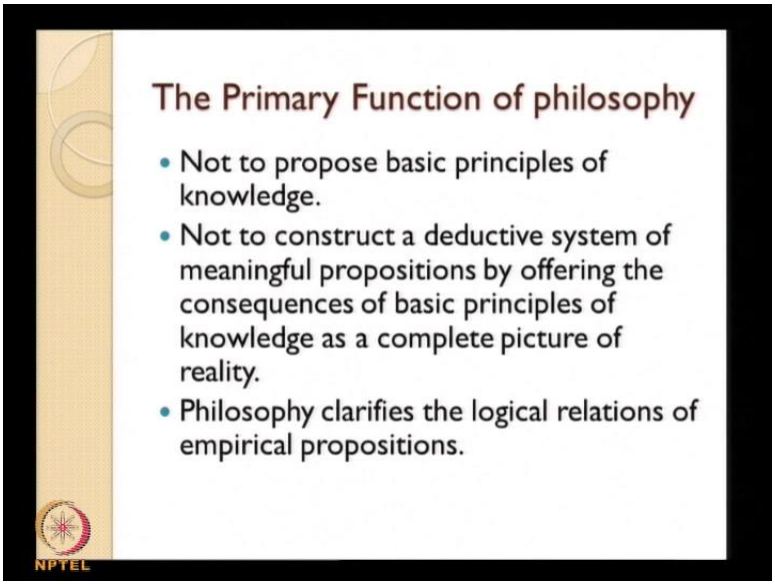

And in this context according to the logical positivist is the primary function of philosophy is not to propose basic principles of knowledge. Here we can see the legacy of Wittgenstein. It was Wittgenstein who said that philosophy is not a theory philosophy; philosophy will never give you knowledge.

Again not to construct a deductive system of meaningful propositions by offering the consequences of basic principles of knowledge as a complete picture of reality so that is not the purpose of philosophy at all. And philosophy in that sense has a very modest purpose to serve. What is it philosophy clarifies, the logical relations of empirical propositions. So, it is a logical analysis ultimately what philosophy does, with which clarifies philosophically clarifies the logical relations of empirical propositions. This is what the overall philosophical position of logical positivism is all about.

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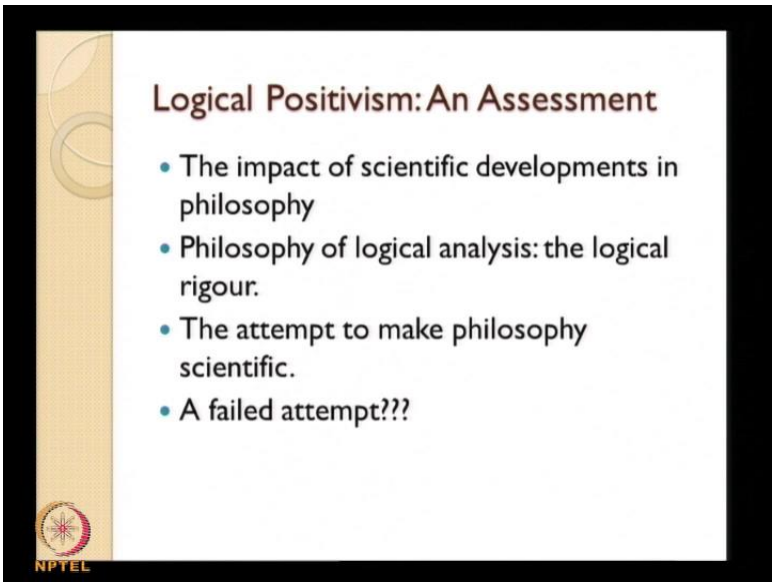

We can see that the important points to be remembered are; number one, they are influenced by the development in sciences and they were trying to develop, a scientific method, a scientific philosophy, a scientific conception of philosophy, and in that connection a unified science, where all knowledge can be reduced to a certain propositions which are directly observable; number two, rejection of metaphysics; and number three, Principle of Verifiability.

When we try to make a final assessment about logical positivism, we can see that the impact of scientific developments in philosophy in their philosophical principles and theories were quite evident. Philosophy of logical analysis, so you can see that the emphasis on logical analysis which distinguishes the logical positivist movement from other philosophical movements despite all their limitations they were quite assertive about the logical rigor which needs to be adopted when you philosophize.

The attempt to make philosophy scientific; this is again a very unique attempt which was the done by these thinkers. And the question is: whether it is failed attempt or not? Actually this is an interesting question which if you try to see whether logical positivism was a failure or not, though it is a little in appropriate to really pose such a question whether a philosophy is a failure or x axis.

A philosophy as these people themselves claim is not a scientific theory. If it is a scientific theory then you can say whether it has succeeded in attaining certain goals or

making certain products or whatever. The philosophy is not a theory about which we can say that it was a successful theory or not, but rather they were sort of a trying to point out that there are certain things which are to be treated as important and the criteria for understanding knowledge. And in that sense their philosophy is a very important movement.

And the most important contribution of these philosophy is to logical analysis of language, and a kind of as I already mentioned logical rigor they have exhibited when they philosophize that is quite remarkable. And in that course many of the old philosophical problems were exposed. But, overall there are hardly any supporters for these philosophical movements in today's world, though they themselves understood the limitations of their philosophy and try to overcome this.

We have already seen how A. J. Ayer had formulated the Principle of Verifiability in different ways. And Ayer also discusses the Principle of Falsifiability proposed by Karl Popper. It was a kind of a response to the limitations and failures of the Principle of Verifiability. But ultimately philosophy goes on and the philosophy of language, the kind of the brand of philosophy these people were trying to advocate is not really relevant today. In the sense that there are hardly any philosopher who would advocate this philosophical position in today's world, but the historically importance of this movement is no doubt extremely important.

We will wind up this lecture now.

Thank you.