UNIT 14: CERTAINTY OF A PRIORI KNOWLEDGE OF KANT

UNIT STRUCTURE

14.1 Learning objectives

14.2 Introduction

14. 3 The problem of synthetic judgement a priori

14.4 Synthetic judgement a priori mathematics

14.5 Synthetic judgement a priori in physics

14.6 Synthetic judgement a priori in metaphysics

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14.1 LEARNING OBJECTIVES

After going through this unit you will be able to:

- explain the certainty of a priori knowledge of Kant
- explain the problem of synthetic judgement a priori knowledge.
- explain the certainty of synthetic judgement a priori knowledge in Mathematics, Physics and Metaphysics.
- explain the main division of Kant's system
- explain the concept of Kant's space and time as an a priori percept.
- describe critically Kant's certainty of a priori knowledge.

14.2 INTODUCTION

Immanuel Kant is generally regarded as the greatest of the modern philosophers. Though he lived through the Seven Years War and the French Revolution, he never interrupted his teaching of Philosophy at Konigsberg

in East Prussia. His most distinctive contribution was the invention of what he called the 'critical' philosophy, which assuming as a datum that there is knowledge of various kinds, and inquired how such knowledge comes to be possible. Kant undoubtedly deserves credit for two things: first, for having perceived that we have a priori knowledge which is not purely 'analytic'; and secondly, for having made evident the philosophical importance of the theory of knowledge.

Can we raise Metaphysics to the status of a science through a revolution in the mode of our thought? This is the great question of Kant. He thinks that he has brought about such a revolution, and he compares his achievement to the revolution brought about by Copernicus in astronomy. People before Kant thought that our knowledge had to conform to its objects. Kant tried the hypothesis that the objects conformed to our ways of knowing. By this hypothesis he could explain how we could have a priori knowledge of objects. So long as one supposed that knowledge conformed to, or simply copied objects which were given ready-made in our experience could not explain how any a priori knowledge was possible. But if the objects conformed to our ways of knowing, i.e, if they were determined by our faculty of knowledge, then to the extent they were so determined, they might be known even prior to experience.

According to Kant, proper knowledge is a joint venture of sense and understanding. Apart from sense and understanding there is reason which uselessly tries to constitute knowledge. However the Ideas of reason are not constitutive but regulative principles of knowledge. Hence, according to Kant, "knowledge begins with sense, proceeds thence to understanding and ends in reason"

There are a priori or universal and necessary elements in any empirical knowledge are a crucial point raised by Kant. According to Kant, any epistemology should have occupied itself with the enquiry of a priori elements involved in knowledge. These elements are independent of any experience whatsoever. Unless these a priori elements be operative, no

experience of any object would arise at all. So, Kant is not so much concerned with any specific objects of knowledge as with the universal or a priori ways of knowing any object. Hence, Kant has called his epistemological enquiry"TRANSCENDENTAL". Kant wrote" I entitle transcendental knowledge which is occupied not so much with objects in so far as this mode of knowledge is to be possible a priori" Kant's philosophy is known as a criticism as opposed to dogmatism. Dogmatism, according to Kant, is the presumption that it is possible to make progress with pure knowledge from concepts alone, without having first investigated in what way and by what right reason has come into possession of these concepts.



LET US KNOW

According to Kant, knowledge begins with sense, proceeds thence to understanding and ends in reason.

14.3 THE PROBLEM OF SYNTHETIC JUDGEMENTS A PRIORI

Kant held that Hume and others simply went wrong because they did not analyse cognitive statements sufficiently enough. Kant stated that knowledge for him always meant scientific knowledge, the clearest example of which is found in Mathematics and Physics. According to Kant an analysis of knowledge in Mathematics and Physics reveals that it consists of synthetic judgement a priori.

A proposition is said to be 'analytic' when its predicate is already contained in the connotation of the subject. For e.g., "All bodies are extended". If we understand the meaning of the term "material body" whose connotation was taken by Descartes, Spinoza and Leibnitz to be "extension", then certainly the predicate "extended" is already contained in the subject. A synthetic judgement, on the other hand, is one in which the predicate does not belong to the subject either as its part or whole. For e.g., "Material

bodies are heavy". Whether a body is heavy or not is known through experience.

Again, a proposition is said to be a priori when it is independent of any experience whatsoever. Necessity and strict universality are the two criteria of a priori propositions and both of these criteria are inseparable. By 'strict universality' is meant 'true in all possible worlds'. A posterior propositions are those which are possible through experience.

Kant does not take pains to distinguish analytic from a priori proposition. For him a priori necessity is different from analytic necessity. Again, a posterior proposition is all synthetic. But Kant does not maintain that all synthetic propositions are a posterior. According to him there are propositions which are a priori and yet which add to knowledge. A priori propositions arise from pure reason or pure understanding. As such they are valid independently of any experience whatsoever. A posterior proposition, on the other hand, is derived from experience. They, therefore, require experience for validation.

For most of the empiricists a priori and the analytic propositions and a posterior and the synthetic propositions are identical. For Kant, synthetic propositions instead of being a posterior may be a priori and are most significant in scientific cognition and are found in Mathematics and Physics.

14.4. SYNTHETIC JUDGEMENTS A PRIORI IN MATHEMATICS

Hume, who preceded Kant accepting the usual view as to what makes knowledge a priori, discovered that in many cases which had previously been supposed analytic and notably in the case of cause and effect, the connection was really synthetic. Before Hume, rationalists had at least supposed that the effect could be logically deduced from the cause, if only we had sufficient knowledge. Hence, he inferred the far more doubtful proposition that nothing could be known as a priori about the connection of

cause and effect. Kant endeavoured to find an answer to it. He perceived that not only the connection of cause and effect, but all the propositions of Arithmetic and Geometry are 'synthetic'. Propositions of Mathematics are universal and necessary. Being universal and necessary such propositions will be called a priori. His stock instance was the proposition "7+5=12". He pointed out quite truly that 7 and 5 have to be put together to give '12'. The idea of '12' is not contained in them, nor even in the idea of adding them together. According to Kant the subject '7+5' simply connotes a process of adding and in itself it does not refer to the product. Here, according to Kant, the product '12' is very easy to calculate. This obviousness of the product gives one the impression that the predicate is already contained in the subject '7+5'. However if we take sufficiently large numbers of six and seven digits each, then of course by adding on fingers we cannot reach the product. Thus, Kant was led to the conclusion that all pure mathematics, though a priori, are synthetic and this conclusion raised a new problem which he endeavoured to find a solution.

Again, Kant observed that geometrical judgements are also synthetic. For eg, ' The straight lines between the two points is the shortest'. Here the predicate ' the shortest' could not be contained in the subject 'the straight lines'. Since, according to him, 'the straight line' is a qualitative notion while 'the shortest' is a quantitative concept. The quantitative predicate cannot be contained in the qualitative subject. Therefore, according to Kant geometrical propositions are synthetic.

14.5. SYNTHETIC JUDGEMENTS A PRIORI IN PHYSICS

Pure Physics, according to Kant contains synthetic judgements a priori. For e.g., "Every Event has a Cause", according to Kant is a synthetic judgement. Kant regards such judgements to have a priori necessity. By 'event' is meant any succession of two or more happenings. By 'cause', on the other hand, is meant a necessary connection between two or more successive happenings. Consequently, the element of necessary connection is not contained in the subject 'event' which means mere successive

happenings. Thus, the predicate 'cause' is not contained in the subject 'event'. Hence, according to Kant, 'Every Event has a Cause' is a synthetic judgement. Kant emphasized with all his might that no scientific judgement which is valid for all persons can be produced without resorting to the principle for causality. So, causality for Kant is a must for every Physicist. Kant regards causality as an a priori necessity in Physics. Hence for Kant, 'Every Event has a Cause' is a priori.

For Kant, knowledge means scientific knowledge which is found in Mathematics and Physics. An analysis of scientific judgement found in Mathematics and Physics shows that they are constituted by synthetic judgements a priori and Kant in his Critique of Pure Reason tried to solve the problem, how synthetic judgements a priori are possible.

14.6. SYNTHETIC JUDGEMENTS A PRIORI IN METAPHYSICS

Kant was most anxious to show that there are a priori elements in knowledge which are not derived from experience yet which help in increasing empirical knowledge. This is the real meaning of synthetic judgement a priori, that is, according to Kant, there are elements which increase our knowledge(i.e., synthetic) without being empirical (i.e., a priori). However, the central point of Kant lies in the point that a priori knowledge serve to increase empirical knowledge. This condition is not observed in Metaphysics, according to Kant. Because in Metaphysics we deal with the super sensible entities like God, immortal self, the cosmos etc. None of these objects can be experienced. So, the a priori elements are not applicable to them. Therefore, according to Kant, Metaphysics as a science is not possible. The attempt at extending knowledge with the help of a priori elements alone, without reference to empirical objects, lands us, according to him, into hopeless illusions. However, though we realize the illusory nature of metaphysical objects, yet we can never completely shake them off. Metaphysics, according to Kant is not a science but is supported by a natural disposition in man.



CHECK YOUR PROGRESS

Q.1 What is analytic proposition?

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Q.2 What is synthetic proposition?

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Q.3 What are a priori propositions?

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Q.4 What is dogmatism?

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Q.5 Fill in the blanks:

a) Propositions of mathematics are.....

b) According to Kant a geometrical judgement is.....

C) For Kant knowledge means.....

.....knowledge serves to increase empirical knowledge.

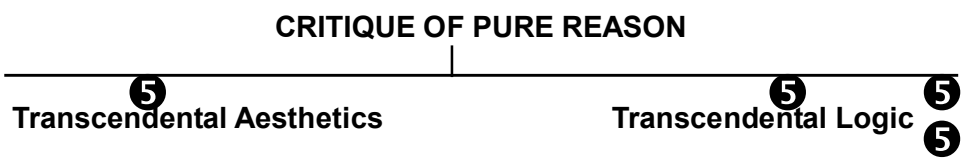
d) Metaphysics, according to Kant is not a.....

e) Kant regard.....as an a priori necessity in Physics.

14.7. MAIN DIVISION OF KANT'S SYSTEM

Kant was meditative and methodical. A desire for thoroughness has made him highly analytic. It was Kant who introduced the tripartite division of mental processes into cognition, cognation and affection. Corresponding to these three divisions there are three Critiques, namely, 'Critique of Pure Reason', 'Critique of Practical Reason' and 'Critique of Judgement'. In the history of Philosophy, 'Critique of Pure Reason' has played an important part than any other Critiques. Here the cognitive process has been divided into three, namely, sensing, understanding and reasoning. But of course

Kant was concerned with a priori forms of sensing, understanding and reasoning. Kant divides his 'critique' in the following ways:



- **Transcendental Analytic.**
- **Transcendental Dialectic.**

TRANSCENDENTAL AESTHETICS: Here, Kant shows that there are a priori forms of sensibility. Everything to be perceived must be spaced and timed as the very condition of its being perceived at all. Propositions of Mathematics can be synthetic only when space and time are a priori percept. Here, Kant tries to answer the question, 'How are synthetic judgements a priori possible?' He tried to show that mathematical propositions were really derived from perceptual experience and also added that they were based on a priori perception of space and time.A percept can be either empirical or pure. An empirical percept is one which has been derived from some sense experience. For e.g., the table before me or the blackboard in front of the students is an empirical percept. A pure percept, on the other hand, is not the sense experience of this or that object given in our present consciousness, but is at the basis of any perception whatsoever. Thus, for Kant, this pure percept is also a priori. According to Kant, space and time are the a priori percept on which all other empirical perceptions are based. Hence, for him the statements that judgements of Mathematics are synthetic means that ultimately they are based on the a priori percept of space and time. Further, for Kant space meant primarily Euclidean space, which according to him was unalterable and all-pervasive feature of any perception of outer things. Keeping these things in mind, Kant proceeds to show that space and time are not concepts but are percept. They are not empirical percept but a priori or pure percept.

TRANSCENDENTAL LOGIC: Transcendental Logic is concerned to determine the limit, origin and the validity of our a priori knowledge of objects. It deals with the laws of understanding in so far as they apply a priori to objects. Kant makes a sharp distinction between sensing and understanding. In sensing an object, the mind remains passive, as Locke's view of the mind as 'tabula rasa' had presented. But this is not enough for the explanation of the knowing process. The manifolds of sense are discrete and passing impressions. Obviously a proposition is a combination of two or more ideas. This knowledge consists of judgements which are the combination of two ideas. Hence, the knowing process consists in combining the ideas. For Kant knowing consists in thinking about percept. To think means to combine the percept into judgements with the help of concepts. Ordinarily, we combine the ideas in judgements which have been empirically acquired and associated. For e.g., 'This grass is green.' We have already acquired the empirical concepts of 'grass' and 'green'. Further, this combination of 'grass' and 'green' appears to us to be objective, i.e., the same for all the persons. The question is how can this objectivity of empirical judgements be explained? There are only two ways in which we can explain this: (i) the combination involved in objective empirical judgements is really so in its own right in nature, independent of any knower, (ii) this combination is a priori, being introduced by the faculty of thinking called 'understanding'. Hence, for Kant, the objectivity of empirical judgements can ultimately be explained only if we could show that they are a priori forms of thinking which are also termed as 'categories'. Thus, thinking need to be confined to percept and may be applied to concepts also, and when it does so it leads to transcendental illusions. Hence, Transcendental Logic has two parts, viz, Transcendental Analytic and Transcendental Dialectic.

14.8. SPACE AND TIME ARE A PRIORI PERCEPTS

According to Kant, space and time are a priori percept on which all empirical perceptions are based. Hence, for him, statements that judgements of mathematics are synthetic mean that they are based on the a priori percept of space and time. For Kant, space meant primarily Euclidean space,

which according to him was unalterable and all-pervasive feature of any perception of outer things. According to Kant, if there were no notion of space then certainly there could be no experience of things as outside or alongside one another. The idea of space is prior to any perceptual experience and hence it is a priori. Kant pointed out that if the idea of space or time were derived empirically, then it could be imagined to be non-existing as is the case with colour, taste or smell etc. But though we can imagine a particular object not to have this colour or that, or even not to have any colour at all, yet we can never think of an object not to have spatial character at all. Because space can never be thought away, therefore, for Kant it is an a priori form of perception without which there can be no perception whatsoever.

Kant maintained that in all our experience there are two elements to be distinguished. The one due to the object (i.e., what we have called the 'physical object'), and the other due to our own nature. He considers that the crude material given in our sensation- the colour, hardness etc- is due to the object and that what we supply is the arrangement in space and time and all the relations between sense-data which result from comparison or from considering one as the cause of the other or in any other way. His chief reason in favour of this view is that we seem to have a priori knowledge as to space and time and causality and comparison but not as to the actual crude material of sensation. We can be sure, he says, that anything we shall ever experience must show the characteristics affirmed of it in our a priori knowledge, because these characteristics are due to our own nature, and therefore, nothing can come into our experience without acquiring these characteristics.

The physical objects which he calls the 'thing-in-itself', he regards as essentially unknowable. What can be known is the object as we have it in experience which he calls the 'phenomenon'. The phenomenon being a joint product of us and the thing-in-itself, is sure to have those characteristics which are due to us and is sure to conform to our a prior knowledge. Hence, this knowledge though true of all actual and possible experience must be

supposed to apply outside experience. Thus, in spite of the existence of a priori knowledge, we cannot know anything about the thing-in-itself or about what is not an actual or possible object of experience. In this way Kant tries to reconcile and harmonize the contention of the rationalists with the arguments of the empiricists.



CHCHECK YOUR PROGRESS

Q.6 What are the three divisions of mental process of Kant?

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Q.7 Name the three 'Critiques' of Kant?

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Q.8 What is an empirical percept?

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Q.9 What is a pure percept?

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Q.10 What are the classification of Kant's Critique?

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14.9. CRITICISM

Many objections have been raised against Kant's certainty of a priori knowledge. Objections have been raised concerning Kant's distinction between Analytic and Synthetic judgements. In the first instance, it has been pointed out that Kant's distinction is not logical but Metaphorical. He thinks of subject and predicate as containers and contained. Secondly,

Kant refers to the distinction only when judgements can be expressed in terms of subject-predicate theory.

Further, it has been pointed out that analytic necessity is quite clear to anybody by a mere inspection of the terms employed. For eg, 'A rainy day is a wet day' is necessarily true by a mere inspection of the terms 'rainy day' and 'wet day'. In contrast a priori necessity of causality, substance or of the two forms of sensibility requires a very detailed demonstration and even then it may be above doubt and further discussion.

The explanation offered by Kant regarding arithmetical judgments as synthetic judgement a priori has not been found to be satisfactory. It has been pointed out that in his explanation, he, indirectly appears to be referring to the psychological process of adding, since he refers to large numbers to support his case. However, the consideration is logical. We have to decide whether the predicate '12' is not already contained in the subject '7+5'. Here, Kant should not have confused logical issues with a psychological one. It appears that Kant was aware of this difficulty and he resorted to the poor explanation regarding arithmetical judgements as synthetic. Kant also fares no better with regard to geometrical judgements. Nobody would accept the explanation of Kant, since, 'the straight line between two points is the shortest' is a primitive proposition of geometry and as such will never be taken as synthetic.

Another objection raised against Kant's view is that Kant took for granted the Newtonian view of science, according to which space and time were regarded as the absolute receptacles of events and causality as the fixed and unalterable law of Nature. From this Kant derived the conclusion that space, time and causality are the a priori and the fixed ways of ordering the discrete data of sensibility. These a priori forms of sensing and of understanding for Kant were also synthetic in as much they applied to matters of fact. Hume asks: "Granted that there are fixed and unalterable modes according to which the mind orders the data. Is this conclusion concerning the ordering function of the mind analytic or synthetic, deductive

or inductive? If the conclusion is inductive, then this is only probable in character and hence cannot be called a priori (i.e., necessary). If, on the other hand, these principles be deductive, then the conclusion concerning them cannot be analytic and would not be applicable to matter of fact and so will cease to be synthetic.

For Kant, all representations, i.e., percept get connected through the faculty of understanding alone. Today the meta-scientist would not agree with Kant. Hence the question of explaining necessary connection between events would not arise for the modernist. Kant was just concerned with the problem of exhibiting the indispensible presence of the a priori factors involved in empirical knowledge. Kant has unduly limited the scope of a priori propositions in addition to failing in the attempt at explaining their certainty.

In spite of many criticisms raised against his certainty of a priori knowledge, it may be concluded that Hume, by his criticism of the concept of causality awakened Kant from his dogmatic slumbers, so at least he says, but the awakening was only temporary, and he soon invented soporific which enabled him to sleep again. Kant's philosophy is to be judged not in terms of logic and statements of science alone. They remain subordinate to his philosophical vision. And the vision of Kant is as living today as it was to him and to his contemporaries. Besides the nature of synthetic judgements a priori was first stated by Kant and today its logical analysis is a fruitful enquiry. The contention of Kant concerning synthetic judgement a priori can be formulated afresh to remain valid and significant even now. For Kant the contentions at the root of scientific pursuit arise from the creative insight of man and without such creative forms there can be no knowledge proper. Emended thus the teaching of Kant with regard to a priori forms is as pertinent today as it was in the days of Kant.



14.10. LET US SUM UP

- According to Kant proper knowledge begins with sense, proceeds to understanding and ends in reason.

- An analysis of knowledge in Mathematics and Physics reveals that it consists of synthetic judgement a priori.
- Necessity and strict universality are the two criteria of a priori knowledge.
- A priori propositions arise from pure reason or pure understanding and as such they are valid independently of any experience whatsoever.Kant regards causality as an a priori necessity in Physics.
- For Kant knowledge means scientific knowledge which is found in Mathematics and Physics.
- According to Kant, Metaphysics as a science is not possible.
- Kant introduced the tripartite division of mental process into cognition, cognation and affection.
- According to Kant space and time are a priori percept on which all empirical perceptions are based.



14.11. FURTHER READINGS

1) Kant, Immanuel. Crititique of Pure Reason
2) Russell , Bertrand. Problems of philosophy
3) Masih, y A Critical History of Western Philosophy



14.12. ANSWERS TO CHECK YOUR PROGRESS

Answer to Q.1: A proposition is said to be analytic when its predicate is already contained in the connotation of the subject. For eg, 'All bodies are extended'. If we understand the meaning of the term 'material body' whose connotation is taken to be 'extension' then certainly the predicate 'extended' is already contained in the subject.

Answer to Q.2: A synthetic proposition is one in which the predicate does not belong to the subject either as its part or whole. For eg, 'Material bodies are heavy', whether a body is heavy or not is known through experience.

Answer to Q.3: A proposition is said to be a priori when it is independent of any experience whatsoever. Necessity and strict universality are the two criteria of a priori proposition. A priori proposition arises from pure reason or pure understanding.

Answer to Q.4: Dogmatism is the presumption that it is possible to make progress with pure knowledge from concepts alone, without having first investigated and by what right reason has come into possession of these concepts.

Answer to Q.5. i) Universal and necessary
ii) Synthetic
iii) A priori
iv) Science
v) Causality

Answer to Q.6: Three division of Kant's mental process are: i) cognition, (ii) cognation, (iii) affection.

Answer to Q.7: Three 'Critiques' of Kant are: (i) Critique of Pure Reason, (ii) Critique of Practical Reason, (iii) Critique of Judgement.

Answer to Q.8: An empirical percept is one which has been derived from some sense experience. For eg, the table before me or the blackboard in front of the students is an empirical percept.

Answer to Q.9: A pure percept is not the sense experience of this or that object given in our present consciousness, but is at the basis of any experience whatsoever. This pure percept is a priori according to Kant. According to him, space and time are the a priori percept on which all other empirical perceptions are based.

Answer to Q.10: Kant divides his Critique into the following ways:

(a) Transcendental Aesthetics, (b) Transcendental Logic. Transcendental Logic is of two parts, viz, (i) Transcendental Analytic and (ii) Transcendental Dialectic.

14.13. MODEL QUESTIONS

A) Very short questions

Q.1 What are the criteria of a priori propositions?

Q.2 Is Metaphysics a science according to Kant?

Q.3 What are a posterior propositions?

Q.4 What did Kant call his epistemological enquiry?

Q.5 What is Transcendental Logic?

B. Short questions(Answer in about 150-200 words)

Q.1 Write short notes on:

a) Transcendental Aesthetics

b) Space and time are a priori percepts

Q.2 Distinguish between analytic proposition and synthetic proposition.

Q.3 Distinguish between a priori proposition and a posterior proposition.

Q.4 Why does Kant say that 'Metaphysics as a science is not possible?' Discuss briefly.

C) Long question (Answer in about 300-500 words)

Q.1 Discuss in brief Kant's certainty of a priori knowledge.

Q.2 Discuss briefly the certainty of synthetic judgement a priori in Mathematics, Physics and Metaphysics.

Q.3 Explain the main division of Kant's system.

Q.4 Discuss the critical comment raised against Kant's synthetic judgement a priori knowledge.

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