HUME'S CONCEPT OF ANALYTIC A PRIORI: A PRECURSOR TO SYNTHETIC A PRIORI JUDGEMENT

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Abstract

Hume was precursor of Kant. Even if his treatment of human knowledge is empirical, Kant finds a grain of possibility of synthetic a priori judgement in the classification of propositions of Hume. As Kant, Hume has also interpreted the statements of mathematics and the laws of science. For him they are analytic a priori. However, he admits that the statements of mathematics are necessary and cannot be falsified by experience. His assumption, that the propositions of relations of ideas and the propositions of matters of facts exhaust the entire domain of human knowledge has been challenged subsequently, and Kant's synthetic a priori judgement is an outcome of that challenge. This paper is an attempt to establish the link between Hume and Kant, and consequently, the possibility of synthetic a priori judgments.

Keywords

Analytic, Synthetic, a priori, a posteriori, analytic a priori, synthetic a priori.

First, we need to consider the two relevant distinctions between a priori and a posteriori and the analytic and synthetic. The former distinction is epistemological and latter is logical in nature. A priori is that which is independently of experience. A posteriori is that which is dependent on experience. Hume and Kant do not substantially disagree. Kant wrote about analytic synthetic distinction in his book "Critique of Pure Reason."

"In all judgement in which the relation of a subject-predicate is thought (if I only consider affirmative judgement, since the application to negative ones easy) this relation is possible in two different ways. Either the predicate B belongs to the subject a something that is (covertly) contained in this concept A or B lies entirely outside the concept A, though to be sure it stands in connection with it. In the first case; I call the judgement analytic in the second synthetic."[1]

According to Kant, Analytic judgement is one in which the notion of predicate is already contained in the notion of subject. On the other hand, synthetic judgment is one in which the notion of predicate is not contained in the notion of subject. However, Kant also provides another definition **in** his book "*Critique of Pure Reason.*" "Analytic are only judgments of explication whereas synthetic claims are judgments of amplification".[2] *On* the basis of this definition analytic judgments is 'judgment of clarification' or 'judgment of explication' because the predicate doesn't add to the notion of the subject and synthetic judgment is 'judgment of amplification' because the predicate add something to the notion of subject. With these two distinctions we can turn to Hume. Hume argue that "all the objects of human reason or enquiry may naturally be divided into two kinds, to, wit, Relations of ideas, and matters of fact. Of the first kind are the sciences of Geometry, Algebra, and Arithmetic; and in short, every affirmation which is either intuitively or demonstratively certain. Proposition of this kind are discovered by the mere operations of thought, without depending on what is anywhere existent in the universe. Matters of fact, which are the second objects of human reason, are not ascertained in the same manner; nor is our evidence of their truth, however great, of a like nature with the foregoing. The contrary of every matter of fact is still possible, because it can never imply a contradiction, and is conceived by the mind with the same facility and distinctness, as if ever so conformable to reality."[3]

Hume's relation of ideas and matters of fact is not a division of relations but it is rather the division of two kinds of propositions into necessary and contingent. That is, all the objects of our knowledge are nothing but the propositions which are of two different kinds, necessary and contingent. The distinction that might be used here is that one kind can be known as a priori and cannot be denied without self-

contradiction, the other kind can be known as a posteriori and can be denied without self-contradiction. A relation of ideas is necessary, and knowable a priori. A matter of fact is contingent, and knowable a posteriori. Again, Hume argues that propositions asserting relations of ideas are called analytic propositions while propositions asserting matters of fact are synthetic propositions So, the distinction has an epistemological aspect (a priori and a posteriori), metaphysical aspect (necessary and contingent) and logical aspect (analytic and synthetic). According to modern empiricist all a priori propositions are analytic since their negation involve self-contradiction. The truth of an analytic proposition depends on the meaning of the terms they contained. Synthetic propositions cannot be a priori because this proposition is based on empirical hypothesis. And thus, it must have excluded from the existence of very possibility of synthetic a priori propositions. "This general proposition represents a development of Hume's View".[4]

According to Hume all mathematical propositions are analytic in the sense that their truth depends on the meanings of the terms they contain. The sciences of arithmetic and geometry are the examples of relation of ideas has proposed by Hume. "That the square of the hypotenuse is equal to the square of the two sides, is a proposition which express a relation between these figures. Those three times five is equal to the half of thirty, expresses a relation between these numbers."[5] Such propositions can be discovered a priori and that they are necessarily true. And he also says," though there never were a circle or triangle in nature, the truths demonstrated by Euclid would for ever retain their certainty and evidence".[6]

Thus, Hume maintain that the truth of all mathematical propositions depends solely on the relations between ideas and so their truth need not be confirmed by experience. Mathematical propositions are about relations of ideas not about matters of facts because mathematical proposition cannot be possibly refuted by experience. So, according to Hume mathematical proposition are formal in nature but they are not empirical hypothesis. He has maintained that mathematics can be applied yet the truth of mathematical propositions does not depend upon the application of mathematics and in this sense that mathematical propositions might be called a priori. (It is to be noted here that the term 'a priori' is not used by Hume himself.) Mathematical propositions are a priori and analytic was also interpreted by Neo-positivists. According to them, mathematical propositions are devoid of all factual content.

According to Hume, "all reasoning concerning matters of fact are founded on the relation of cause and effect"[7.] He argued that knowledge of propositions asserting matters of fact, on the contrary, depend on such causal principles that

every event has a cause and that like causes that like effects. Hume claims that these principles must be derived from experience and cannot be a priori. Thus, Hume concludes that a priori propositions cannot ever by synthetic, but they are be always analytic in character. That is, he has denied the very possibility of synthetic a priori propositions.

Kant Immanuel, "Critique of Pure Reason", Translated by N. K Smith, (1987). Kant has put forward some solutions to four questions that come to his mind when he started writing his magnum opus: (1) How is pure mathematics Possible? (2) How is physics possible? (3) How is metaphysics, as natural disposition, possible? (4) How is metaphysics, as a science, possible? In all these branches of study synthetic a priori judgments lie at their very root. Reason has different faculties, namely, sensibility, understanding and pure reason. Space and time as two a priori form of sensibility make perception possible. At the root of the possibility of mathematics lies these two forms of space and time, their nature and description, that constitute our knowledge of geometry and arithmetic. On the other hand, understanding by the help of twelve a priori categories systematizing the intuitions into concepts and judgments and make our knowledge of science of nature possible. Thus, Space, Time, substance and causality are the basic categories upon which the knowledge of mathematics and natural sciences are based. Geometry is the description of space and arithmetic is the succession of moments of time. Natural science is nothing but the natural laws governing the spatial-temporal existence of physical objects. Kant claims all traditional metaphysics to be dogmatic, and the kind of metaphysics he enunciates in formulating the a priori foundations of knowledge is called by him transcendental metaphysics. He claims it to be a scientific body of knowledge.

"In all theoretical sciences the synthetic a priori judgments are contained in principles", he says, (1) "All mathematical judgments, without exception, are synthetic a priori".[8] (2) "Natural Science (Physics) contains a priori synthetic judgments as principles".(3) "Metaphysics, even if we look upon it as having hitherto failed in all its endeavours, is yet, owing to the nature of human reason, a quite indispensable science, and ought to contain a priori synthetic knowledge".[9] '7+5=12' and 'that the straight line between the two points is the shortest' are examples of synthetic a priori judgments of Mathematical Sciences. Examples like," that in all changes of the material world, the quantity of matter remains unchanged; and that in all communication of motion, action and reaction are always be equal"[10] are synthetic a priori judgments in the field of Physics. The propositions, 'that the world must have a first beginning etc. are examples of synthetic a priori judgment belonging to metaphysics.

Conclusion

We have seen from the above discussion that there is a clear-cut division between the relation of ideas and the matters of facts. The examples taken by Hume are: 1. The square of the hypotenuse is equal to the sum of the square of the base and the perpendicular. 2. Thrice five is equal to half of thirty. One is of geometry and the other is of arithmetic. For Hume, they are relations of ideas and analytic, they cannot be falsified by any number of matters of fact. However, regarding the origin of such statements he takes resort to 'imagination' and 'sentiment' while explaining about their necessary character. Kant also takes the help of imagination regarding the possibility of necessary character of statements of mathematics. According to Kant, 'mathematics is construction of imagination'. However, Kant calls his imagination transcendental, which is not same as ordinary imagination or poetic imagination. The difference between Hume and Kant is that, while talking about necessity, Hume calls it analytic whereas Kant calls it synthetic. We would like to go with Kant, because the negation of mathematical statements does not end up in contradiction.

As a matter of facts, the laws of science, especially the principle of causality, according to Hume is the result of association of two events happening together time and again. He calls it habitual or 'customary connection'. This customary connection generates a psychological necessity, for which when we come across the cause of something we can anticipate its effect and vice versa. That psychological necessity of Hume is the source of Kant's synthetic a priori judgment.

Kant had a rationalistic background and wanted to give a rational foundation to Humean empiricism. Understanding and Categories he sought from the classification of propositions of Aristotle. He gave an a priori form to the psycho-empirical contents of Hume. So, both Hume and Kant deal with the statements of mathematics as well as natural philosophy. Both accept them to be a priori. While for Hume it was analytic a priori, for Kant it was synthetic a priori. The difference in their perception and attitude made them so.

Endnotes

1. Kant, I. (1781). *Critique of Pure Reason*. (Trans.by). Smith, N.K., Pg. **A6-7/B10.**
2. Ibid. Pg. **A7/B11.**
3. D. Hume. (1951). *An Enquiry Concerning Human Understanding*, oxford, Sec.iv., Part. 1, Pg. **25.**
4. F. Copleston. (1959) *A history of Philosophy, London*, Pg.**277.**
5. Op.Cit.

6. Ibid.

7. Ibid. Pg. **26.**

8. Kant, I. (1781). *Critique of Pure Reason*. (Trans.by). Smith, N.K., Pg. **A-10/B -14.**

9. Ibid. Pg. **B-18.**

10. Ibid.

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