A PRIORI KNOWLEDGE*

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I

Kant's *Critique of Pure Reason* was historic in many important respects. It has made seminal contributions in the post-Kantian era. The critical philosophy that he espoused there, has been influencing philosophical discourse since 1781 onwards. In the Introduction of that book Kant asserts that we are in possession of certain modes of *a priori* knowledge. Actually there he talks about four sorts of judgements or knowledge: *a priori*, *a posterior*, analytic and synthetic. In order to clarify the nature of these judgements he contrasted *a priori* with *a posterior* knowledge and analytic judgement with synthetic one. The necessity of explanations of these judgements was caused by his indomitable desire to show the possibility of a particular combination of judgements which his predecessors mostly considered impossible. The combination was between synthetic judgements and *a priori* judgements. In brief Kant wanted to demonstrate how synthetic *a priori* judgements are possible. The detailed explanation of various sorts of judgements in the Introduction paved the way for his demonstration.

However, we should not presume that Kant was the first philosopher to talk about *a priori* knowledge in philosophy. The concept of *a priori* was, of course, in philosophy even before Kant. In a number of philosophers' writings before Kant the notions of *a priori* and *a posteriori* was used, though of course without mentioning these terms. Like many issues in philosophy we can trace the mention of these sorts of knowledge in ancient Greek philosophy. For example, in the dialogue *Meno* (380 B. C.) where Plato talks about theory of recollection we find the hint of a knowledge which is akin to *a priori* knowledge. Again Aristotle in his *Posterior Analytics* draws our attention to this sort of knowledge. Leibniz also drew our attention by distinguishing between truths of reason and truths of fact. And Hume, who woke up Kant

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from his dogmatic slumber, as Kant said, distinguished between relations of ideas and matters of fact. All these may be regarded as precursors of the aforesaid Kantian distinction. However, this should not give us impression that Kant was merely harping on the points that his predecessors spoke of by using different expressions. Kant's contribution was that he brought the concept to the forefront of discussion and gave prominence and clarity to it. Introducing the concept (i.e. the concept of *a priori*) in the Introduction he contrasted it with the *a posterior* knowledge. While the two terms referred traditionally to forms of demonstration and also to the kind of knowledge gained in those demonstration, Kant extended their range beyond kinds of knowledge first to judgements and then to the very elements of knowledge.

There are writers who opine that the distinction drawn between *a priori* and *a posteriori* knowledge is epistemological as it contrasts two kinds of *knowledge.* Some even go to the extent of saying that the distinction connotes two kinds of epistemic justification, the sort of justification appropriate to knowledge.

II

The expressions '*a priori*' and '*a posteriori*' are basically of Latin origin. These literally mean 'from what comes before' and 'from what comes later'. In the Introduction of the First *Critique* we find that Kant does not discuss at length the nature of *a posterior* knowledge. This shows that *a posterior* knowledge did not pose any big problem to Kant. Discussion at length the nature of *a priori* knowledge makes us thinks that it was his focal point. He defined *a priori* knowledge thus

> Knowledge that is... independent of experience and even of all impressions of the senses... is entitled *a priori*, and distinguished from the empirical, which has its sources *a posterior*, that is, in experience.

The term 'independent' figured in the above definition is important. In saying that something is known independently of experience, it was not intended that we could have known it even if we had never had any experience. In fact, experience is a prerequisite for any sort of knowledge including *a priori*

knowledge. First of all, if we do not have any experience, our cognitive faculties would never have developed to the point that we could entertain any proposition at all. The intent is that once our faculties are ready to take part in the process of cognition and are functioning properly, there are some propositions that we can know to be true without any further need of experience. Again, some of component concepts in a given proposition are concepts that can only be acquired through experience, e.g., the concept of 'event', 'red', etc.. In such cases experience would be necessary for us to grasp the proposition. But once we have framed it in our consciousness, we may be able to ascertain that it is true without any further aid from experience. This point can further be explained by taking the help of recent analysis of knowledge. It has been claimed that someone knows a proposition only if:

- He believes it,
- It is true, and
- He is adequately justified in believing it.

Experience may be necessary for the obtaining of belief condition, i.e. condition (i) of knowledge. But experience is not necessary in a given case for the obtaining of justification condition, i.e. condition (iii). Without this the knowledge will still qualify as *a priori*. Frege, in his *Foundations of Arithmetic*, also explain the concept of *a priori* in the same way. He there writes that *a priori* judgement is not a judgement about the conditions, psychological, physiological, and physical, which have made it possible for us to form the content of the proposition in our consciousness, nor is it a judgement about the way in which some other man has come... to believe it to be true;...it is a judgement about the ultimate ground upon which rests the justification for holding it to be true.[1]

In the Introduction Kant asserts that all our knowledge begins with experience, but does not arise necessarily out of it. A close reading makes it

[1]Gottlob Frege, *The Foundation of Arithmetic*, translated by J. L. Austin, Evanston, Ill.: North Western University Press, 1980, p. 3.

evident that, for Kant, all knowledge begins with experience since unless the senses stimulate the faculty of knowledge into action, knowledge in the sense of knowledge of *objects* cannot arise. Thus we can say that experience is the occasioning cause of our knowledge, as we have shown in a previous paragraph. When it is said that *a priori* knowledge is prior it actually means that it provides the principle of possibility of all our knowledge and also its principle of possibility is not dependent on experience.

In order make crystal clear the concept of *a priori*, Kant distinguishes between relatively *a priori* knowledge and absolutely *a priori* knowledge. For Kant relatively *a priori* knowledge is not *a priori* proper. It is not so as it ultimately depends, directly or indirectly, on experience. He gives an instance to prove his point: 'This house will fall down if its support is withdrawn'. This is a relatively *a priori* judgement because though it is not based on the observation of the actual fall of the house, still it is deducible from an empirical general rule 'All material bodies fall down when their supports are withdrawn' along with the statement that this house is a material body. *A priori* knowledge is absolutely independent of experience in the sense that it is neither immediately based on sense observations nor mediately based on experience by way of being either an empirical generalization or deducible conclusion from an empirical generalization.

Kant also makes distinction between pure and non-pure *a priori* knowledge. An *a priori* knowledge is pure if it does not contain an element of empirical knowledge. To put it otherwise, an *a priori* knowledge is pure if the judgement as a whole is *a priori* and all its constituent concepts are *a priori*. It may happen that a judgement as a whole is *a priori* but at least one of its concepts is empirical. Such judgement has been given the name non-pure *a priori* judgement, e.g., 'Every event has a cause', the concept of 'event' being empirical. Some commentators, however, (e.g. Korner) are of the opinion that an *a priori* judgement consists of *a priori* concepts and an *a posteriori* judgement consists of *a posteriori* concepts. However, this interpretation is not

defensible. For Kant, a judgement consisting of *a posteriori* concepts may yet be *a priori*, though, of course, non-pure *a priori*. To prove this point we can give the example 'All red flowers are red' is *a priori*, being analytic, although both its subject and its predicate concepts are *a priori*. Thus, we can say that whether a judgement is *a priori* or *a posteriori* does not depend on the nature of its constituent concept. Kant argues in various ways that they (*a priori* knowledge) are not only independent of experience, but also even the conditions of experience.

Kant gives us two criteria of *a priori* knowledge: necessity and strict universality. In the ultimate analysis it appears that both the criteria are different sides of the same coin. By necessity Kant means the impossibility of the opposite. Kant distinguishes between two senses of impossibility - logical and transcendental. A proposition is logically impossible if it is self-contradictory, i.e. one which either involves or can be shown by analysis to involve an explicit concept of contradiction. A logically possible proposition is transcendentally impossible if the state of affairs projected by it is unconstructible, i.e. incapable of exhibition in intuition (in space and time). For example, the proposition 'All bodies are extended' is necessary, because its opposition (contradiction) - viz, 'some bodies are not extended'- is the self-contradictory, being reducible to the contradiction 'Some extended substances are not extended'. However, the proposition 'Two straight lines cannot enclose a space' is necessary, as its opposite -Two straight lines can sometimes enclose a space - is, though logically possible, yet transcendentally impossible, in so far as the two-sided figures projected by it is not constructible, i. e., not in principle capable of exhibition in the intuition of space. Thus it can safely be said that for Kant a necessary proposition is one of which the opposite (contradictory) is either self-contradictory or unconstructible (i. e. counter-intuitive). Further deliberation will make it clear that a proposition which is necessary in the first sense is analytic, while a proposition which is necessary in the second sense is synthetically necessary. In this connection it will not be

out of place to state that, for Kant, *a priori* proposition is necessary in a wider sense than the one in which a merely analytic proposition is necessary.

Another important criterion is the universality. By universality is meant universal validity - validity under all possible circumstances. A true universal proposition in this sense does not admit of the possibility of an exception. For example, we cannot conceive of the possibility of an exception to the truth expressed by the proposition '7+5=12'. Universality in this sense should not be confused with universal quantification. These two should not be confused as same as not all universally quantified propositions are universal in this sense. For example, 'All swans are white' is universally quantified, but is not universal in this sense as it admits of the possibility of an exception. Moreover, a universal proposition in the Kantian sense may or may not contain a universal quantifier, e.g. '7+5=12'.

It may well be said that universality need not be a sign of *a priority* because it can well be explained empirically through induction. In order to ward off this confusion Kant distinguishes between comparative and strict universality. Inductive universality is only comparative, and not a strict one. An inductive generalization expresses a rule to which no exception has been found so far, but to which an exception is nevertheless allowed as possible. There is a conceivable circumstance in which it is possibly false. Hence it is not strictly universal. Strict universality consists in excluding the possibility of an exception and it is this feature which cannot be explained by induction. It is this sort of universality that Kant ascribes to *a priori* knowledge. Strict universality by virtue of its strictness is already a form of necessity.

A close study reveals that the purity of *a priori* knowledge is known by way of abstraction. For example, *a priori* forms of intuition - space and time- are discovered by abstracting from experience everything which the understanding thinks through its concepts thus isolating sensibility and then separating off everything which belongs to sensation, so that nothing may remain except pure intuition and the mere form of appearances, which is all

that sensibility can supply *a priori*. The same is equally true for the *a priori* concepts, categories, which are the *a priori* conditions upon which the possibility of experience rests. These remain as underlying grounds when everything empirical is abstracted from appearances. Establishing the purity of *a priori* principles, however, itself requires a criterion as otherwise it will be impossible to ascertain when the process of abstraction has reached its terminus in the *a priori*. The criteria of universality and necessity are used to registrar the arrival at an *a priori* judgement or element. If this intuition or concept necessarily holds for every experience then it is *a priori*. Kant uses this argument on several occasions. From the analysis of *a priori* knowledge and judgements Kant moves quickly into the proofs for the existence of *a priori* principles. The first proof appeals to their necessary role in experience. In the second edition of the *Critique of Pure Reason* Kant asserts that it is possible to show that pure *a priori* principles are indespensible for the possibility of experience, and so prove their existence *a priori*. Otherwise how could experience derive its certainty, if all the rules, according to which it proceeds, were always themselves empirical, and therefore contingent, asks Kant. Here the purity of the *a priori* is used to support its universality and necessity.

III

Since the publication of the first *Critique* it was a common practice for philosophical circles to think that the notions - such as *a priori* -necessity, a posterior-contingency - coincide though they are not exactly synonymous. It was also believed that pairs such as - a priori - contingent and a posterior-necessary are not compatible or cannot go together. This common belief got a shock from the American philosopher Saul Kripke. Kripke in his N*aming and Necessity* tries to show that there is no reason to interlink these concepts. It is this issue that will be discussed in this section.

Kantian exposition of the concept of *a priori* judgement did not remain static. Rather it has raised several vital philosophical questions which were

addressed by his successors. From our preceding discussion of *a priori* knowledge it can be seen that this concept revolves around a three crucial distinctions: first, the epistemological distinction between *a priori* and *a posteriori* knowledge, second, the metaphysical distinction between necessity and contingency, and finally, the semantical distinction between analytic and synthetic truth. Moreover, some of the pertinent questions asked about *a priori* knowledge are: What are the necessary and sufficient conditions for one's having *a priori* knowledge? Can we humans satisfy those conditions? Are every proposition knowable *a priori* are analytically as well as necessarily true? Can there be *a priori* knowledge of some synthetically true propositions or of some contingently true propositions? W. V. O. Quine's attack in his 'Two Dogmas of Empiricism' has made the notion a bit more complicated and what is being asked now is whether the very notion of *a priori* knowledge is philosophically misguided.

In order to give clarity to the concept of *a priori* and to pave the ways for proving his overriding aim (how synthetic *a priori* judegements are possible?) Kant takes recourse to semantical, epistemological and metaphysical explanations: semantical distinction between analytic and synthetic truths, epistemological between *a priori* and *a posteriori* truths, and a metaphysical distinction between necessary and contingent truths. Since then it has become almost customary to equate *a priority* with necessity and *a posteriority* with contingency. This was taken for granted by philosophers. However, in the second half of the twentieth century Saul Kripke made an effort to break this myth. Contrary to Kant's claim Kripke shows that there are necessities which are very much *a posteriori* and also there are *a priori* contingent truths. Kripke argues the above mainly in his *Naming and Necessity* and in his essay 'Identity and necessity'. *Naming and Necessity* was a transcript of three lectures that Kripke delivered at Princeton University, U S A. It is mainly a critique of descriptivist theories of proper names which are

attributed to Frege, Russell and Wittgenstein. Descriptivist holds that proper names are cognized by virtue of their association with a description or cluster of descriptions. However, Kripke considered this view as a flawed one and advocated an alternative theory what he called causal theory of reference. Taking recourse to modal logic he tried to substantiate his claim that proper names are rigid designators. It is mainly in the third chapter of the book that he cracked the usually held association between necessity and a priority and contingency and a posteriority. Hilary Putnam in his "The Meaning of 'Meaning" comments that since Kant there has been a split between philosophers who thought that all necessary truths were analytic whereas another group thought that some necessary truths were synthetic *a priori*. But none of these philosophers thought that a metaphysically necessary truth could fail to be *a priori*.[2] It is exactly here wherein the importance of Kripke's argument lies. In order to prove his points Kripke takes the help of Descriptivist theory of names, causal theory of reference, the notion of rigid designator, and modality. In the notion of modality we find the concept of possible worlds. Possible worlds are imagined worlds where we could think of ways how things could have been. It is understood and compared with actual world. Actual world is the world the way things actually are. The concept of possible worlds is used to explain modal notions like logical possibility, necessity and contingency.

Kripke's main aim was to remind that three notions - necessity, analyticity, and a priority - are conceptually distinct and that we should not use these three labels interchangeably. Kant has claimed that sense experience does not teach us that something could not have been otherwise. For Kripke this claim would have been plausible if it would have meant that sense experience by itself is not sufficient to teach us that something is necessary,

[2] Putnam, Hilary (1975). "The Meaning of `Meaning". *Minnesota Studies in the Philosophy of Science* **7**: 131–193.

that some additional a priori element is required. While classifying knowledge of necessity as a priori, Kant in fact has assumed that experience is never required, apart from any a priori element, to teach us that something is necessary. It is here that Kripe disagrees with Kant. Kripke in his Naming and Necessity gives a number of examples of such a posterior necessities. Moreover, he is of the opinion that in addition to *a posteriori* truths that are necessary, there are also a priori truths that are contingent. The connection that Kripke accepts is that whatever is analytic is also *a priori* and *necessary*. On the other hand, *a posteriori* necessity or an a priori contingency will be synthetic. Let us see how Kripke shows this.

One of the examples given by Kripke about contingent a priority is case of 'meter'. Meter is held to designate rigidly a certain length, the reference-fixing specification being that it is to be the length of a certain bar that it had at a certain time t. For Kripke, it is a priori that the bar was one meter long at a particular time and at the same time it is also contingent on account of the fact that the temperature and hence the length of the bar could have been different what they were actually at that specified time. By this example Kripke underscores the conceptual distinctness between the categories of necessity and a priority.

In addition to above points Kripe shows in *Naming and Necessity* that there are *a posteriori* judgements. We need to keep in mind that Kripke's main concern in that book about naming. It is with reference to the above that he brings the issue of *a posteriori* necessity. He shows what is essential and what is accidental for individuals such as Hesperus or Aristotle. Next he takes examples of natural substances such as gold/water, then objects of natural kinds such as tigers or cats and ultimately instances of natural phenomena such as heat or light. In the 3rd lecture Kripke tries with a number of examples to prove that there are certain facts that are necessary though they are knowable *only* a posterior. It is a known fact that Aristotle taught Alexander. We can imagine, he says, a counterfactual situation or a possible world where

Aristotle need not have taught Alexander. Again, 'Hydrogen is made of atoms containing on electron' is an example of *a posteriori* necessity. This is a necessary proposition as hydrogen could not have a different atomic structure. Anything with a different atomic structure would not be hydrogen. And this fact is definitely known *a posteriori*. Physicists discovered this truth after a great number of detailed experiments and observations. Thus Kripke claims that the above statement is necessary as well as *a posteriori*. Another obvious example of *a posteriori* necessity is identity involving proper names; e. g. Marilyn Monroe is Norma Jeane Baker. This is also necessary as Marilyn Monroe could not have been Norma Jean Baker. This would require her somehow not to have been herself, which would be absurd. Again, the statement is not *a priori*. Somebody could understand this statement perfectly well and yet not know it is true. It is easily understandable in an imaginary situation where someone who grew up with Norma Jean but lost touch with her, and had heard of Marilyn Monroe but not seen any of the films.

In 'Identity and Necessity' also Kripke is engrossed with the question of necessity, contingency etc. He raises the question how are contingent identity statements possible as whatever exists is necessarily self-identical? He answers by saying that contingent identity is not possible though contingent identity statements are possible. It is possible because referring expressions in some identity statements pick out different objects at different possible worlds.

Edmund Husserl in his *Logical Investigations* talks about *a priori* knowledge. He is at one with Kant in saying that it has two features that we discussed in detail. However, Husserl thinks that the notion of *a priori* needs closer examination. He writes that this sort of knowledge (*a priori*) is obvious and even trivial but 'its systematic demonstration, theoretical pursuit and phenomenological clarification remains of supreme scientific and philosophical interest, and by no means easy.'[3] There he talks about formal *a priori* and pits it against material *a priori*. Pure logic including mathematics

[3] *Logical Investigations*, trans. J. N. Findlay, ed. D. Moran, Routledge 2001, p. 73

covers the whole domain of the formal *a priori* knowledge. In addition to that, Husserl opines, all domains of knowledge contain an *a priori* part. This rest of the portion he calls material *a priori.* This formal and material *a priori* is another way of characterizing[4] analytic *a priori* and synthetic *a priori*, says Dermot Moran. The expression '*a priori*' undergoes a considerable change in Husserl's philosophy. He talks about objective *a priori*. He explains objectivity as the place where the *a priori* is exercised.

Kripke's examples of empirical identity statements such as 'Hesperus is Phosphorus', statements of material origin, such as 'This lectern was originally made of (a particular piece of) wood' and statements of kind essence and identity, such as 'Gold has atomic number 79' have some special significance. Since these are not *a priori*, they cannot simply be true by convention. If conventionalism was already on the wane, Kripke's examples, and similar ones from Putnam seemed to kill it decisively. As these truths are not logically necessary, but are still necessary absolutely, they have sometimes been called 'metaphysically necessary'. However, it needs to be noted that even if these necessary truths were not true by convention, they might still owe their necessity to convention. The arguments for proposed necessary *a posteriori* truths each involve commitment to some general principle, for instance, that if a material object originates in bit of matter M, then it essentially originates in M. These principles are plausibly *a priori*, for the arguments rest on the familiar appeals to what we can imagine, or would be willing to say. The conventionalist proposal, then, is that these principles are analytic, and that while these conventions do not determine which modal statements are true (what bit of matter something did originate in), they are responsible for these truths being necessary (the principle determines that nothing with a different origin can count as this object). So conventionalism

[4] Coppock, P., Journal of Philosophy 81: 261-70.

does not require that all necessary truths are true by convention, but only why they are necessary.

The above view and other modern elaborations make it clear that being *a priori* is to be sharply distinguished from being necessary, from being true purely in virtue of meaning, and from being knowable infallibly. Examples and reflection on the nature of the properties both show that there are *a priori* propositions which are not necessary. If a proposition is to be knowably true *a priori* in the actual world, it requires only that there is some non-empirical route to its justifiability; but that is very different from necessary. Conversely, in the presence of examples of the necessary *a posteriori*, it is clear that a proposition's being necessary does not ensure that it is *a priori*.

The above remarks, however, do not conflict with the classical rationalists' view which has received further elaboration in recent work, that all necessity can be traced back ultimately to the *a priori*. The non-coincidence of the *a priori* and the necessary serves just to emphasize how much work any contemporary development of that rationalist view has to do in explaining its notion of the source of necessity.

To say that a proposition is *a priori* is also not to be committed to the view that it is true purely in virtue of meaning. Something can be both knowable in a way which is justificationally independent of experience, whilst also being true in virtue of its truth condition holding, just like any other truth. Quine decisively refuted the idea that anything could be true purely in virtue of its meaning.

A priori justification is not infallible justification. Just as one may be justified in believing an ordinary empirical proposition that is subsequently revealed on empirical grounds to be false, so one may be justified in believing an *a priori* proposition that is subsequently revealed on *a priori* grounds to be false. It seems that *a priori* propositions cannot be defeated by wholly empirical information, i.e. that they may still be experientially indefeasible.

In addition to proper names, says Kripke, a posterior nouns are found in certain simple terms which designate natural substances (such as water), some simple terms which designate natural *kind* objects and also to certain simple terms which designate natural phenomena (e.g. heat). Citing examples of all these three sorts - 'Water is H2O' for natural substances, 'Whale are mammals for natural kind object and 'Heat is random molecular motion' - Kripke argues that all these are a posterior and is proved by the fact that they are scientific conclusions. We know that scientific conclusions are arrived at only taking recourse to a posterior means or appeal to sense experience. Moreover, all these facts could not have been otherwise and hence they are necessary. His reason for saying this is that a substance having a composition other than H_2O would not be called water also a non-mammal could not be whale and so on. Examples taken by Kripke are both from proper nouns and mass or common nouns.