

On the Synthesis of Pure Sensibility and Pure Rationality in Immanuel Kant's Epistemology

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Introduction

Hume's skepticism, more particularly his technical distinction between a priori and a posteriori propositions or statements, awakened Kant from his dogmatic slumber, and provided a basis for treating the question of whether, and how metaphysics is possible. Kant said that it was the influence of David Hume (awakening from the dogmatic slumber), which had turned his mind to the new fields of speculative philosophy. One can identify two possible versions of Humean influence on Kant. The first is connected with the conception of the "skeptical method", to which Kant adhered since about 1765, and the second is the true awakening which took place in the summer of 1771.¹ In acknowledging the profound influence of Hume in his speculative philosophy, Kant asserts:

I openly confess, the suggestion of David Hume was the very thing, which many years ago first interrupted my dogmatic slumber, and gave my investigations in the field of speculative philosophy quite a new direction. I was far from following him in the conclusions at which he arrived by regarding, not the whole of his problem, but a part, which by itself can give us no information. If we start from a well-founded, but undeveloped, thought, which another has bequeathed to us, we may well hope by continued reflection to advance farther than the acute man, to whom we owe the first spark of light. I therefore first tried whether Hume's objection could not be put into a general form, and soon found that the concept of the connection of cause and effect was by no means the only idea by which the understanding thinks the connection of things a priori, but rather that metaphysics consists altogether of such connections. But as soon as I had succeeded in solving Hume's problem not merely in a particular case, but with respect to the whole faculty of pure reason, I could proceed safely, though slowly, to determine the whole sphere of pure reason completely and from general principles, in its circumference as well as in its contents. This was required for metaphysics in order to construct its system according to a reliable plan...²

This paper sets out to discuss the nature and relevance of Kant's synthesis between sensibility and understanding, in relation to his introduction of the synthetic a priori judgment, in his *Critique of Pure Reason*.

¹ T. Zakydalsky, trans. Kant: "The Awakening from Dogmatic Slumber" *Russian Studies in Philosophy: A Journal of Translations* 38 (2000) 23-38

² Immanuel Kant, *Prolegomena to any Future Metaphysics*, 261.

(A) ON KANT'S SYNTHESIS OF SENSIBILITY AND RATIONALITY

Kant says:

We will pursue the pure concepts into their first seeds and predispositions in the human understanding, where they lie ready, until with the opportunity of experience they are finally developed, and [then], liberated from the empirical conditions attaching to them they are exhibited in their clarity by the very same understanding", (A66/B91).

Following Hume, Kant acknowledged the distinction between a priori and a posteriori cognitions and between analytic and synthetic judgments. The knowledge we gain from experience is a posteriori, and what we can know independent of experience is a priori. The terms a priori and a posteriori, served in the scholastic literature to indicate that which comes before and that which comes after. Kant uses them in a meaning of his own, in which the "before" and the "after" refer to experience. An a priori concept or content is neither derived from experience nor dependent on it; in this sense it is "before" experience or precedes it. On the other hand, an a posteriori concept or content is possible only on the basis of some sensible experience (inner or outer) and is derived from it. Hence, an a priori concept or proposition can be known as true prior to any experience, whereas an a posteriori proposition depends on experience as a condition for being known and verified. Kant emphasizes that his philosophy deals with the "absolutely a priori," not the relative one. A "relative a priori" is exemplified in a sentence like "the man could have known a priori that the balloon will explode if placed near the fire." The man's possible prior knowledge is derived from experience and as such is essentially a posteriori and empirical. Kant's concern is with an a priori judgment that has no origin in experience whatsoever. He calls this absolute a priori "pure," in contrast to "empirical."³ Kant moved a step further, to consider synthetic a priori propositions. A synthetic judgment is one whose predicate contains information not contained in the subject, and an analytic judgment is one whose predicate is a mere analysis of the subject. Kant claims that mathematics, natural science, and metaphysics all lay claim to synthetic a priori propositions—propositions that are necessarily but not trivially true and can be known prior to experience. Since mathematics and pure natural science are well-established fields, he proposes to examine how their synthetic truths are possible a priori, in the hope that this examination will shed light on the possibility of metaphysics as a science. In talking about the relationship between intuition and understanding, in the first part of his *Transcendental Aesthetic*, Kant says:

In whatever mode, or by whatever means our knowledge may relate to objects, it is at least quite clear that the only manner in which it immediately relates to them is by means of an intuition. To this as the indispensable groundwork, all thought points. But an intuition can take place only in so far as the object is given to us. This, again, is only possible, to man at least, on condition that the object affect the mind in a certain manner. The capacity for receiving representations (receptivity) through the mode in which we are affected by objects, is called sensibility. By means of sensibility, therefore, objects are given to us, and it alone furnishes us with intuitions; by the understanding they are

³ Yirmiyahu Yovel, "Following Kant's Argument," in *Kant's Philosophical Revolution* (Princeton: Princeton University Press, 2018), p. 22

thought, and from it arise conceptions. But all thought must directly or indirectly, by means of certain signs, relate ultimately to intuitions; consequently, with us, to sensibility, because in no other way can an object be given to us.⁴

From here, Kant goes ahead to refer to the science of all principles a priori as transcendental aesthetic, while that of the principles of pure thought he refers to as transcendental logic.⁵ Kant, to whom is attributed the analytic-synthetic terminology, used these distinctions in sharpening his formulation of the problem to which he devoted the first part of *The Critique of Pure Reason*. The problem was how are synthetic a priori truths possible (in mathematics, natural science and metaphysics)? Kant maintained, of course, that there are synthetic a priori truths, although this has remained a controversial philosophical issue, between Kantians and pure rationalists. Kant, was partly a rationalist, and partly an empiricist. From Descartes he drew some rationalist principles, and became entrenched in dogmatism; and from Hume, he gained exposure to some fundamental principles of empiricism, which jolted him out of his dogmatic slumber. He therefore represents a point of synthesis or symbiosis between these two perspectives. In the work: “Kant’s Transcendental Critique of Classical Empiricism,” Marc Rolli asserts:

It is common anecdotal knowledge that Kant awoke from his dogmatic. Thanks to Hume’s scepticism. Inversely, a seldom articulated hope lies hidden in the name ‘transcendental empiricism’: could empiricism possibly profit from the same transcendental method that is meant to override it? Deleuze does in fact attempt to modify empiricist theory with a philosophically transcendental approach. Our engagement with Kant stands under this directive. It entails neither a retreat from Kant nor the simple adoption of his critique of empiricism. Rather, armed with relevant Deleuzian deliberations, the transcendental critique will – as far as possible – be assimilated empirically, whereby the ‘leftovers’ that cannot be integrated will undergo a further empiricist critique. In short, putting Kant’s position on the scales should lead to two results: to adopt philosophically transcendental components for the empiricist theory and in the process convincingly prevent turning the empiricist project as such into an impossibility.⁶

Mathematics is possible, Kant suggests, due to the pure intuitions of our faculty of sensibility. Space and time are not things in themselves that we meet with in experience; rather, they are pure intuitions that help us structure our sensations. Geometry comes from our pure intuition of space, and mathematics comes from our pure intuition of time, (since our concept of numbers is built from the successive moments in our concept of time). Pure natural science is possible based on the pure concepts of our faculty of understanding. Kant distinguishes between "judgments of perception," which are based on subjective sensations, and "judgments of experience," which try to draw objective, necessary truths from experience. Science, as an objective body of knowledge, is only possible if we can consider nature as according itself with

⁴ Immanuel Kant, *Critique of Pure Reason*, Transcendental Aesthetic, Part. 1

⁵ *Ibidem*.

⁶ Marc Rolli, “Kant’s Transcendental Critique of Classical Empiricism”, in Gilles Deleuze's *Transcendental Empiricism* (Edinburg: Edinburg University Press, 2016), p.51

objective, regular laws. These laws, (like "every effect has a cause"), are concepts of our understanding, just as space and time are intuitions of our sensibility. We cannot know anything about things in themselves, but the appearances that constitute our experience follow these laws. Immanuel Kant's philosophy is indeed a blending, or a synthesis of rationalism and empiricism. He says that although all our knowledge begins with experience, it does not follow that it all arises out of experience. Also, Wilfrid Sellars offers a wonderful explanation of the nature of unity between sensibility and understanding, when he says:

The same function which gives unity to the various representations in a judgment also gives unity to the mere synthesis of various representations in an intuition; and this unity, in its most general expression, we entitle the pure concept of the understanding. The same understanding through the same operations by which in concepts, by means of analytical unity, it produced the logical form of a judgment, also introduces a transcendental content into its representations, by means of the synthetic unity of the manifold in intuition in general. On this account we are entitled to call these representations pure concepts of the understanding, and to regard them as applying a priori to objects -- a conclusion which general logic is not in a position to establish.⁷

For Kant, empirical realism and transcendental idealism⁸ are two sides of the same coin. Subjecting sensations to the a priori conditions of space and time is not sufficient to make judging objects possible. Kant argues that the understanding must provide the concepts, which are rules for identifying what is common or universal in different representations, (A106). He says, "Without sensibility no object would be given to us; and without understanding no object would be thought. Thoughts without content are empty; intuitions without concepts are blind...The understanding can intuit nothing, the senses can think nothing. Only through their union, can knowledge arise."⁹ In the Analytic of Concepts section of the Critique, Kant argues that in order to think about the input from sensibility, sensations must conform to the conceptual structure that the mind has available to it. By applying concepts, the understanding takes the particulars that are given in sensation and identifies what is common and general about them. The concept of a "shelter" for instance, allows one to identify what is common in particular representations of a house, a tent, or a cave. In the Transcendental Aesthetic section

⁷ Wilfrid Sellars, "Kant's Transcendental Idealism" Published in *Collections of Philosophy* (1976): 165-181.

⁸ "As Kant typically uses it, the term 'transcendental' is intended to contrast sharply with two other terms, namely 'immanent' and 'transcendent'. Something is immanent with respect to certain bounds or limits if it lies within them. Something is 'transcendent' if it lies beyond these bounds or limits. Something is 'transcendental', however, if it lies neither within nor without those limits, but is, rather, a matter of the essential nature those very limits themselves. Kant was concerned to establish the essential a priori limits of human knowledge. Now nothing can possibly provide information about what is transcendent, that is, whatever by definition lies beyond the limits of knowledge? Science and common sense provide us with information about what lies within the limits of the knowable. But a special, non-scientific, peculiarly metaphysical investigation is required if we are to acquire any knowledge of the very limits of the knowable themselves. Kant calls such an investigation 'transcendental': "I entitle transcendental all knowledge which is occupied, not to so much with objects, as with the mode of our knowledge of objects in so far as this mode of knowledge is to be possible a priori. A system of such concepts might be entitled transcendental philosophy." (Kant, 1929: B 25), quoted from Nicholas Bunnin and E.P. Tsui-James, (Eds.), *The Blackwell Companion To Philosophy*, 2nd Edition, (Oxford: Blackwell Publishing Company, 2003), p.731

⁹ Immanuel Kant, *Critique of Pure Reason*, trans. N. Kemp Smith, A 51/B 75, quoted in *A Dictionary of Philosophical Quotations* (A.J.Ayer and Jane O'Grady, eds.), [Oxford: Blackwell Publishers, 1992], pp.219-220.

of the Critique, Kant argues that sensibility is the understanding's means of accessing objects. Since Kant calls his idealism 'transcendental' in order to indicate that it enables him to account for the existence of synthetic a priori knowledge concerning objects in space and time, he has, strictly speaking, no use for the term 'transcendental realism,' since on his account of synthetic a priori knowledge we could have no such knowledge of spatio-temporal objects if they were things themselves.¹⁰ Also, Gardner (1999), in discussing the relationship between sensibility and understanding in Kant's Critique of Pure Reason, says:

If it is not the world of experience that provides the intellect with the objects of which its ideas are true, what reason is there for thinking that there are any such objects? And if the ideas of the intellect are quite independent of the sensible world, how can intellectual principles such as the law of cause and effect — which is a presupposition of Newtonian science and as such must surely be accorded objectivity — have valid application to the spatio-temporal world?¹¹

The divorce of the sensible and the intelligible, it seems, would simply not do. Yet getting them to live with each other seemed just as difficult (the motivating factor in Kant's suggestion of the divorce in the first place). Similar difficulties in making sense of metaphysics had caused Hume to retreat into skeptical denial, but Kant found this refuge unacceptable. Metaphysics was necessary, so he felt, and thus the search began again for a way to bridge the gap between the two. Hume had classified knowledge in the following way:

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. ... 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.¹²

However, in the Critique of Pure Reason, Kant's aim was to move beyond the traditional dichotomy between rationalism and empiricism, and he strongly felt that he had finally bridged this gap, reconciling the powers of sensibility and intellect. Perhaps the key insight which made this reconciliation possible was the recognition that both rationalist and empiricist camps, despite their diametrically opposing views on many points, were both mistaken with regard to the sources of knowledge, and needed to revise their conceptual frameworks, and learn from each other's pitfalls.

The reason why synthetic a priori judgments are possible in geometry, Kant argues, is that space is an a priori form of sensibility. That is, we can know the claims of geometry with a priori certainty (which we do) only if experiencing objects in space is the necessary mode of our experience. Kant also argues that we cannot experience objects without being able to

¹⁰ Wilfrid Sellars, "Kant's Transcendental Idealism" Published in *Collections of Philosophy* (1976): 165-181.

¹¹ Sebastian Gardner, *Kant and the Critique of Pure Reason* (Routledge, 1999) pp. 18-19

¹² David Hume, *An Enquiry Concerning Human Understanding* (Collier and Son, 1910); Section IV, Part 1.

represent them spatially. It is impossible to grasp an object as an object unless we delineate the region of space it occupies. Without a spatial representation, our sensations are undifferentiated and we cannot ascribe properties to particular objects. Time, Kant argues, is also necessary as a form or condition of our intuitions of objects. The idea of time itself cannot be gathered from experience because succession and simultaneity of objects, the phenomena that would indicate the passage of time, would be impossible to represent if we did not already possess the capacity to represent objects in time. The empiricist might object at this point by insisting that such concepts do arise from experience, and question Kant's claim that the mind brings an a priori conceptual structure to the world. But Kant raises a more fundamental issue, by saying that empirical derivation is not sufficient to explain all of our concepts. Hume had argued, and Kant accepts, that we cannot empirically derive our concepts of causation, substance, self, identity, and so forth. However, what Hume had failed to see, Kant argues, is that even the possibility of making judgments about objects, to which Hume would assent, presupposes the possession of these fundamental concepts. Hume had argued for a sort of associationism to explain how we arrive at causal beliefs. The problem that Kant points out is that a Humean association of ideas already presupposes that we can conceive of identical, persistent objects that have regular, predictable, causal behavior. And being able to conceive of objects in this rich sense, presupposes that the mind makes several a priori contributions. Thus, one must be able to separate the objects from each other in one's sensations, and from one's sensations of oneself. One must be able to attribute properties to the objects. One must be able to conceive of an external world with its own course of events that is separate from the stream of perceptions in one's consciousness.

These components of experience cannot be found in experience because they constitute it. The mind's a priori conceptual contribution to experience can be enumerated by a special set of concepts that make all other empirical concepts and judgments possible. These concepts cannot be experienced directly; they are only manifest as the form which particular judgments of objects take. With Kant's claim that the mind of the knower makes an active contribution to experience of objects before us, we are in a better position to understand transcendental idealism, which shows the limitations of our knowledge.

The Rationalists believed that we could possess metaphysical knowledge about God, souls, substance, and for them, such knowledge was transcendently real. Kant argues, however, that we cannot have knowledge of the realm beyond the empirical. That is, transcendental knowledge is ideal, not real, for minds like ours. Kant saw the question of the possibility of Synthetic a priori judgments or propositions, as having implications for the question of the possibility of the science of metaphysics. He says:

All metaphysicians are therefore solemnly and legally suspended from their occupations till they shall have answered in a satisfactory manner the question, how are synthetic cognitions a priori possible? For the answer contains the only credentials which they must show when they have anything to offer in the name of pure reason. But if they do not possess these credentials, they can expect nothing else of reasonable people, who have been deceived so often, than to be dismissed without further ado. If they on the other hand desire to carry on their business, not as a science, but as an art

of wholesome oratory suited to the common sense of man, they cannot in justice be prevented... It may be said, that the entire transcendental philosophy, which necessarily precedes all metaphysics, is nothing but the complete solution of the problem here propounded, in systematical order and completeness, and hitherto we have never had any transcendental philosophy. For what goes by its name is properly a part of metaphysics, whereas the former [transcendental] sciences has first to constitute the possibility of the latter, and must therefore precede all metaphysics. And it is not surprising that when a whole science, deprived of all help from other sciences, and consequently in itself quite new, is required to answer a single question satisfactorily, we should find the answer troublesome and difficult, nay even shrouded in obscurity.¹³

David Hume had established that experience cannot give us the right to use a pure concept of cause or substance, but Kant argues that "Yet we do need to know how these concepts can refer to objects even though they do not take these objects from any experience" (A85/B117). That is, we need a deduction of the pure concepts of the understanding. We can establish the right to apply empirical concepts to objects by appealing to the fact that the concepts originated from those very objects.

When we form an empirical concept by comparing our perceptions of individual objects, we "ascend from singular perceptions to universal concepts" (A86/B119). Such an account of the origin of empirical concepts could be called an "empirical deduction." No empirical deduction could establish our right to apply pure concepts to objects, since those concepts are supplied by the pure understanding, and not the objects themselves. So we need a "transcendental deduction" of the categories. To treat a cognition transcendently is to investigate the possibility of its having an a priori origin, which is nonetheless applicable to objects. Kant offered a transcendental deduction of the concepts of space and time in the Aesthetic (A87/B119-20). We can say that objects are in space and time because space and time are the forms of sensible intuition of objects. That is to say, we cannot intuit an object without assigning it a position in space and time. "For only by means of such pure forms of sensibility can an object appear to us, i.e., can it be an object of empirical intuition" (A89/B121).

The pure concepts of the understanding, on the other hand, are not conditions for something to be an object of empirical intuition. "Therefore objects can indeed appear to us without having to refer necessarily to functions of the understanding, and hence without the understanding's containing a priori the conditions of these objects" (A90/B122). This is illustrated by Hume's case of the concept of a cause. This is the concept according to which when A occurs, B must occur as a result. Experience may allow us to generate by induction an empirical rule "whereby something usually happens" (A91/B124), but it cannot give us a rule according to which things must happen in a certain sequence. So, "appearances might possibly be of such a character that the understanding would not find them to conform at all to the conditions of its unity" (A90/B123). It seems as though initially, Kant himself had expressed doubts regarding possibility of the science of metaphysics, because in his Prolegomena, he says:

¹³ Immanuel Kant, Prolegomena to Any Future Metaphysics, 280

If anyone thinks himself offended, he is at liberty to refute my charge by producing a single synthetical proposition belonging to metaphysics, which he would prove dogmatically a priori, for until he has actually performed this feat, I shall not grant that he has truly advanced the science; even should this proposition be sufficiently confirmed by common experience. No demand can be more moderate or more equitable, and in the (inevitably certain) event of its non-performance, no assertion more just, than that hitherto metaphysics has never existed as a science.¹⁴

Kant notes that since objects of intuition must conform to a priori forms of intuition, we can ask "whether concepts do not also a priori precede objects, as conditions under which alone something can be, if not intuited, yet thought as object as such" (A93/B125). But why would pure concepts be required for us to think something given in intuition as an object? The answer is that the concept would be required for the intuition to reach the status of experience. "All experience, besides containing the senses' intuition through which something is given, does also contain a concept of an object that is given in intuition, or that appears" (A93/B126).

If a priori concepts must be applied to intuitions in order for them to rise to the level of experience, we have a foundation of a deduction of their applicability to objects. "All empirical cognition of objects necessarily conforms to such concepts, because nothing is possible as object of experience unless these concepts are presupposed" (A93/B126). In addressing the issue of synthetic unity, Kant maintains that through sensibility, only a manifold can be given. If that manifold is to be combined into the presentation of an object, the spontaneity of the understanding must be that which does the combining. The combination of the manifold by the understanding is called "synthesis." The outcome of synthesis is the unity of the manifold. Conceptually, unity is more fundamental than synthesis, since it is a component of it. The unity presupposed by synthesis is not the category of unity, because the concept of a category presupposes that of unity as well. In order for me to combine the manifold into a synthetic unity, there must be a single "I" which does the combining. This is what Kant calls the "synthetic unity of apperception." A better expression might be the "unity of synthesis in one consciousness." Kant claimed that this unity is a necessary condition for the "analytic unity of apperception." This is the unity introduced first, the presentation of the self as that to which all my presentations are presented. Kant thought that the unity of synthesis in one consciousness is fundamental. He says that "the principle of this unity is the supreme principle in all of human cognition" (B135). Furthermore, the synthetic unity of apperception is the highest point, to which we must attach all use of the understanding, even the whole of logic, and in accordance with it transcendental philosophy; indeed, this power is the understanding itself, (B134)

The synthesis is required in order for one to present what is given in intuition as being of one kind or another. So it seems that the "pure synthesis" is some kind of synthesis of the manifold of time itself. So the idea seems to be that the synthesis of the presentations given in intuition requires a synthesis of individual times into a single stretch of time. Having discussed the unity induced by synthesis in terms of what is required for the presentation of objects, Kant extends the discussion to the synthesis that unites cognitions in judgments. In a judgment, we relate

¹⁴ Ibid. 369

cognitions to one another, and this relation is one of combination or synthesis in one consciousness. So, "a judgment is nothing but a way of bringing given cognitions to the objective unity of apperception (B142).

It is objective, because judgments are meant to say something about the way things are, and not simply to report our subjective psychological states. There is a "necessary unity" in judgments, even if they are empirical. This is not to say that such judgments are necessarily true, but only that "they belong to one another by virtue of the necessary unity of apperception in the synthesis of intuitions" (B142). Once again, all Kant has really established is that the unity of apperception is a necessary condition for the unification of cognitions in a judgment. So, in Kant's transcendental synthesis, objects are given to us in intuition, and the pure concepts of the understanding have reference to objects only through intuition. The categories are therefore limited in their application. Since they apply to objects of intuition "as such," and if we try to apply them to objects other than those of our sensible intuition, "they are then empty concepts of objects, i.e., concepts through which we cannot judge at all whether or not these objects are so much as possible" (B148). Without objects given in intuition to which they could be applied, they are "mere forms of thought, without objective reality" (B148).

When the figurative synthesis "concerns merely the original synthetic unity of apperception," it is called transcendental synthesis (B151). The idea here is that if we unify times into one time, we necessarily bring it into a single consciousness. The figurative synthesis is the product of the imagination, which, though spontaneous, itself "belongs to sensibility" (B151). Kant sometimes refers to the imagination in its role of carrying out the figurative synthesis as the "productive imagination," as opposed to the "reproductive imagination," which is not spontaneous and follows empirical laws of association (the laws to which Hume had called attention, B152). The reproductive imagination plays no role in the transcendental deduction. In talking about the synthetic function of the imagination as the appropriate basis for metaphysics, Kant asserts:

Synthesis in general... is the mere result of the power of imagination, a blind but indispensable function of the soul, without which we should have no knowledge whatsoever, but of which we are scarcely ever conscious.¹⁵

So, now we have two forms of syntheses: The first is the intellectual synthesis, which involves pure concepts whose application to objects is in question. The second is the figurative synthesis, which involves pure intuitions whose relation to pure concepts is in question. This synthesis determines the manifold of pure intuition, just as judgments determine given intuitions by thinking them under concepts. What the two have in common is that both bring their respective cognitions to unity in a single self-consciousness. If the figurative synthesis succeeds in doing this, then it is automatically subject to the categories, and it gets a new name. "However, when the figurative synthesis concerns merely the original synthetic unity of apperception, i.e., merely this transcendental unity of thought in the categories, then it must be

¹⁵ Immanuel Kant, *Critique of Pure Reason*, trans. N. Kemp Smith A 78/B 103. Quoted in *A Dictionary of Philosophical Quotations* (A.J. Ayer and Jane O'Grady, eds.), [Oxford: Blackwell Publishers, 1992], p. 220.

called the transcendental synthesis of imagination, to distinguish it from the merely intellectual combination" (B151).

This is the vital link between concept and intuition. They are brought together by the unity of consciousness on the side of concept and the synthesis of the pure manifold by the imagination on the side of intuition. "This synthesis is an action of the understanding upon sensibility, and is the understanding's first application (and at the same time the basis of all its other applications) to objects of the intuition that is possible for us" (B152). Here, Kant calls attention to a fact about human cognition that is really the model for his whole account of the relation between pure concepts and pure intuitions. We cannot think a line without drawing it in thought. We cannot think a circle without describing it. We cannot at all present the three dimensions of space without placing three lines perpendicularly to one another at the same point, (B154). These acts of drawing, describing and placing all take place under the guidance of the understanding. "Hence by no means does the understanding already find in inner sense such a combination of the manifold; rather, the understanding produces it, inasmuch as the understanding affects the sense" (B155). Kant attempted to explain how we could gain knowledge of the external world: how is it that we represent the world, how might objective truth become accessible? His answer was in the connection of the object with the subject through the synthetic a priori structure of reason. In the tradition of Hume, Kant believed that the only thing that humans can be certain of is experience and we cannot get directly to any certainty beyond our experience.¹⁶ However, Kant undertook a "Copernican Revolution" in which he shifted analysis from the nature of the object of experience to the conditions for the possibility of experience. Yirmiyahu Yovel (2018: 1-2) recounts this achievement in the following words:

Kant maintains that every human advancement, especially in the sciences, originates in a revolution in the mode of thinking, which elevates a certain domain of knowledge to the level of an apodictic science. In the past, this had taken place in mathematics and physics, and now, after many centuries of groping in the dark, the conditions are ripe for a revolution that would signal the royal road also for philosophy. The core of the philosophical revolution lies in a completely new understanding of the concept of object, or objective being, and its relation to human knowledge. Kant compares the required reversal to the one Copernicus performed in astronomy. Until Copernicus, the earth was seen as fixed in the centre and the sun as revolving around it. Copernicus made us see that, on the contrary, the sun stands in the centre, while the earth revolves around it. Similarly, philosophers since ancient times believed that human knowledge revolves around the object, that is, must fit the structure and features of an object that stands in itself independently from the outset, and does not depend on the process of knowledge. The Kantian revolution abolishes the object's metaphysical independence and makes it dependent on the structure of human knowledge. The structure of the object, meaning the empirical object, the only one we know, is derived a priori (free of sense-experience) from the human understanding (intellect) that connects a multitude

¹⁶ Pat Ryan, "From Dogmatic Slumber to Anthropological Sleep: Foucault's Analysis of Modernity", The Stanford Encyclopedia, 25Mar.2007, available at: <http://plato.stanford.edu/contents.html>>.

of sensible items into a unity; and the modes of this unification are drawn from the primordial unity of the “I think.” Kant’s bold idea thus says that the understanding, in knowing the world, does not copy the basic patterns of its knowledge from the world, but rather dictates these patterns to the world.¹⁷

As a consequence of this restructuring of the possibility of knowledge, Man was forced to recognize himself as both an object of knowledge and the condition for its possibility. By this move, Kant had ushered in what Foucault calls the age of Man; an age in which Man became the possibility of all knowledge, and as Foucault will argue, the cause of an age of anthropological sleep. As Foucault uses the term, Man is the episteme, ushered in by Kant, in which the knowing subject is the condition for the possibility of everything that can be known in the Modern Age.¹⁸

(B) ON THE RELEVANCE OF THE SYNTHETIC A PRIORI JUDGMENTS

It was Kant’s opinion that synthetic a priori propositions are possible, and can actually provide the basis for much of the knowledge we acquire as humans. He maintained that natural science depends on them to predict and explain events; that they are of great help in the deduction of the categories in logic; and that even geometry, arithmetic, and mathematics, contain such truths as well. Moreover, he opined that if the science of metaphysics turns out to be possible at all, it must rest upon synthetic a priori truths, since anything else would be either uninformative or impossible to justify. Let us listen to Kant as he asserts:

There exists in the faculty of reason, a natural desire to venture beyond the field of experience, to attempt to reach the utmost bounds of all cognition, by the help of ideas alone, and not to rest satisfied until it has fulfilled its course and raised the sum of its cognitions into a self-subsistent systematic whole... For it is a necessary rule of the speculative use of reason that we must not overlook natural causes, or refuse to listen to the teaching of experience, for the sake of deducing what we know and perceive from something that transcends all our knowledge...¹⁹

But how are synthetic a priori judgments possible at all? This is the central question Kant tried to answer. If we do know it, it would have to be either analytic or synthetic and would have to be known either a priori or a posteriori. But the transcendental constitution of experience, especially its details such as the contribution of a particular spatial ordering, is certainly not analytic, so, if true at all, it must be synthetic. In addition, it is not the sort of thing that could be learned from experience: the transcendental constitution of experience cannot be discovered in experience. So, if we know that we do contribute some particular spatial ordering to experience, our knowledge of it must be synthetic and a priori. That, however, leaves us at where we started in trying to understand how synthetic a priori knowledge is possible. It seems Kant explained how synthetic a priori knowledge is possible by first assuming that it is. In

¹⁷ Yirmiyahu Yovel, “Following Kant’s Argument,” in *Kant’s Philosophical Revolution* (Princeton: Princeton University Press, 2018), p. 22

¹⁸ Pat Ryan, *Op. Cit.* p. 11

¹⁹ Immanuel Kant, *the Critique of Pure Reason*, Chapt. 2, Section 1 (Of the Ultimate End of the Pure Use of Reason).

affirming the relevance of Kant's distinction regarding synthetic a priori judgments, Thonnard, (1956: 659) states:

Not only in metaphysics, but especially the modern sciences are, in Kant's view, constituted by a connected system of synthetic a priori judgments. Besides the principle of causality he gives examples: physical theories, as the principle of conservation of energy; geometrical definitions, as that the straight line is the shortest distance from one point to another, and mathematical affirmations, as that $5+7 = 12$. These last judgments are evidently "a priori" (in the Kantian sense), but it is difficult to show that they are synthetic. Kant remarks that it is not needful to have an actual experience, but it is sufficient that the experience be imaginary or possible. In this sense, it is true that these universal truths are not, on the one hand, pure tautologies; and, on the other, that they can always be concretized in experiential facts, and thus can be called "synthetic a priori." Beyond these universal judgments which are eminently scientific, we form particular or singular judgments about the real and objective order... They are universal and necessary in the sense that all men, in validating them, experience the same impression; consequently, they also require the intervention of necessary, a priori laws which rule the activity of our spirit.²⁰

Besides, the assumption of the possibility and actuality of synthetic a priori knowledge of the transcendental constitution of experience, was a new insight introduced by Kant, which his predecessors scarcely envisaged, or saw as possible. The areas of application are as follows:

(1) Synthetic a priori Judgements and Mathematical truths

For Kant, Mathematical truths such as $2+3 = 5$ or $7+5 = 12$; or the interior angles of any triangle add up to a straight line; and other similar truths of mathematics are synthetic judgments, for they give us significant knowledge of how the world is. Although the sum of the interior angles is not contained in the concept of a triangle, yet, such truths are known a priori, since they apply with strict and universal necessity to all of the objects of our experience, without having been derived from that experience itself. He asserts:

Suppose that the conception of a triangle is given to a philosopher and that he is required to discover, by the philosophical method, what relation the sum of its angles bears to a right angle. He has nothing before him but the conception of a figure enclosed within three right angles, and, consequently, with the same number of angles. He may analyze the conception of a right, of an angle, or of the number three as long as he pleases, but he will not discover any properties not contained in these conceptions. But, if this question is proposed to a geometrician, he at once begins by constructing a triangle. He knows that two right angles are equal to the sum of all the contiguous angles which proceed from one point in a straight line; and he goes on to produce one side of his triangle, thus forming two adjacent angles which are together equal to two right angles. He then divides the exterior of these angles, by drawing a line parallel with the opposite side of the triangle, and immediately perceives that he has thus got an exterior adjacent

²⁰ A.A. Thonnard, *A Short History of Philosophy*, (Edward A. Maziarz, trans.), (Rome: Publishers to the Holy Apostolic See, Desclée & Cie, 1956), p. 659

angle which is equal to the interior. Proceeding in this way, through a chain of inferences, and always on the ground of intuition, he arrives at a clear and universally valid solution to the question.²¹

In these instances, Kant supposed, no one will ask whether or not we have synthetic a priori knowledge; plainly, we do. But, the question is, how do we come to have such knowledge? Put differently, what is our warrant for saying that such a form of knowledge exists? If experience does not supply the required connection between the concepts involved, then what does? Kant's answer is that we do it ourselves. Conformity with the truths of mathematics is a pre-condition that we impose upon every possible object of our experience. Descartes had pointed out in his Fifth Meditation, that the essence of bodies is manifested to us in Euclidean solid geometry, which determines a priori the structure of the spatial world we experience. And in order to be perceived by us, any object must be regarded as being uniquely located in space and time. So, it is the spatio-temporal framework itself that provides the missing connection between the concept of the triangle and that of the sum of its angles. Space and time, Kant argued in the "Transcendental Aesthetic" of the first Critique, are the "pure forms of sensible intuition" under which we perceive what we do. Understanding mathematics in this way makes it possible to rise above an old controversy between rationalists and empiricists regarding the very nature of space and time.

(2) The Synthetic a priori judgments and the Natural Sciences

Just like in Mathematics, Kant maintained that the synthetic a priori judgments provide the necessary foundations for human knowledge in the natural sciences. The most general laws of nature, like the truths of mathematics, cannot be justified by experience, yet must apply to it universally. Kant's approach is to offer a transcendental argument from the fact that we do have knowledge of the natural world to the truth of synthetic a priori propositions about the structure of our experience of it. The concepts of space and time as forms of sensible intuition constitute a necessary condition for any perception, but the possibility of scientific knowledge requires that our experience of the world be not only perceivable but thinkable as well, and Kant held that the general intelligibility of experience entails the satisfaction of two further conditions: First, it must be possible in principle to arrange and organize the chaos of our many individual sensory images by tracing the connections that hold among them. This Kant called the synthetic unity of the sensory manifold. Second, it must be possible in principle for a single subject to perform this organization by discovering the connections among perceived images. This is satisfied by what Kant called the transcendental unity of apperception. Experiential knowledge is thinkable only if there is some regularity in what is known, and there is some knower in whom that regularity can be represented. Since we do actually have knowledge of the world as we experience it, Kant held, both of these conditions must in fact obtain.

(3) Synthetic a priori Judgments and the Deduction of the Categories

It was Hume who noted that one can perfectly separate individual images as they occur within the sensory manifold, and that the knowing subject can make connections between them, for

²¹ Kant, Critique of Pure Reason, The Transcendental Doctrine of Method, Chapter 1, Section 1.

in the knowing subject are found the principles of connection. Natural science and Mathematics using the resources of synthetic a priori propositions, all draw from the structure of human understanding itself. If one takes a careful look at the kinds of judgments distinguished by logicians in Kant's time, one discovers that each of them had some quantity (applying to all things, some, or only one); some quality (affirmative, negative, or complementary); some relation (absolute, conditional, or alternative); and some modality (problematic, assertoric or apodeictic).

Kant supposed that any intelligible thought can be expressed in judgments of these sorts. But then it follows that any thinkable experience must be understood in these ways, and we are justified in projecting this entire way of thinking outside ourselves, as the inevitable structure of any possible experience. The most general principles of natural science are not empirical generalizations from what we have experienced, but synthetic a priori judgments about what we could experience, in which these concepts provide the crucial connectives.

(4) Synthetic a priori Judgments and the possibility of Metaphysics

There is an open question whether or not there is need to pursue the question of synthetic a priori truths any further, since Kant himself had opined that such truths are both possible and actual. The marks of the a priori, according to Kant, are necessity and strict universality (i.e., universality that does not admit of the possibility of an exception). But the kind of necessity we understand best is logical necessity (i.e. the necessity of that which is self-contradictory to deny). There's something puzzling in the idea that there is a kind of necessity that we are capable of grasping apart from experience, but which is not logical necessity. Also, offering further explanation of how it is possible for us to know synthetic a priori truths might provide an answer to various skeptical doubts (like Hume's problem of causality). In addressing the question of how the science of metaphysics is possible, Kant says:

Metaphysics, as a natural disposition of reason, is actual, but if considered by itself alone (as the analytical solution of the third principal question showed), dialectical and illusory... In order that as a science metaphysics may be entitled to claim not mere fallacious plausibility, but insight and conviction, a Critique of Reason must itself exhibit the whole stock of a priori concepts, their division according to their various sources (Sensibility, Understanding, and Reason), together with a complete table of them, the analysis of all these concepts, with all their consequences, especially by means of the deduction of these concepts, the possibility of synthetical cognition a priori, the principles of its application and finally its bounds, all in a complete system. Critique, therefore, and critique alone, contains in itself the whole well-proved and well-tested plan, and even all the means required to accomplish metaphysics, as a science; by other ways and means it is impossible.²²

Hume had argued that causal relations were neither analytic nor experientially guaranteed. So, one might have an answer for Hume, if one knows of causality in some way that is neither analytic nor guaranteed by experience, (i.e., if our knowledge of it is synthetic a priori). Of

²² Ibid. 366

course, finding out how such a thing is possible, may tell us something about the range or limits of its applicability; and many of the traditional questions and arguments associated with metaphysics (Does God exist? Is the Soul Immortal? Is there a freewill?), seem to involve appeals to principles that, if we know them at all, must be synthetic and a priori. If we understood how it was possible for there to be a synthetic a priori truth, it could shed light on such debates. However, if synthetic a priori knowledge is possible only insofar as it applies to the world of possible experience (i.e. experience that is possible for beings like ourselves), then we have to admit that what goes entirely beyond possible experience, including many traditional arguments in metaphysics bearing on the existence of God, or the immortality of the soul, are not matters of possible knowledge for beings like us. But the issue is that Kant's arguments do assume that the principles we know to apply within experience, also extend to things considered in themselves.

Conclusion

As Kant says: "Thoughts without content are empty; intuitions without concepts are blind" (B 75). So, without sensory input, we would only have concepts spinning in the void; and without conceptual articulation, there is only a sensory chaos. Kant adds that: "When the light dove parts the air in free flight and feels the air's resistance, it might come to think that it would do much better still in space devoid of air." (B 8-9) But, we certainly need the atmosphere of experiential input, for the wings of thought to beat against, and we only deceive ourselves if we imagine that we can do without it. From the foregoing discussion, the practical relevance or application of the synthetic a priori judgments of Kant, are obvious. One may say that since the human imagination is the centre or basis of metaphysical activity, and the human consciousness is the potential for creativity and inventions, a proper harnessing of such potentials could improve on the situation of the human person and transform his entire circumstances on earth. Kant's Critique of Pure Reason, having faced a crisis, made a detour into anthropology, and attempted to answer the question: What must I do to be a man? By instituting transcendence, the human mind or consciousness is able to establish the ontological foundation for inventions, discovery, creativity and ingenuity.²³ This is what will certainly improve and develop the human condition, irrespective of race or colour, or any other related distinctions. The Africans in particular, need to work harder at tapping their rich natural potentials, and applying them to the needs of our time, with a view to achieving world-reconstruction and greater human development. As Okoro (2006:156), points out there is need to bridge the realms of ontology and anthropology, for the sake of transformation. He argues that:

Transformation would be rendered spurious if ideas gathered from the universal realm of ontology, are not anthropologically localized...The point to note here is that complete operation at the level of ontology oblivious of anthropological peculiarities,

²³ Chiedozie Okoro, Op.Cit. p. 156

could result into naivety, in the same way as concentration on anthropological peculiarities oblivious ontological essences, could result into absolutism.²⁴

Our ontology needs to have an impact on our “life-world.” It must have some practical relevance to our daily lives in society. In describing what our life world entails, Okoro says:

We define the life world as man’s native transcendental capacity and ability to effectively and pragmatically synchronize the objective world with subjective understanding. It is the imaginative visioning of the world about us imaged in symbolic forms. In such a symbolic representation of the world, things are not compartmentalized. On the contrary, in the universe of life-forces, things are inclusively interconnected and interpenetrating. This explains the reason why the African cosmos is said to operate on the tripod or what is otherwise referred to as the tripological symbolization and representation for the universe. Man and society are considered to be of tripartite composition. The ‘cosmic order’ as a living entity is replicated in the ‘social order’, which in turn is replicated in the ‘self-order’, and vice versa. The self-order in turn consists of the body, mind and spirit. Wisdom consists in the harmonization of this tripartite composition of man and his society, usually done in a hierarchical order with the singular purpose of unifying the horizontal and vertical factors in man and in the society.²⁵

As real as our limitations might be, focusing on them will not help us. We need to look beyond them. To contribute to universal human development, the contemporary Africans need to act with greater wisdom, so as to “turn their adversities into advantages.”²⁶ The logical and epistemological principles of the traditional ancient African ontology, needs to be refined and updated, if they are to address the various contemporary challenges that we face: social, economic, scientific, political, cultural, etc. Without adopting this pathway, our ontology may continue to remain only locally relevant, while experiencing a crisis of relevance with regard to the wider human community. We need to meet up with international standards, while at the same time retaining our ontological identity.

Kant is both an empirical realist and a transcendental idealist. Thus, from Kantian idealism to post-Kantian idealism, as well as post-modern idealism, there are extant differences, although all of them can be traced back to the same root, since they all postulate that ontology depends on epistemology. The former asserts that ontology depends on epistemology through a causal chain and is therefore discredited by science. The latter, in contrast, relies on a pseudo-dependence, which one might call “cultural”: it passes off as ontology what is actually an axiology linked to the importance of certain cultural values in the human world.²⁷ Transcendental realism comprises two components: negative and positive realism. The job of the former is to show the autonomy of ontology from epistemology (and therefore rests on a

²⁴ Chiedozie Okoro, “Phenomenology for World Reconstruction” (2006) in *Analecta Husserliana* XCII, A.T. Tymieniecka (ed.), 333.

²⁵ Chiedozie Okoro, “The Logic and Epistemology of Life-Force in African Philosophy,” p. 5. This paper was read at AEGIS European Conference on African Studies, July 11-14,

²⁶ Chiedozie Okoro, “The Logic and Epistemology of Life-Force in African Philosophy,” p. 20

²⁷ Maurizio Ferraris, “Transcendental Realism,” *The Monist*, Vol. 98, NO. 2, ‘The New Realism,’ (April, 2015), p. 215

metaphysical argument); the job of the latter is to show how epistemology is to be derived from ontology (and therefore rests on a transcendental argument). Realism is bound to the problem of the existence of the external world, because without a world external to the subject the very notion of reality would likely not be conceivable, and whole parts of our vocabulary and our ordinary experience (starting from the very idea of “knowledge”) would be meaningless.²⁸

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²⁸ Maurizio Ferrari, Op. Cit. p. 224