

KANT'S SCHEMATISM OF CATEGORIES

It is held by Walsh that nowhere is Kant's genius shown so very clearly as it is shown in his seizing the problem of schematism. He has regarded the problem of schematism as the central problem of the whole critique. We may feel a bit reluctant to agree with Walsh's above eulogy of Kant and may regard his view as a slight exaggeration, yet we shall not disagree with him when he says that the aim of Kant in dealing with the problem of schematism is "to show that categories, despite their non-empirical origin and remoteness from sense, can nevertheless be shown to have a sort of empirical reference and therefore to be capable of genuine application."¹ This task is undoubtedly of paramount importance within the framework of Kant's critical philosophy. But the presentation of schematism is so very enigmatic and ambivalent that it has led to many misunderstandings. The aim of this paper is to make the exposition of this problem as clear as possible in order to understand and appreciate the real intention and implication of Kant.

The significance of categories lies in their being applied to experience. This is proved by Kant in his tortuous argument of the transcendental deduction of the categories. Knowledge arises only when sensible intuitions are brought under the categories of understanding. The fact that they are brought to give rise to knowledge is shown by Kant with a great deal of labour. But a question arises. Are the categories shown to be applicable in experience by Kant in the transcendental deduction the same that are derived from the forms of judgment in the metaphysical deduction. If they are the same, not only can we prove that they are applied in experience, there can be really speaking no application at all, as sensible intuition and categories are both heterogeneous. The former are empirical, the latter are devoid of any empirical content and are logical. Nothing is common between them on the basis of which they may get related. Kant himself says that these categories are logically significant, although lacking real significance. To use the phraseology of Frege, they have a meaning but lack significance. As a matter of fact, pure categories derived in the metaphysical deduction standing as they are, are of no use at all.

Knowledge is constituted by two elements, linguistic or a priori and factual or a posteriori. Kant's categories derived in the metaphysical deduction are undoubtedly linguistic elements in the composition of knowledge. To use those categories is simply to play with words. Being non-empirical is certainly their distinctive feature and shows their pure logical character. But this distinctive feature, however pleasing it may appear, gives them an airy look because this non-empirical or pure feature deprives them of being applicable to empirical objects. Therefore they must be brought down to earth. That is to say, they must be enabled to be applicable to objects. The transcendental schema enables a category to apply to objects. Schemata in this way bring categories down to earth.

All the concepts — whether pure or empirical — must be homogeneous with the instances or intuition which are supposed to fall under them. If there is no such homogeneity the concepts would be of no worth at all. Kant observes that empirical concepts have homogeneity with their instances. Categories, on the other hand, appear to have nothing in common with the sensible intuitions which are to be subsumed under the former. How is the subsumption which will go to make the categories meaningful possible? Kant answers this question by saying that, "there must be some third thing, which is homogeneous on the one hand, with the category, and on the other hand, with the appearance and which thus makes the application of the former to the latter possible. This mediating representation must be pure, that is, void of all empirical content, and yet at the same time, while it must in one respect be intellectual, it must in another be sensible. "Such a representation is the transcendental schema."²

Thus transcendental schema serves to link the categories with objects and thereby supplies a reference, a meaning to the former. The very term "schema" suggests the function that it performs. Weldon holds that a schema is simply a plan or design such as the ground plan or elevation of a building and may be thought of as mediating between the general idea 'house' and a particular construction of bricks and mortar. The same function of mediation is done by it in the realm of categories.

There are two kinds of rule governing the use of concepts — referential rules and the non-referential rules. Referential rules

must be satisfied if concepts are to be applied correctly. If a man learning English knows that 'being a dog' implies 'being a mammal' he knows the non-referential rules governing these concepts. He knows their logical grammar but not their referential rules. Non-referential rules require the referential rules which make the former applicable to intuition. Kantian categories derived in the metaphysical deduction are the non-referential rules and the transcendental schema functions as a referential rule making the former applicable to sensible intuition.

In his endeavour to find out transcendental schema, Kant looks towards time which is the form of sensibility. Being an a priori form of intuition it is pure and therefore it is homogeneous with the pure categories. Being itself an intuition, it is empirical and is therefore homogeneous with the appearances. So this dual character of time makes it fit for being a transcendental schema. A question may be asked here, why does Kant not take space which also fulfills both the above mentioned requirements. The reason for not making space the transcendental schema and for making time the same may be as follows. Whereas space is the form of outer sense and therefore only external objects pass through it, time is the form of inner sense through which not only external objects but the internal objects also pass. Thus time is the formal condition of all phenomena in general, not only of the external phenomena but of the internal phenomena as well.

Kant refers this transcendental schema to the transcendental determination of time. He does not make clear as to what he means by this phrase. He may be taken to mean by it "not a determination or characteristic which must belong to objects so far as they are temporal and are combined in one time."³ This transcendental determination of time is homogeneous with the categories in so far as it is universal and it rests on a priori rule. It is homogeneous with the appearance in as much as all empirical intuitions occur and last in time. This transcendental determination of time is thus a mediating representation between the categories and the appearance and makes the subsumption of the latter under the former or the application of the former to the latter possible.

Kant makes a distinction between an image and a schema because both are the products of imagination. Schema must

not be confused with a picture or image. A schema enables us to form an image of the concept but it is not itself an image. An image is particular whereas a schema is universal. If we think of '1', '2', '3', '4', '5' we get an image of number 5. But if we think of number in general by which we can form an image not only of number five but of any number whatsoever, we have a schema and not an image. So we see that a schema is a universal procedure of producing objects i. e. images of different kinds. According to Kant, there are three things — concept, schema and image. It is by means of schema that we get the image of the concept. Kant says,

“This representation of a universal procedure of imagination in producing an image for a concept, I entitle the schema of this concept.”⁴

Kant considers the difference between schema and image not in relation to categories but in relation to empirical and mathematical concepts. An image cannot render the universality of a concept possible. It is the schema which does so. Since schema is a rule by which different images are constructed it can realise all the possibilities that a concept (e. g. that of a triangle) may have (whether it is right angled or obtuse angled). An image on the other hand, can realise only one of these possibilities.

Prof. Paton observes that the transcendental schemata are the necessary characteristics of objects which must be had by them if they are to be categorized. Transcendental schemata are the universal characteristics which must belong to objects as objects in time. “These universal characteristics belong to objects, not as given in sensation, but as combined by the transcendental synthesis of imagination in one time.”⁵ Transcendental schemata are the ways in which objects are to be combined.

Necessary succession e. g. is a characteristic of objects in so far as they change in time. It is their characteristic not as they are given in sensation. It is rather imposed upon them, by the transcendental synthesis of imagination. It is by virtue of this characteristic that the application of the pure category of ground and consequent to phenomena becomes possible. As such, the pure category of ground and consequent is empty. It is only when we see this category in the light of the fact that objects succeed in one time that we know that cause (ground) is succeeded by effect (consequence).

In other words, the pure category of ground and consequent becomes the schematized category of cause and effect.

Kant, as has been pointed out, maintains that the categories applied and restricted to the transcendental schema of time or as one writer has put it, 'sunk in time' become schematized categories. Thus the category of ground and consequent added by the transcendental schema of necessary succession becomes the schematized category of cause and effect. A difficulty here inevitably comes up. As Kant never uses the phrase 'schematized category', should he be supposed to have identified the schematized category with the transcendental schema? Or as the names given by him to different schemata are different from the names given to different schematized categories, should the supposed identification be regarded as implausible? Prof. Paton maintains the latter view and in fact this seems to be in conformity with the intentions of Kant. Transcendental schema, according to Prof. Paton, is that element in the schematized category which is lacked by the pure unschematized category. In addition to this element of transcendental schema, the schematized category possesses the element of pure category also and this element is lacked by the transcendental schema and therefore it cannot be identified with the schematized category.

Kant himself appears very emphatic against the supposed identification when he says,

"Now there certainly does remain in the pure concepts of understanding, even after elimination of every sensible condition, a meaning; but it is purely logical, signifying only the bare unity of representations."⁶

The category of cause and effect e. g. which is a schematized category does have the logical element of the pure category of ground and consequent. Thus schematized category may be said to be an addition of pure category and transcendental schema. Prof. Paton takes into consideration the traditional definition of substance according to which substance is regarded (a) as the ultimate subject of all predicates (b) as the permanent substratum of change. Paton observes,

"The first (i. e. "A") Kant derives from the form of judgement. The second is given in the transcendental schema and is derived from the synthesis of the manifold in time and space".⁷

Kant, as has already been shown, makes a three-fold division of concept, schema and image. Concept, according to Kant, is universal and image is particular. What is the status of schema? Whether it is universal or particular? As regards this question, Kant is very enigmatic. Some of his remarks can be interpreted to mean that schema is universal and some of them can be construed to suggest that schema is particular. We shall engage ourselves in this problem here.

When Kant contrasts schema with an image he maintains that the former is a rule for the construction of the latter and therefore whereas the former is universal, the latter is particular. He seems to have identified the transcendental schema with the empirical concept in as much as the former is regarded by him as a rule of synthesis which, according to him, is the functional definition of a concept. This identification of a schema with the empirical concept yields an undesirable consequence. If this identification is done, the very purpose of introducing schema as mediator between the concept and an image would be ignored. Because of this undesirable consequence commentators of Kant have tried to give a different interpretation of the conception of schema. They have held that schema is a monogram. It is a schematic image which represents the concept. As an image is particular, a schema can be denied as a particular representing a universal. "This definition of the schema" says Swing "sounds almost like Berkeleyan definition of an abstract idea."⁸

We have seen as to how two mutually opposed interpretations have been made of Kant's conception of schema. One interpretation regards it as a universal rule for constructing particular images. Another interpretation regards it as a particular image representing a universal concept. In view of these conflicting views about Kant's conception of schema some students of Kant have maintained that the two opposed views express two characteristics of schema which can be upheld at the same time. Thus, says Swing, "the schema has come to be understood to be an image (or a particular) which represents a concept (or a universal) that functions as a rule of synthesis."

This interpretation too is unacceptable. According to this interpretation, schema is a symbol or monogram representing a rule of synthesis. But Kant does not ascribe this symbolic function of synthesis to schema.

In view of above views which are not satisfactory and are mutually incompatible, another interpretation is given which appears to do justice to Kant's intentions. According to this interpretation, Kant entertained two definitions of schema, instead of one. Corresponding to two definitions of schema, two names of schema are also given — image schema and concept schema. "The image schema means the schema that is an image or particular representing a concept or universal; the concept schema means the schema that is a concept or universal functioning as a rule of synthesis."⁹ A particular triangle that represents all the triangles or the concept of triangle is the image schema of triangle. The rule for constructing particular triangles is the concept schema. We may note here that the image schema corresponds to Heidegger's schema-image.¹⁰

Kant, it may be noted, does not give as many schemata as there are categories. All the categories do not have schemata corresponding to them. Each category of relation as well as of modality has a schema. That is to say, there are three schemata for relational categories and three for modal categories. But there is only one schema for the categories of quantity and one for the categories of quality.

The schema of the category of quantity or magnitude is number. The determination of the quantity of a thing implies measurement. And measurement implies the determination of the units that a thing has. This measurement shall remain incomplete if the units that are homogeneous are not successively added. This successive addition of homogeneous units is nothing but the act of counting. In the process of counting, the schema of number is produced. All objects, according to Kant, in so far as they are spatial and temporal must have number or to put it differently, must be numerable because space and time being homogeneous, all the objects in space and time are known by means of the transcendental synthesis of imagination which successively synthesises the homogeneous parts of space and time.

Kant's description of number is full of ambiguities. He says, "Number is therefore simply the unity of the synthesis of the manifold of a homogeneous intuition in general, a unity due to my generating time itself in the apprehension of the intuition."¹¹

By regarding number as the unity of the synthesis....., Kant seems to identify number with counting or with the unity of the act of counting. As a matter of fact, number itself is a synthetic unity produced by the successive addition of homogeneous units or a unity comprehending in a whole the successive addition of homogeneous units. As regards the second half of Kant's above statement, it may be said that time is generated not only in the act of counting but in every mental act.¹² Therefore the mere fact that I generate time in counting cannot be a reason for regarding number a schema.

The schema of the category of quality is degree. Kant calls it 'sensation in general'. But this seems misleading as Kant does not mean only sensation but rather the degree of sensation or sensation having degree. Kant believes that the bare forms of space and time devoid of any content give us no knowledge. They require to be filled in by some material. This material is sensation. The affirmation of a thing or being in space and time is found in sensation. The negation of a thing or non-being is signified by empty space and empty time. Every sensation, according to Kant, involves the notion of degree. It cannot always remain the same. Its intensity is subject to getting more and getting less. Sensation of colour red e. g. is sometimes less bright and sometimes more and thereby involves the notion of degree. The category of reality refers to being in time or filled time. The category of negation makes a reference to not being in time or empty time. The category of limitation "rests upon the distinction of one and the same time as filled and as empty."

Besides quantity and quality, an object of experience must have a position in space and time. This position is determined by the relation that an object has with others. There are three schemata of the categories derived from the relational judgements. Each relational category has its corresponding schema. Thus the schema corresponding to the category of substance is 'permanence of the real in time.' The concept of substance involves the notion of something abiding and invariable underlying continuous flux. Substance refers to something that is non-transitory amid appearances.

The schema of the category of cause "is the real upon which, whenever posited something else always follows." That is to say,

it is nothing but rule-governed succession. The schema of the category of community is rule-governed co-existence of the determinations of different substances.

Agreement or compatibility with the general conditions of time is the schema of the category of possibility. Existence in some determinate time is the schema of the category of actuality. If a thing is to be brought under the category of actuality, it must have the characteristic of being existent in some determinate time. Necessity implies being for all times. So the schema of the category of necessity is "existence of an object at all times".

Prof. Paton has attached a great deal of importance to Kant's doctrine of schematism. He says,

"If we reject his derivation of the categories, this chapter acquires a new and special importance; it suggests the possibility of making fresh start, and of justifying the categories from the nature of time without any reference to the forms of judgment."¹³

On the other hand, this doctrine of Kant has been subjected to severe criticism. Not to say of the solution, the very problem for which Kant introduces the conception of schematism is questioned. It may be argued that the very problem of schematism, that since categories and empirical intuitions are heterogeneous there is required a mediator to link the two, is absurd. To have concepts implies their way of application. To have inapplicable concepts is a contradiction in terms.¹⁴

Kant, indeed makes the problem appear as something highly artificial when he says that this problem is not in relation to empirical concept as, to follow Bennett "a general empirical concept is not worryingly heterogeneous from a highly specific empirical concept. A question arises as to what it is for a highly general concept to be homogeneous with a highly specific concept which falls under it. Bennett exposes the artificiality of the problem quite beautifully,

"The concept of a dog (an empirical concept) is homogeneous with the concept of a loyal though bad tempered borzoi with an off white coat and bad teeth, in the sense that the former concept is included in the latter. But then the category of substance, say is in that sense homogeneous with

the concept of a substance which is spherical, orange coloured, sweet tasting and rich in vitamin C. So what is the problem?"¹⁵

Warnock who treats the problem of schematism quite sympathetically offers another interpretation. According to Warnock, when Kant says that empirical concepts are homogeneous with their instances what he means is that they (concepts) are sensible characteristics of a thing and therefore they can be applicable without the introduction of a third thing. Warnock says,

"I think Kant's point is only that the roundness of a thing (an empirical concept) is sensible (intuition) characteristic of it. I can see that a thing is round, and can be taught to use 'round' by having round things pointed out to me"¹⁶

Such is not the case with categories like causality, possibility etc. Warnock further says,

"'This is the cause' is not like 'This is the foot ball'; a possible President does not at the moment of electoral triumph, lose one characteristic, possibility and acquires a new one, actuality, what is referred to by... 'cause', or 'possible', is in no case a thing I can look at, point to, 'intuit'....."¹⁷

Kant is criticized by Joseph for maintaining that the universal concept in order to be applicable to particular intuitions must be in some way like the letter.¹⁸ If this is held, then in that case another universal concept resembling particular intuitions would be required and this will give rise to the fallacy of infinite regress. Thus Kant's doctrine of schematism is subjected to criticism in the same way as Plato's theory of ideas was subjected to criticism by Aristotle's 'third man' argument.¹⁹

Joseph takes Kant to mean that particular plates are said to be subsumed under universal circularity. He refuses to accept that there is any resemblance whatsoever, between a round plate and circularity. Joseph further says that Kant should not have forgotten the fact that mathematician is concerned not with circularity but with perfect circles (or another imperfect circle) that a plate can be homogeneous with.

Prof. A. H. Smith makes a criticism of the above contention of Joseph.

"Now if we cannot exclude all reference to universals in describing the study of the mathematician, Kant's account may be preferable to Joseph's and it seems indeed that Joseph misses an important point which Kant is trying to make"²⁰

To sum up, we may discuss the opinion of Walsh who says quite emphatically,

"The uncommitted reader may still find both problem and solution here artificial."²¹

Both the problem as well as the solution given in the chapter on schematism, says Walsh, are based on certain assumptions. The first assumption that Kant makes is that there are categories and they can be plausibly shown to play a part in human thinking. If we challenge Kant on this point, he will quote certain categorical principles like "nothing happens without a cause". The second assumption made by Kant is that there can be nothing except the logical notions at the root of the categories. He defends this assumption by saying that understanding is discursive or intellectual and not intuitive. By such an argument, he gives the impression of asking an opponent to show what the origin of categories is, if it is not pure logic. It has been taken for granted by Kant that logic does not vary with content and is in no sense empirical. Kant does not try to justify this contention. This view we may observe, is challenged by modern writers like Quine and Waismann.

However critical we may be of Kant's formulation of the doctrine of schematism, we shall not and we cannot disagree with Walsh when he says,

"The fact remains that if categories are to have a genuine use, we must be able to show how they make an empirical difference or have empirical effects or (which comes to the same thing) have an empirical cash value. The importance of the doctrine of schematism is that it tries to do precisely this, and in a measure at least succeeds in doing it."²²

NOTES

1. Walsh, "Schematism" published in *Kant Studies* Band 49 (1957), reprinted in *Kant, A Collection of Critical Essays* ed. R.P. Wolff (London; Macmillan, 1968).
2. Kant, *Critique of Pure Reason*, Dr. N.K. Smith (London: Macmillan and Co., 1956), A 138 = B 177.
3. Paton, *Kant's metaphysic of Experience*, Vol. II, (London : George Allen and Unwin, 1951), p. 29.
4. *Op. cit.*, B 180.
5. *Op. cit.*, pp. 19-20.
6. *Op. cit.*, A 147.
7. *Op. cit.*, pp. 69-70.
8. T. K. Swing, *Kant's Transcendental Logic*, (London : Yale University Press, 1969), p. 56.
9. *Loc. cit.*
10. Heidegger, *Kant and the Problem of Metaphysics* (Bloomington Indians, U. P., 1965), p. 21.
11. *Op. cit.*, A 143.
12. A. C. Swing, *A Short Commentary on Kant's critique of Pure Reason* (London : Methuen & Co. Ltd., 1938), p. 147.
13. *Op. cit.* p. 20.
14. Graham Bird : *Kant's Theory of Knowledge*, (London : Routledge and Kegal Paul, 1962), p. 74.
15. Jonathan Bennet : *Kant's Analytic* (Cambridge University Press, 1966), p. 148.
16. Warnock : "Concepts and Schematism" published in *Analysis*, Vol. I (1948-49) pp. 80-81.
17. *Loc. cit.*
18. H. W. B. Joseph, *Essays in Ancient and Modern Philosophy* (Oxford : Clarendon Press, 1935), p. 270.
19. T. D. Weldon : *Introduction to Kant's critique of Pure Reason*, (Oxford: Clarendon Press, 1953), p. 104 and R.P. Wolff : *Kant's Theory of Mental Activity* (Cambridge Harward University Press, 1963), p. 207.
20. A. H. Smith, *Kantian Studies* (Oxford : The Clarendon Press, 1947), p. 187.
21. Walsh, "Schematism."
22. *Loc. cit.*