

SCHEMATISM IN PERSPECTIVE

Many Kantian scholars hold that the chapter on *Schematism* in *The Critique of Pure Reason* is highly un-
plausible, obscure, notoriously unsatisfactory, abstruse,
and artificial.¹ However, some commentators consider it the
most misunderstood portion of the *Critique*. This might be
the result of Kant's unique style and his overlapping termi-
nological jargon. Nevertheless, most of the criticism seems
to be a "somewhat disjointed interpretation of Kant which
not only fails to exhibit the organic unity of his thought,
but makes what Kant had to say sound outdated and even
silly."² Hence, it seems quite plausible to focus it in the
broader perspective of Kant's epistemological program.
The objective of this paper is two-fold: (1) to show that
the introduction of *Schematism* in the *Critique* is justified
and necessary if transcendental argument is valid, and
(2) among the two forms of intuition, *time* is more com-
prehensive than *space*. In order to do that I shall examine
common objections generally raised against Kant's *Sche-
matism*. First, I shall establish that the artificiality claim
is unfounded. Against the objection that Kant could not
provide an account of schemata of space, which is a serious
omission from his epistemological approach, I shall argue
that only temporal determination would serve as the crite-
rion for the subsumption of an object under a concept.

I

Norman Kemp Smith, in his famous commentary, does
not see any plausible justification for the introduction of a
chapter on schematism. Moreover, he remains uneasy about
how two diametrically opposed entities — concepts and
data — can appropriately be connected. He argues that if
the concepts and data are *de facto* heterogeneous, then no

subsumption of an object under a concept is possible. However, if they are not heterogeneous, of course, then, for Kant, no problem of subsumption arises. He thinks that the need of a "third thing" is highly artificial and confusing, since it is the consequence of Kant's "misleading mode of formulating his problem." He points out that if the subsumption is the process of bringing particular instances of objects under a universal concept (rule), there is no need to think of a mediating condition such as a schema, which is "simply a name."³ Is it legitimate to introduce a "third thing," he asks, for subsumption? Smith goes on to say that Kant's definitions of different schemata do not fit in his account of schematism. Furthermore, his terminology is out of harmony with his critical principles.⁴ Last, but not least, the entire discussion on the nature of schemata is out of order.

Walsh is also unhappy, like Smith, with the Kantian treatment in *Schematism*. He initiates his criticism with somewhat soft words but gradually his tone becomes increasingly tough. For him, it is hard to see the central point Kant is making. He declares, "It is hard not to think of this as an artificial solution, conceived in a crude pictorial manner, to a difficulty which itself depends on an uncritical acceptance of faculty psychology," and this conclusion draws support from the fact that schematism does not appear to be discussed, either under that name or under any other, by philosophers other than Kant.⁵ He further notices that Kant uses "schema" sometimes in the sense of mediator or "third thing," and sometimes as procedure. For instance, he says that the schema of a triangle is a "rule of synthesis of the imagination, in respect of pure figures in space." (B180/A141).

Walsh understands that schema as mediator is a *static* role, while schema as procedure is *dynamic*. The parallel usage of these terms may well be understood in subsumability and applicability. When an object is subsumed, it

indicates a static notion; however, when the question of applicability of categories arises, Kant seems to use a dynamic notion of schema.

Walsh interprets knowledge as having two distinct constituents, "*a priori* or linguistic and *a posteriori* or factual and that categories belong to former; the question which immediately arises is whether operating with the categories is anything other than playing with words."⁶ Warnock severely attacks the nature of concepts and specifically considers the schematism issue as one of misuse of language.⁷

Eva Schaper investigates many "third things" in Kant's philosophy; she enumerates them one by one and finally concludes that "they are suspicious." Nevertheless, she felt uncomfortable with the view that Kant's treatment is a mere complicated exercise in pseudo-problems. But she does try to understand the artificiality of the problem from a different angle. She says that according to Kant, the notion of "imagination" is crucial for schematization of the concepts. "Imagination" is defined as "the faculty of presenting in intuition an object that is not itself present." Kant brings the same thing in from the back door.⁹ For Schaper, the chapter on schematism poses a dilemma. Her argument runs like this: either we should accept that Kant had successfully established the applicability of the categories in the Transcendental Deduction and then schematism is not necessary, or schematism completes the argument. In which case, the transcendental argument cannot be considered as valid.

II

As a matter of fact, Kant's basic objective in *The Critique of Pure Reason* is to establish that synthetic *a priori* knowledge is possible. In the transcendental deduction, the heart of the critique, Kant shows the objective validity of pure concepts for appearances (data). However, he does not show how the concepts relate or can be applied to objects. If it was left for schemata, the transcendental argu-

ment succeeds in showing the possibility of applicability of concepts to appearances (data).¹⁰ *Schematism* resolves two things: (1) it tells how the programme of transcendental deduction can be implemented through the process of schematization, and (2) it also shows how the objects are subsumed or subordinated, unlike deduction, under *a priori* concepts. In brief, transcendental deduction or justification basically deals with the problems of *applicability* of concept to objects. Quite contrary to it, schematism handles the problem of the *subsumability* of an object (datum) under a concept. Hence, the doctrine of schematism proceeds from the representations (or data) of objects to the concepts. In other words, transcendental deduction explicates the role of *a priori* categories in the structure of knowledge, while schematism theory explains, again unlike transcendental deduction, how a *posteriori* datum of the object plays its role in the system of knowledge. Of course, this perspective makes *Schematism* as unavoidable and crucial chapter in the whole system of the *Critique*. My view is that the *Critique* could not be completed without introducing the doctrine of schematism. This does not invalidate the transcendental argument, as Schaper's argument requires, because her claim depends on the confluence of the two distinct problems of justification on the one hand, and the subsumption on the other. Her dilemma should well be resolved by considering transcendental deduction and schematism as complementary. Schematism more accurately demonstrates the Copernican turn by showing a significant thesis of subsumption. The proof of the subsumption is that the given object in intuition can be subsumed at a determinate time; in fact, this invalidates the claim of artificiality. Looking back at transcendental deduction, it is clear that the argument of deduction was actually incomplete in a very significant way. As Kant puts it:

"The categories require, in addition to the pure concept of understanding, determination of their application to sensibility in general (schemata). Apart from

such application, they are not concepts through which an object is known." (A245/B303).

The deduction only claimed that the pure concepts can be applied to external *a posteriori* data. Kant's brilliance lies in visualizing the cognitive conditions and their role in the reconstruction of an epistemological system. Experience is not possible without the proper employment of an *a priori* concept of understanding to the appearance. The imagination, thus, seems to energize the pure concepts, such as categories, so that they can synthesize the manifold of representations. The manifold of representations are capable of being synthesized, along with the imaginatory process, into an objective fact after the application of pure concepts that serve as rules. But how would it be possible to apply pure concepts to entirely heterogeneous data? Schematism takes care of this issue and provides an account of how the subsumption of appearance is possible using pure concepts.

It is interesting to note that Kant's first achievement lies in recognizing the fact that knowledge is composed of heterogeneous elements. In the beginning of the *Critique*, he establishes that knowledge is the product of quite distinct elements, such as sensibility and understanding, and this idea prevails throughout the *Critique*. Kant's predecessors, such as Leibniz, could not resolve the dichotomy of truth of fact and truth of reason. Indeed what was the unresolvable problem of other philosophers, becomes the project for Kant. He boldly maintains the heterogeneity of *a priori* concepts and *a posteriori* data, and at the same time shows the necessity of synthesis of these diverse elements within the same domain. The recognition of heterogeneity seems the first step in unity of synthesis through homogeneity.

Kant's strategy is to prove that concepts are not restricted or confined to their own realm: moreover, they are necessarily applicable to the domain of appearance. This was

roughly the project in the transcendental deduction towards minimizing the gap between heterogeneous elements, such as concepts and data. The doctrine of schematism attacked the issue from a new angle, and filled out the heterogeneity gap without disturbing the integrity of the heterogeneous elements. Kant investigates "time" as a mediator which is homogeneous to concepts being *a priori* and formal and simultaneously homogeneous to *appearance* being a form of intuition in terms of which objects are given.

"Thus an application of the category to appearance becomes possible by means of the transcendental determination of *time*, which, as the schema of the concept of understanding, mediates the subsumption of appearances under the category." (139/B178).

Most of the Kantian critics accept the uniqueness and special role of *time* in outer as well as inner sense, due to the fact that all external objects are presented in the framework of time and space, as the *Aesthetic* established, and all understanding occurs only in time. The issue of the omission of spatial schemata will be discussed later on, but the point I want to emphasize here is this: it is true that the transcendental deduction does show the very applicability of the concepts to appearances, but indeed it is a mere speculative and intellectual exercise, and from the viewpoint of the *Critique's* overall argument, it is inconclusive and partial. In other words, the transcendental argument does *de jure* possess tremendous appeal; however, at a functional level, when the problem of individuation of an object arises, it is badly in need of being complemented by some theory which could implement the conclusion of the transcendental argument. Now the real need emerges for a schematism which deals with the practical aspect of the concept's applicability and provides a functional exposition of the forms of intuition which have already been dealt with in *Aesthetic*.

The transcendental element of time which appeared in *Aesthetic* as a form of intuition in a phenomenological sense, reappears in *Schematism* in a dynamic mode, which makes up the heterogeneity of concepts and data. Therefore, schematism is not at all an artificial device, but rather a programme of the completion of the *Critique's* central argument.

This argument may be substantiated by invoking to some previous discussion from the *Critique*. Kant begins the transcendental doctrine of elements with these remarkable words:

"Our knowledge springs from two fundamental sources of the mind; the first is the capacity of receiving representations . . . the second is the power of knowing an object through these representations . . . Through the first an object is *given* to us, through the second the object is *thought* in relation to that (given) representation . . . Intuition and concepts constitute, therefore, the elements of all our knowledge." (B75/A51).

Furthermore, elsewhere in the *Critique* Kant holds that forms of intuition are conditions for synthetic judgements, perhaps because of the fact that the latter are the products of the synthesis of concepts and intuitions. In *Schematism*, a synthesis occurs between concepts and data through the form of intuition, such as time. Similarly, transcendental logic is concerned with laws of understanding and reason, insofar as they relate *a priori* to objects. (B81/A56). The laws of understanding, according to my interpretation, should cover all sorts of syntheses and mental activities, including the schematism, as Kant describes it, of pure concepts, and pure concepts themselves, which Kant understands as *rules*. Thus, *Schematism* can be viewed as the culmination of the basic ideas, such as synthesis, application, and subsumption, in the *Critique*, that have explicitly prevailed throughout.

In the light of the above discussion, the objections to the artificiality of schematism, and the assertions regarding playing with words are considered weak and unjustifiable. Although there are some obscurities, schematism is "an essential part of his argument," as Paton holds.¹¹ He says that even if Kant's theory of categories is rejected, "it suggests the possibility of making a fresh start, and of justifying the categories from the nature of time without any reference to the forms of judgment."¹² Further, he says, "whatever be our view of the derivation of the categories, the chapter on schematism is essential to an understanding of the critical philosophy."¹³

Walsh's view that the notion of schematism has never been discussed in the history of philosophy is irrelevant, although his investigation into the alleged discrepancy needs some light shed upon it. First, Walsh's observation that the problem of schematism only arises in the case of *a priori* concepts has to be contrasted with an entirely different observation. Kant, in fact, characterizes "transcendental schema as a pure representation, yet at the same time in one respect, it is intellectual and in another respect is sensible." (A138/B177). At another place, he asserts, to "this formal and pure condition of sensibility to which the employment of the concept of understanding is restricted, we shall entitle the schema of the concept." (A140/B179). This shows that Kant's concern in *Schematism* was not only an *a priori* concepts, but also an empirical concepts. He illustrated his point by using the example of five points and the image of the number five. Moreover, he thinks in terms of the image of a concept. "The image is a product of the empirical faculty of the reproductive imagination" (A142), and the image can be connected with the concept only by means of the schema to which it belongs. Next, he considers the schemata of the pure concepts of understanding and concludes that "the schema of a *pure* concept of understanding can never be brought into any image whatsoever." (A142). Moreover he says that, "in respect of all

the representations, so far as these representations are to be connected *a priori* in one concept in conformity with the unity of apperception." (A142). Thus, in the light of these references, no problem of discrepancy arises.

Walsh observes that, in the case of simple empirical concepts of objects, such as "white," "dog," and "barking," attention can be paid to the features of things or situations to which they refer, whereas the same cannot be done with other concepts such as "cause," "possibility," or "substance."

Kant's notion of *concept* is radically different from the modern usage of the term "concept." For him, it is a rule of combination or synthesis. As Kant puts it:

"All knowledge demands a concept . . . But a concept is *always*, as regards its form, something universal which serves as a rule." (A106).

And furthermore, in many places, he explains that combination is not something that an object possesses or that lies in an object, but is an exclusive affair of understanding. (A20/B34, B135, B154, B155, A106).

From this it can be inferred that all empirical or *a priori* concepts are rules of combination, and hence, originate from understanding. It is important to note here that understanding is a fundamental requirement for knowledge of an object, in conjunction with sensibility. If a concept is empirical, it should be the result of the synthesis of the representations of an object. Kant elucidates this point:

"Whereas all intuitions are sensible, rest on affection, concepts rest on function. By "function" I mean the unity of the act of bringing various representations under one common representation. Concepts are based on the spontaneity of thought, sensible intuition on a receptivity of impression." (A/68B98, A86/B119).

It is obvious from this context that Kant does include empirical concepts in his descriptions, and furthermore, it

sheds light on *a priori* and empirical concepts. One may ask, if the source of empirical and *a priori* concepts is rooted in understanding, then what is the difference between them? As Walsh asks, is there any inconsistency in Kant's thinking? A close reading reveals that this is not the case; instead, Kant does maintain a clear distinction between *a priori* and empirical concepts, as is clear from the above quotations. In the case of an empirical concept, such as "body," or "red," the data are given in the form of representations; while the synthesis of these representations occurs at the level of understanding. Moreover, a second level of synthesis implicitly occurs between the datum and schematized categories of quantity and quality for the formation of empirical concepts. In the case of pure concepts, the schematized categories are represented by understanding, such as "cause," "possibility" and "substance." A knowledge of a rose involves many empirical concepts, such as "softness," "redness," etc., and many pure concepts, such as causality and substance, etc., at multi-levels of synthesis, in the understanding.

Keeping this explication in view, Walsh's observation seems a result of overlooking the basic distinction between empirical and *a priori* concepts. I believe Warnock's many objections would easily be handled by the Kantian vision of the schematism and the syntheses of all concepts. For instance, "What is referred to by 'one,' or 'cause,' or 'possible,' is in no case a thing that I can look at, point to, 'intuit.' I cannot, then, learn to use these words in the same way as I learn to use 'white' or 'round' " ¹⁴ can be explained by the Kantian methodology as was briefly elaborated above.

Walsh's and Warnock's reservations that no reference to objects for concepts like "cause" and "possible" are possible, seem strange and unjustifiable. Surely reference cannot be made to their objects because pure concepts are only applicable as conditions for synthesis of objects, not as concepts of particular objects that presuppose these conditions. It never happens that one category is being referred

to something in the world. Even though the schematized categories are determined in time individually, they are being applied simultaneously and collectively to generate a synthetic unity in one time.

I conclude that, although Kant is often vague, the chapter on *Schematism* is the source of objectivity and coherency in his thought and in his methodology. Once Kant's enriched approach to the problem of knowledge is appreciated, most of the objections will evaporate.

III

Kantian scholars such as Paton, Walsh, Kemp Smith, and Franzwa Gragg have been engaged in debating another issue of "*spatial schemata*." They believe that Kant's omission of the schema of space is a serious mistake and deficiency in his exposition. Paton clearly holds this view that omission of space from the schematism is an error in Kant's account.¹⁵

Chipman and Schaper, contrary to the above criticism, hold that the omission of space in the chapter on schematism is quite appropriate and consistent with Kant's overall epistemological programme. In the midst of this controversy, I shall discuss only Gragg's account in *Space and the Schematism* which seems to be a representative view in favour of spatial schemata.¹⁶ His strategy is to bring out hidden ingredients from the *Critique* to show the direction of Kant's development of thought in relation to inner and outer sense, and the increased reliance upon outer sense in the second edition. Gragg quotes Kant (A146/B186) where Kant is saying that the application of pure concepts is possible to appearances only through the determination of time. The schemata of these concepts mediates the subsumption of the data under the concepts. This process involves realization of categories in the specified time relations. Gragg argues that time alone is not capable of carrying the burden of restriction for categorical realization.

This should be a similar burden to that of spatial schemata. Consider Kant's account of time:

"... an *a priori* condition of all appearances whatsoever," (A22/B37).

and

"Time is nothing but the form of inner sense, that is, of the intuition of ourselves and of our inner state. It cannot be a determination of outer appearances; it has to do neither with shape nor position but with the relation of our representations in our inner sense." (A34/B50)

Gragg infers that the above quotes only describe the temporal order of representation in the mind. They are silent about the temporal ordering of external events/objects of the mental events. Thus, Kant only takes into account temporal ordering of representations in an inner sense of both outer and inner appearances, and seems to neglect what is "referred to" by those representations.¹⁷ Gragg pleads here for the theory of *objectification of time*, assuming Kant was well aware of it. The role of this theory would be to determine the representations of objects in the outer sense. Here, Gragg seems to assume, first, that the object of knowledge needs to be determined in space and time outside of the mind. Second, the outer sense is something outside of the mind. This assumption seems to be hidden in his assertion:

"The problem of objectification of time arises for legitimate distinction between the *objects of outer-sense* and their *representation in inner sense*."¹⁸

Kant takes an entirely different view. In his opening remarks about space, he says:

"By means of outer sense, a *property of mind*, we represent to *ourselves* objects as outside us, and all without exception in space." (B37).

So outer sense is not something outside of the mind, but rather a property or a mechanism by which outside objects are represented as external by the mind and all represented objects are in space; however, Kant puts forth a reminder that space is not an empirical concept and cannot be derived from outer experience. (B38). Moreover, he holds that "space is nothing but the form of all appearances of out-sense. It is the *subjective condition* of sensibility, under which alone intuition is possible for us." (B42). This shows that an extra notion of spatial schemata is not needed because objects of outer sense have already been taken into account when they are represented by the outer sense of human beings. Gragg perhaps has in mind the idea that the representations in inner sense are captured by the determination of time, yet the "referred to" — the object — remains unhandled. For that, he envisions spatial schemata.

Although Gragg grants that Kant's initial view indeed gave a special importance to time, his later development in B-edition of the *Critique* reveals that he did emphasize external objects in the outer sense. Gragg further mentions that Kant's later writings reflect a shift from a subjectivistic position to a phenomenalist position. The Phenomenalist view, for him, is an extension of temporal conditions to outer objects. The meaningful shift between the *Analytic of Concepts* and the *Analytic of Principles* is an indicator of an obvious emphasis on outer objects.

In my judgement, the transition from *Analytic of Concepts* to *Analytic of Principles* does not characterize any shift in his position, as Gragg notices, but rather it is a part of his argument. First, Kant showed the necessity of application of categories to objects, but it was only an outline of his argument. In *Analytic of Principles*, he establishes how these objects can be individually subsumed under concepts. Of course, here, he deals with concrete objects through the application of their schematized categories. But it does not mean he turned away from inner sense to outer sense. The transi-

tion should be considered an indicator of a further step toward the completion of the transcendental argument. Nevertheless, this interpretation looks compatible with the overall conceptual scheme of the *Critique*.

Gragg further argues that the schema of substance — “permanence of the real in time” — reveals that temporal schema of categories range over the time-determination of natural events. In the light of B275 and B291, he argues,

“... the notion of permanence cannot be derived from the subjectivist view of innersense, this leads us to understand that phenomenalist conception has to be included in the body of schematism.”

He concludes that it is clear that the possibility of knowledge of objective time-relation and hence, space-relation, has been assumed, but could not be incorporated in the schematism.¹⁹ In other words, the chapter on schematism does not provide a solution of the problem of objectification of time, but it does leave room for an unstated solution. Gragg cites especially (B291) and (xii), a footnote in the second preface, in order to substantiate his point. The text of (B291) read as follows:

“In order to understand the possibility of things in conformity with the categories, and so to demonstrate the *objective reality* of the latter, we need, not merely intuition, but intuitions that are in all cases *outer intuition* . . . in order to obtain something *permanent* in intuition corresponding to the concept of *substance*, and so to demonstrate the objective reality of this concept, we require an intuition in space (of matter).”

There are two ways of reading (B291). Someone can read it with a pre-conceived notion and interpret it as a significant point of departure for Kant, as Gragg perhaps does. Another reading consistent with the text may include the observation that this does not show any significant departure from Kant's earlier position. Kant has

many times resurrected the idea that knowledge of objects is possible when they are given in outer intuition — in space and time, for example. These are the only subjective conditions under which an object can be subsumed under concepts. "Space is a necessary *a priori* representation which underlies all outer intuition." (A24). Again Kant says,

"If we depart from the subjective conditions under which alone we can have outer intuition, namely, liability to be affected by objects, the representation of space stands for nothing whatsoever." (B34).

Hence, in outer intuition, space always remains tied up with time. An object in space cannot be conceived of irrespective of time.

Gragg, in fact, explores the justification for spatial schemata from the objects outside us. The expression "outside us" is ambiguous. Sometimes it refers to "thing-in-itself" and sometimes it stands for outer *appearance*. Kant uses it in the latter sense. He also distinguishes between *empirically* external and *external* (in the transcendental sense) objects. The former is understood for "things which are to be found in space." (A373). Thus, what Kant says in B291 seems a reiteration.

Gragg and Norman Smith suggest that the distinction between the time of representation and the time of external objects is to be made through the reference to space.

Kant would here reject this suggestion on the ground that it assumes that representations occur in time and space. If "time of our representation" means the time when something is represented by us, then it does not require any reference to space. The reason is that the object being talked about was in time and space before representation. When the synthesis of the manifold of space occurs, spatial as well as temporal dimensions of objects have been taken care of, and "time of external objects" can be interpreted

as the time when objects exist; and "time of our representation" means time when the representation of that object occurs in us, even though a reference to space is not needed. Kant would say that both occurrences are in one time — simultaneously.

Gragg concludes that,

" . . . the categories are realized in their application to the data of outer intuition — data with both temporal and spatial dimensions — and thereby distinguished from strictly temporal data of inner sense. And so the importance of spatial schemata for the categories is revealed through the necessity of objective time determination, as required by the phenomenalist side of the Kantian account."²⁰

Gragg, here, at least, admits that empirical data comprise temporal and spatial dimension, which are strictly distinguished by the temporal data of inner sense. Furthermore, if the premise is accepted that there are two schemata, namely schemata of space and schemata of time, instead of one, then how would it be possible for empirical data to be subsumed under the temporal data of inner sense (schematized category, for example)? In other words, how would it be possible to apply categories (which are temporal in character) to empirical data (which are spatio-temporal)? Apparently, there is no way out to resolve this problem.

The basic mistake, perhaps, lies either in the conception of "data" or in the notion of schematism itself. Kant is quite explicit that objects are in space. The data or representations or contingent informations about objects are not at all any more in space, once the objects are represented to the mind. The data does contain the representations about the shape, size, volume, etc., of a particular object, but these representations are not in space any longer. Additionally, there is the synthesis of the representations of

temporal dimensions and then further, the synthesis of the representations of representations. On the other hand, there is the synthesis of the representations of the individually schematized categories. Both processes are heterogeneous, but are occurring simultaneously, at one time. The determination of this transcendental time is the schemata of time. It is interesting to note that in representation of objects, synthesis of representation, imagination, production, and reproduction of concepts, schematization, determination of time happens spontaneously and simultaneously.

After arguing for spatial schemata, Gragg spells out the ways of introducing space into the system of schematism as a supplement of time. As an example, he quotes Paton, who considers the categories of quantity as an illustration of a spatial inclusion in the schematism:

"Since space and time are homogeneous, and since all objects are in a common space and time, all objects are known through a transcendental synthesis of imagination which successively synthesizes the homogeneous parts of space and time. Hence, every object must be numberable."²¹

Did Paton succeed in inventing a method of introducing spatial schema in the body of schematism? The emphatic answer is "No." First, the statement of the fact that "Since space and time are homogeneous" is not a representation of a fact. As will be shown later, space and time are not alike in nature. Second, concerning the synthesis of homogeneous parts of space and time, I understand that synthesis of one part of space and one part of time never occurs. What occurs is the synthesis of parts of space — but in time. That synthesis can be synthesized with the synthesis of time. Notice that all these processes of synthesization operate in the inner sense, channelized in determination of transcendental time. Hence, this analysis precludes the pos-

sibility of spatial inclusion in the schematism, and shows that Paton's attempt is deemed to be unsuccessful.

Kant sheds ample light on the ontological aspect of space and time. Concerning the issue of spatial dimension, as Gragg discusses it, Kant's space and time are the two original *quanta* of our sensibility. "Time is *in itself a series*" and a formal condition of all series.²² (A412/B439).

This is the first reason for Kant's emphasis on time, because time is a formal condition of all series; it entails that time is more *comprehensive* in comparison to space. Anything which is in space, must be *in time* — but not vice versa. Since time prevails, both in inner and outer sense, any perception must pass through the medium of time.

The second reason lies in the nature of space. Kant says, "... *taken in and by itself*, there is no distinction between *progress* and *regress*." The parts of space are co-existent and hence, "it is an *aggregate*, not a series." The aggregation of something requires collection or coordination of parts irrespective of internal relationships among parts. There is no logical, necessary connection between parts, and so they are not at all subordinated. Hence, it follows that an extension of space would not work. Kant confirms this fact:

"But as the parts of space are co-ordinated with, not subordinated to, one another, one part is not the *condition* of the possibility of another; and unlike time, space does not in itself constitute a series." (B439).

It makes sense because the synthesis of the representations of objects in space occurs in the mind whose time is the only schema. This doctrine of assimilation of space into time really eliminates the possibility of spatial schemata. In the light of these facts about space and time, any assumption of spatial schemata does not make sense and seems *artificial*.

The third reason is that consciousness of objects is possible through the medium of time. Kant recognizes three basic modes of time. They are *duration*, *succession*, and *co-existence*. These modes constitute "three rules of all appearances in time." (B220). It means that no experience of objects is possible without the application of these rules, so they are prior to all experience. The given object comes into contact with proper application of these temporal rules to the human consciousness and to perception.

Finally, the objectivity of scientific knowledge of the world is also deeply concerned with time-determination. As Kant puts it:

"This *synthetic unity* in the time-relation of all perception, as thus determined *a priori*, is the law, that all empirical time-determination must stand under rules of universal time-determination. The analogies of experience must be the rule of this description." (A178).

Concerning the analogies, he says:

"An analogy of experience, is, therefore, only a rule according to which a unity of experience may arise from perception." (B233).

Thus, perception and unity of empirical experience is going to be possible through time.

Due to these fundamental ontological differences between space and time, there is no way for Kant to treat space and time equally on an epistemological plane, in spite of the fact that both are forms of intuition. The epistemological importance of time is exhibited overwhelmingly in the *Critique*. In the context of schematism, Kant's omission of spatial schemata is consistent and purposeful.

Department of Philosophy,
Aligarh Muslim University,
ALIGARH.

M. MUQIM

NOTES

1. Norman Kemp Smith, *A Commentary to Kant's Critique of Pure Reason*. W. H. Walsh, "Schematism", *Kant Studien*, 49, p. 335.
2. A. C. Genova, "Kant's Epigenesis of Pure Reason," *Kant Studien*, 65, p. 259.
3. Smith, pp. 335-36.
4. *Ibid.*, p. 335.
5. Walsh, p. 95.
6. *Ibid.*, p. 101.
7. G. J. Warnock, "Concepts and Schematism," *Analysis*, pp. 77-82.
8. Eva Schaper, "Kant's Schematism Reconsidered," *Review of Metaphysics*, xvii, p. 267.
9. *Ibid.*, p. 269.
10. L. Chipman, "Kant's Categories and their Schematism," *Kant Studien*, 63, pp. 36-37.
11. For Kant himself, it is an absolutely indispensable part of his argument.
12. H. J. Paton, *Kant's Metaphysics of Experience*, Vol. II, pp. 20-21.
13. *Ibid.*, pp. 20-21.
14. Warnock, p. 81.
15. Paton, p. 78.
16. E. Franzwa Gragg, "Space and the Schematism," *Kant Studien*, 69, pp. 149-159. ..
17. *Ibid.*, p. 152.
18. *Ibid.*, p. 152.
19. *Ibid.*, p. 153.
20. *Ibid.*, p. 155.
21. Paton, p. 46.
22. This can't satisfy Gragg because he believes that the B-edition is the indicator of change in Kant's view. And this change is the change in emphasis, not in the very definitions of time and space. The argument here is not contextual, but rather from the nature of space and time. It is believed that Kant maintains these characterizations of space and time throughout. What is being argued here is the point that the epistemological preference to time over space is basically rooted in the ontological distinctions of space and time.