Kant’s Transcendental Schematism of the Understanding

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Abstract

KRASIMIRA FILCHEVA: Kant’s Transcendental Schematism of the Understanding
(Under the direction of Alan Nelson)

In the Schematism chapter in the *Critique of Pure Reason*, Kant introduces a key element in his analysis of experience – the transcendental schema that mediates the application of the categories to phenomenal objects. In this paper, I seek to develop an interpretation of the doctrine of the schematism with a view to solving three significant problems that arise for that part of the critical system. I show the systematic unity of Kant’s various descriptions of the nature of the transcendental schemata and their connection to the preceding deductions, thereby dispelling a possible charge of obscurity. I demonstrate how Kant’s doctrine can withstand criticism about the apparent lack of justification of his schemata. Finally, I argue that a close study of the original grounds on which Kant introduces the transcendental schematism can remove the threat of regress generated by the demand for homogeneity, which opens this chapter in the *Critique*. 
To Iliana
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Introduction

Kant's exposition of the transcendental schemas of the categories in the first chapter of the *Analytic of Principles* is both a crucial part of the system of the first *Critique* and a notoriously obscure one. The transcendental schemas are described in a variety of ways, which leaves the reader with the task to determine how coherent the different descriptions really are. For example, the transcendental schema is variously characterized as “a transcendental determination of time” (A139/B178), “only the phenomenon, or sensible concept of an object in agreement with the category” (A 146/B186), “a transcendental product of the imagination, which concerns the determination of the inner sense in general, in accordance with conditions of its form (time)” (A142/B181), and as “the formal and pure condition of sensibility to which the concept of understanding is restricted” (A140/B179).\(^1\)

The following two interrelated questions naturally arise in response to Kant's numerous characterizations of the transcendental schemas. Can we give an explanation of why Kant may have seen the need to offer so many descriptions of the transcendental schemas without imputing any unnecessary obscurity to his discussion? Is there, nonetheless, a privileged conception of the transcendental schemata that is, on the one hand, strongly suggested by the text, and, on the other, suited to preserve the legitimacy of the other characterizations? In the first part of this paper, I am concerned to argue for a positive answer to both of these questions. In broad agreement with Henry Allison on the nature of schemata as determinate

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\(^1\) In what follows, I address problems surrounding the transcendental schemas specifically. I do not enter into a discussion of the schemas of the pure sensible concepts (e.g. geometrical concepts) except where this is relevant to my discussion. I also remain neutral on whether Kant sees any need for schemas of empirical concepts like “dog” (A141/B181).
pure intuitions of time, I show that taking seriously Kant's conception of the schemas as a product or a pure synthesis of the transcendental imagination can offer illuminating connections with the deductions, which often prefigure the Schematism chapter. However, in order to understand Kant's transcendental schematism, it is not sufficient to investigate the nature of the schemas and their role in Kant's analysis of empirical cognition. It is also necessary to understand why Kant chooses to introduce the transcendental schematism in the particular terms he employs. Little in the preceding Deductions seems to foreshadow Kant's concern with homogeneity, which serves as an opening of the Schematism chapter. Unless we seek greater illumination on this question, the character of Kant's account of transcendental schematism cannot be fully revealed. Part of its function may well be obscured. Thus, in addition to the investigation of the schemata, I turn to this clarificatory task in the first section of the paper.

Furthermore, in the first section, I also propose an additional constraint on any adequate account of the nature, status, and systematic role of the transcendental schemas in the *Critique*. Any adequate account of Kant's conception of the schemata should show why, in light of this conception, Kant would not have seen the need for any deduction or justification of the particular schemas he associates with the different categories. The charge that Kant did not offer a deduction or a justification of the particular pairings of categories with their schemas is explicit in Allison's commentary on the Schematism chapter (1981). I also believe it to be implicit in Guyer's (1987). Building on my discussion in the first part of the paper, I show that any demand for such a deduction or, alternatively, any criticism of the particular schemas that Kant associates with the given categories will seem, by Kant's lights, to be largely misplaced. More carefully, I try to expose as erroneous any criticism of Kant
that is specifically based on the assumption that the schemas are a kind of conceptual translation of the categories in temporal terms.

The account of the schemas I defend meets the above constraint. It gives a plausible explanation of why Kant does not seem to have noticed any need to give a justification of the particular schemas he associates with the different categories. To show this will be the task of the second part of the paper. The second part also prepares the ground for addressing the real problem of the Schematism chapter, as Kant conceived of it. Kant’s notes indicate a different locus of concern, namely a potential threat of unintelligibility of the kind the transcendental schematism was designed to remove. By showing that appearances and categories are, in the final analysis, homogeneous, thereby giving an answer to the problem that opens the Schematism chapter, Kant also seems to leave his account vulnerable to a threat of regress. Insofar as the transcendental schemas are introduced to demonstrate the ultimate, though mediated, homogeneity between appearance and category, one is bound to ask how it is that the transcendental schemas and categories can be homogeneous in the first place. Must a third mediating representation be introduced to ensure that? If there is a genuine threat of regress, it will be difficult to see how Kant can avoid it. The third and final part of the paper seeks to address this problem.
I. Syntheses of the Imagination

First, it is important to understand Kant’s choice to formulate the problem treated in the Schematism chapter in terms of the alleged heterogeneity between the categories, on the one hand, and the empirical intuitions of objects (as appearances), on the other. The notion of homogeneity shapes the general character of Kant’s discussion. The solution of the original problem that Kant sets out in the opening lines of the chapter is supposed to emerge when it becomes clear that the pure concepts and the appearances are in fact homogeneous, given the mediating schemas, contrary to the initial assumption. The transcendental schematism of the understanding, which Kant develops in the subsequent paragraphs, must in turn demonstrate how that is possible. How we should understand Kant’s demand for homogeneity of representations and what is the relevant notion of homogeneity that operates in the background of his discussion is not at all clear. Yet, Kant’s choice to frame his investigation in these terms must be taken seriously. Accordingly, an adequate analysis of the transcendental schematism must clarify the notion of homogeneity and its function in Kant’s investigation. Before examining the nature of the transcendental schemas, we should turn to this task of clarification.

2 In general, I will freely substitute “appearance” for the “empirical intuition of the appearance” when speaking of the relation of homogeneity between category and appearance/intuition. It is clear that Kant takes appearances to be mediately homogeneous with categories via their respective representations, whether conceptual or intuitive. For example, at the beginning of the chapter he writes that “in all subsumptions of an object under a concept the representations of the former must be homogeneous with the latter” (A 137/B 176). When he introduces the schemas, however, he speaks of the appearance’s homogeneity with the transcendental schema (B 178). Since Kant freely omits mention of the mediating intuition of the appearance that renders it homogeneous with the pure concept, I will be similarly inexact when no misunderstanding is likely to arise. For the claim that concepts always apply indirectly to objects via their intuitions, see B93.
(i) Transcendental Homogeneity

Kant introduces the problem of the Schematism chapter with a contrast between the pure sensible concepts and the categories. There seems to be no problem in the application of pure sensible concepts (e.g. geometrical concepts) to appearances since there is the necessary homogeneity between the pure sensible concept and the empirical concept of the object. Kant's example of the plate illustrates the point:

“Thus the empirical concept of a plate has homogeneity with the pure geometrical concept of a circle, for the roundness that is thought in the former can be intuited in the latter” (A138/B177).

What Kant presumably means here is that the concept of roundness that is contained in the concept of a plate, i.e. “thought in the former” is subsumable under the geometrical concept because the latter, as a pure sensible concept, can be given an intuition in space, an intuition of roundness or circularity.\(^3\) As objects that are necessarily in space, appearances are represented by empirical concepts that somehow contain the spatial concepts. At A77, Kant explicitly shows the link between the \textit{a priori} manifolds of space and time under which sensibility receives the representations of objects and the concept of these objects:

“now space and time contain a manifold of pure \textit{a priori} intuition but belong nevertheless among the conditions of the receptivity of our mind, under which alone it can receive representations of objects, and \textit{thus must always also affect the concept of these objects}” (A77; emphasis added).

There seems to be no problem with the subsumption of empirical concepts under pure sensible concepts, and, correspondingly, no problem with the application of the latter to appearances. Yet, according to Kant, there is a special difficulty in the case of the pure concepts of the understanding which are not at all homogenous with the empirical concepts

\(^3\) Guyer makes a similar point (p. 163).
of appearances. Kant initially formulates the difficulty in somewhat different terms, drawing attention to the lack of homogeneity between the pure concepts and the empirical (and even sensible) intuitions and claiming that the pure concepts “can never be encountered in any intuition” (A138/B177). However, in a letter to Tieftrunk in which he is trying to clarify the nature of the problem that generates the need for a transcendental schematism, Kant replaces this talk of intuitions with a characterization of the problem at the level of the relevant concepts. This account of transcendental subsumption is initially contrasted with the one of the logical subsumption of concepts, which is a matter of the identity of higher and lower concept:

“In the case of transcendental subsumption, on the other hand, since we subsume an empirical concept under a pure concept of the understanding by means of a mediating concept (the latter being that of the synthesized material derived from the representations of inner sense), this subsumption of an empirical concept under a category would seem to be the subsumption of something heterogeneous in content” (Letter to Tieftrunk December 11, 1797).

Below, we will turn attention to this special kind of concept of “the synthesized material derived from the representations of inner sense.” For now it suffices to notice that Kant discusses the matter of homogeneity in terms of concepts. Two related points need to be made here. First, Kant seems to draw no distinction, relevant to the purposes of his exposition, between the subsumption of appearances and empirical concepts under the pure concepts, on the one hand, and the application of the pure concepts to the appearances, on the other. Homogeneity is required for both relations - subsumption and application. This becomes especially clear at A 138/B 177.

Second, as the letter to Tieftrunk suggests, as well as Kant’s initial example of the

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4 See p. 538 in the Cambridge Edition of the Works of Immanuel Kant: Correspondence.
pure sensible concept of a circle and the empirical concept of a plate, the relation of homogeneity seems to apply to concepts. An obvious question arises here. Is Kant’s homogeneity requirement with respect to the application of categories to intuitions (and hence empirical objects) equivalent to the homogeneity requirement with respect to the transcendental subsumption of concepts, i.e. homogeneity between category and empirical concepts? In other words, are Kant’s two formulations expressions of the same requirement or different ones? Alternatively, is Kant just speaking loosely when he refers to the homogeneity between category and appearance, and hence category and empirical intuition while reserving the relation of homogeneity for the conceptual level? What is the nature of the relevant requirement in any case?

One reason for taking the above questions seriously concerns the relationship between the two radically distinct sources of cognition that stand at the core of the transcendental enterprise – Kant’s concepts and intuitions. If we take Kant to be admitting a relation of homogeneity between pure concepts and intuitions in its full import instead of explaining away his characterizations of this relation entirely in terms of the associated concepts, then there will implications both for our understanding of the concept of homogeneity in play and the relation between concept and intuition in Kant’s system. The transcendental schematism can thus be seen as a refinement of Kant's initial divide between concepts and intuitions. The task is to investigate the nature of this refinement. A proper understanding of the operative concept of homogeneity should assist us in this task.

It is clear that Kant takes the two formulations of his problem of homogeneity to be closely linked insofar as he proposes to explain his points in the Schematism chapter in the terms employed in the letter to Tieftrunk, that is, in terms of transcendental conceptual
subsumption. Even though I do not want to insist on two entirely independent critical requirements in the two cases – homogeneity between concepts and homogeneity between concept and intuition - I also think that much clarity can be gained by identifying these two levels of description and treating them separately. In addition to the abovementioned reason for clearly distinguishing between these levels, I have to attend to what I take to be the most important one. Kant’s discussion in the Schematism chapter gives expression to a distinctive demand couched in terms of homogeneity that can become obscured if we seek a greater affinity between the two formulations of the problem in the letter to Tiefturk and the Analytic.

The opening paragraphs of the Schematism chapter give a strong impression that Kant’s main motivation for introducing the transcendental schematism in the first place, establishing the relevant relation of homogeneity between category and appearance, has to do with the need for greater intelligibility. He has presumably shown in the preceding Deduction that the objects of experience must stand under the categories and so the latter must apply to the former. The question is how that could be the case:

“This question, so natural and important, is really the cause which makes a transcendental doctrine of the power of judgment necessary…In all other sciences, where the concepts through which the object is thought in general are not so different and heterogeneous from those that represent it in concreto, as it is given, it is unnecessary to offer a special discussion of the application of the former to the latter” (A 138/B 177)

The natural and important question that makes “a transcendental doctrine of the power of judgment necessary” is how, given the ordinary understanding of homogeneity that Kant is implicitly working with in the introductory passages, the appearances can be subsumed under the categories. It is a common and allegedly uncontroversial requirement
that in any subsumption of “an object under a concept” that “the representations of the
former must be homogeneous with the latter” (A 137/B 176). So the task of the
transcendental doctrine of the power of judgment must be to show some continuity between
the common case and the special case of a priori application of categories to appearances.
Given that the transcendental schematism is introduced in terms of the demand for
homogeneity, the latter is best seen in light of the corresponding function of the schematism,
that is, to demonstrate the continuity between the conditions under which the application of
the ordinary empirical concepts to appearances is made possible and the conditions under
which the empirical application of the pure concepts is made possible. This observation will
be especially important to keep in mind for the discussion in the last section of this paper.

The task of the transcendental doctrine of the power of judgment is thus to gain
greater clarity where the apparent heterogeneity between pure and empirical concepts seems
to confound one of the allegedly uncontroversial principles an analysis of experience has to
admit – the condition of homogeneity. Yet, the original notion of homogeneity that Kant
articulates in the opening passages is in fact bound to aggravate the problem of intelligibility
instead of facilitating its solution. For it makes it hard or impossible to see how the continuity
between the common application of concepts and the a priori application of the categories
can be attained.

The original notion of continuity is understood in terms of containment of common
marks or representations. According to Kant, “the concept must contain that which is
represented in the object that is to be subsumed under it” (A 137/B 176). By employing this
understanding of homogeneity, we can see how the common mark or common representation
of roundness that Kant refers to in his mathematical example ensures that the pure sensible
concept of a circle and the empirical concept are homogeneous (ibid.). Recognizing the workings of this conception of homogeneity in the exposition of the problem also allows us to understand Kant’s reference to the complete heterogeneity between pure concept and empirical intuition. As Kant insists, “no one would say that the category, e.g. causality, could also be intuited through the senses and is contained in the appearance” (A 138/B 177). There is no common mark in the relevant sense that could be contained in the empirical intuition.

Moreover, the idea that there could be such a common representation can appear almost incoherent. The question whether Kant might not be speaking loosely by shifting to the level of intuitions is bound to re-emerge. How can a mark or representation be common to an intuition, a singular and sensible representation, on the one hand, and a concept, as a general representation, on the other? We can understand how roundness can be common to the empirical and pure sensible concept as another conceptual representation without leaving the level of general representations. But how can “roundness,” without being interpreted as a conceptual representation, constitute a common mark between an empirical intuition and an empirical concept or a pure sensible concept?

It is important to notice at this point that Kant’s discussion in this part of the chapter marks a significant departure from the original conception of homogeneity in several ways. Even before introducing the transcendental schemas, Kant seems to leave room for a very different understanding of homogeneity suggested by his mathematical case. He does not, for example, refer to roundness as a common mark of two concepts. Rather he justifies the claim that the relevant concepts are homogeneous because the roundness that is thought in the concept of a plate, one of the marks of the concept of a plate, can be purely intuited in the concept of a circle. It is unlikely that Kant is assuming that “roundness” is a conceptual mark
of the pure sensible concept of a circle, which we can find in the latter upon analysis, in the way we can find the mark of “roundness” in the concept of a plate.

In fact, Kant seems to be securing the homogeneity in question by way of the possibility of mathematical construction – roundness can be intuited in the concept of a circle (rather than discerned as a mark within the concept upon analysis) in the sense that constructing the concept in the pure intuition of space yields a determinate intuition of a circle. The sense in which roundness is contained in the two concepts that are allegedly homogeneous is thus very different when pure sensible concepts are in question. I will have more to say about the construction of pure sensible concepts and their relationship to the pure concepts of the understanding in a brief discussion below. For now it suffices to note that Kant is already departing from the original understanding of homogeneity, if the latter is understood as restricted to containment of common marks at the purely conceptual level.

However, Kant’s modification of the original notion of homogeneity is much more important with respect to the transcendental schemas and their mediating role in the application of the categories to appearances. We can recognize the modified conception once we attend to the criteria for homogeneity that Kant lists when he asserts that the transcendental schema is homogeneous with the category. There seem to be three criteria in play. The category constitutes the unity, universality, and *a priori* rule-based character of the transcendental schema (A 139/B 178). These are the grounds on which the schema is said to

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5 One might object to the inclusion of unity among these criteria, given that Kant seems to be mentioning unity only in passing. He puts the claim that the category constitutes the unity of the transcendental time-determination in parentheses. But the appearance is deceptive. These three characteristics of the transcendental schemas are in effect inseparable as they all reflect the nature of the schemas as a product of the application of the category to the pure intuition of time. It is this application that first yields the pure synthses that are called transcendental time-determinations or schemas, as I try to show below. Accordingly, this genesis of the transcendental time-determinations is precisely what grounds the relation of homogeneity. It will be surprising if Kant left out the feature of unity while reserving the other two as the marks of homogeneity between category and schema. The fact that the category constitutes the unity of the schema is explained by this genesis of the
be homogeneous with the category. As I will argue below, the nature of the schemas is best understood as intuitive insofar as the pure syntheses that Kant identifies with the schemas are a result of the application of the categories to the pure manifold of time, which yields determinate pure intuitions. Hence, if the transcendental schemas are homogeneous with the categories, according to these criteria, Kant will seem to be making use of a modified conception of homogeneity. We might call that sense of homogeneity between representations transcendental.

It should also be clear that Kant’s occasional reference to a “unity” that can be “added” to or “contained in a representation” cannot provide any meaningful way to retain the old notion of homogeneity in this context. For even though, one can loosely say that “unity” is contained in the empirical intuition, there is no good sense in which this could be anything like the containment meant in ordinary cases, e.g. the “roundness” contained in a pure sensible intuition. For unity is something that can only be “thought.” This is in turn possible only through awareness of the subject’s acts of unification (B 138). So any so-called representation of “unity,” and “synthesis” for that matter, is bound to be very different. It is not something given but arises only through awareness of the activity of the apperceiving subject (Cf. B 130-31). There is thus a clear need for Kant’s modification of the concept of homogeneity.

In conformity with the concept of transcendental homogeneity, there will be no incoherence in Kant’s claim that empirical intuitions, as these are synthesized in accordance with the transcendental schemas, turn out to be homogeneous with the categories. There is, accordingly, no tension between Kant’s opening remarks that pure concepts of the

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6 For example, at B 145 Kant uses the peculiar expression of “adding” unity.
understanding are “entirely heterogeneous” with empirical intuitions. They are heterogeneous under the original non-transcendental conception of homogeneity but not under Kant’s own.

It is instructive to notice a peculiar implication of this modified conception of homogeneity. If we take two of Kant’s criteria of transcendental homogeneity – unity and a priori rule-based character of the schemas – we are bound to recognize some echoes from the preceding Deduction of the categories, in the B-edition. Kant takes himself to have established that the pure concepts can be justifiably applied to objects of experience. Crucially, he does so by showing in section 20 of the B-Deduction that the categories, as logical functions for judging, constitute the unity of empirical intuitions (B 143). To say that the manifold of empirical intuitions stands under the categories is also to say that it is synthesized, as an empirical given, according to a priori rules, namely the categories. Keeping aside the criterion of universality for now, it will seem that even before any introduction of the transcendental schematism in all its detail, Kant has the resources to demonstrate the transcendental homogeneity between the pure concepts and the empirical intuitions and thus the empirical objects. Why is any further elaboration of a schematism of the understanding needed? If the problem of homogeneity was supposed to motivate the introduction of the transcendental schematism, it may seem that it provides a rather slim motivational basis.

I do not want to claim that the problem of homogeneity exhausts Kant’s grounds for introducing the transcendental schematism by any means. A narrow focus on Kant’s exposition of the schematism in terms of the demand for homogeneity between representations can only be a partial elucidation of this part of the critical system. However, the foregoing reflections can still be used to underscore the suggestion that Kant’s demand
for homogeneity is designed to give expression precisely to a problem of intelligibility that the schematism of the understanding is uniquely suited to address. The schematism in effect provides the subjective deduction of the categories insofar as it shows in detail how it is that understanding and imagination, via the transcendental syntheses, i.e. the schemas, are mediating the application of the categories to the appearances. This concern with intelligibility can thus explain why Kant’s demonstration of the transcendental homogeneity between appearances and categories is not superfluous in any way, even though the B-Deduction already contains the justificatory ground for asserting the homogeneity in question.7

It should thus be clear that any purely logical concern with the conditions of transcendental subsumption of concepts that Kant articulates in his correspondence will not do justice to the animating spirit behind his analysis in the Critique. Yet, it would also be mistaken to see the grounds on which Kant introduces the concept of a schema in the correspondence with Tieftrunk as bearing no affinity to his motivating concerns in the Critique. Kant does write that without the mediating concept of a transcendental time-determination, it can seem as if something heterogeneous – an empirical concept – is supposed to be subsumed under a pure concept. This would be “contrary to logic” (To Tieftrunk, December 11, 1797).8

But just as Kant was concerned to demonstrate some continuity between the

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7 Compare Woods' characterization of Kant's concern with homogeneity in the chapter: “Kant, in acknowledging the heterogeneity of pure concepts and intuitions is attempting to solve the problem of how, given the fact of experience, they come to be homogeneous” (Woods 204). Later on, he notes: “in the Deduction, Kant claimed to prove that the categories are applicable, and it is now the task of the Schematism chapter to show more concretely the particular ways in which they are applicable” (Woods 207). If the latter describe a kind of subjective deduction of the categories’ application to empirical objects, then Woods' characterization of the task of the schematism would be similar in spirit to my own.

8 The context makes it clear that Kant is speaking of general logic rather than transcendental logic.
conditions of the application of ordinary empirical concepts to objects of experience and the categories’ a priori application to objects of experience, he would, unsurprisingly, be concerned with the continuity between the logical subsumption of concepts and the transcendental subsumption of concepts. After all, it is the underlying conditions of the possibility of experience – the application of categories to empirical intuitions - that enables the transcendental subsumption of empirical concepts under the pure concepts in the first place. Thus it is the homogeneity of the categories and the empirical intuitions that grounds the homogeneity between the corresponding concepts. It is best to keep in mind both the affinities and the apparent differences between the two formulations of the homogeneity requirement.

Given this general outline of the relationship between Kant’s reasons for maintaining the need for a transcendental doctrine of the power of judgment and his opening remarks on homogeneity, we are in a position to address the central question of this section. How does Kant conceive the transcendental schema?

(ii) The nature of the transcendental schema

There is one specification of the nature of schemata that occurs consistently in the Schematism chapter and Kant's Reflexionen which we can take as a starting point. Kant presents the schemata as “transcendental time-determinations.” Importantly, he introduces the notion of a transcendental time-determination as a representation that is at once homogeneous with the appearances, on the one hand, and the pure concept of the understanding, on the other. It is very significant that he does so after drawing attention to the

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a priori manifold of time as a form of intuition (A139/B178). The category containing or expressing the synthetic unity of any manifold in general (empirical or a priori manifold, we may add), would ground the unity of the a priori manifold of time in particular. But this seems to suggest that the categories when applied to the pure manifold of time yield the transcendental time-determinations – the universal and determinate intuitions of time. The transcendental schemas thus appear to be results of the application of the categories to the pure manifold of time – what we may call determinate intuitions of time.

The burden of the argument to follow is to show that the conception of the schema as a determinate pure intuition plays a large unifying role both in the different descriptions of the schematism of the understanding in the relevant chapter and the relationship between the transcendental schematism and Kant's discussion of the syntheses of the imagination in the preceding deductions of the categories. In particular, my aim is to show that the following set of interrelated claims makes the best overall sense of Kant’s myriad conceptions of the schemas. The Schematism chapter presents the schema as a product of an a priori or transcendental synthesis of the imagination in which the pure material is the manifold of time and the intellectual form is given by the corresponding category. The result of this synthesis is the a priori time-determination that thus meets both constraints Kant has advanced – it is intellectual in that the unity of the manifold of time is given by the category, i.e. its form, and it is sensible (yet not empirical) in that the material or manifold is the pure manifold of time.10 A synthesized pure manifold of time or “a determinate pure intuition,” along Allison’s

10 Kant makes the claim that the schema needs to be an intellectual representation, on the one hand, and a sensible one, on the other at A138/B177. The discussion to follow should make it clear that Kant does not violate his own division between intellectual or conceptual representations and sensible or intuitive ones. As suggested above, a transcendental schema has different aspects depending on how it is produced and what kind of manifold of representations is contained in it (i.e. whether sensible or conceptual). The schematic representation is conceptual insofar as it produced by the application of the categories to the pure manifold of time and sensible insofar as the material that is schematized is sensible or intuitive. The body of the paper will
lines, is thus a transcendental schema.

In what follows, I proceed in broad agreement with this view of Henry Allison’s. My argument for this view, however, depends heavily on demonstrating the important connections between Kant’s official presentation of the schematism and the preceding writings on the deductions. I thus try to show that this conception of the schemas can reveal systematic connections and play a unifying role in the text. I proceed to answer an important objection to the view that schemata should be conceived as determinate pure intuitions. This discussion will have the result of clearly delineating the difference between the relation that holds between the categories and time as a formal intuition, on the one hand, and the relation that holds between the pure sensible concepts and space as a formal intuition, on the other.

At this juncture, it should be emphasized, as Allison does, that Kant distinguished between the mere forms of intuitions, space and time, and the corresponding formal intuitions of space and time (Allison 68-9). While the former “contain” merely an a priori, unsynthesized manifold, the latter stand for a pure intuition that possesses unity. Kant explicitly draws this distinction with respect to space as a pure intuition in a footnote to section 26 in the B-deduction (B160n). A formal intuition of space is an objective representation of space (as in geometry). It is a unitary pure intuition. But space as the mere

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11 I draw on Allison (1981). See pp.65-73. Michael Woods (1983) offers a related but not entirely fortunate characterization of a time-determination as a pure image or, alternatively, a temporal aspect under which an empirical intuition is apprehended (p. 216). It seems to me most appropriate to avoid description of the schemata as any kind of image or a temporal aspect. Adhering to Kant’s own usual divisions of representations into intuitions and concepts, I think that conceiving of the schemata as pure intuitions can better reveal the systematic connections of the schemata with the pure syntheses of the imagination that Kant describes in the context of his deduction of the categories.

12 See also Allison (68-9) on the textual support he offers for this distinction with respect to time.
form of intuition just “gives the manifold”\textsuperscript{13}

Textual support for the distinction between time as a mere form of intuition and time as a formal intuition, which Allison also calls a determinate intuition, can be recovered once we notice a key feature of the formal intuition of space – it is a synthetic product of the understanding’s influence on the sensibility:

“In the Aesthetic I ascribed this unity [of space as form of intuition] merely to sensibility, only in order to note that it precedes all concepts, \textit{though to be sure it presupposes a synthesis}, which does not belong to the senses but through \textit{which all concepts of space and time first become possible}. For since through it (as the understanding determines sensibility) space or time are first given as intuitions, the unity of this a priori intuition belongs to \textit{space and time}…”

\textsuperscript{B160n}

Notice that Kant includes time in his discussion, though he does not explicitly call it a

\textsuperscript{13} Beatrice Longuenesse gives an interpretation of Kant’s notions of a form of intuition and formal intuition that is markedly different from the present one. She rejects the characterization of the form of intuition as that which merely gives indeterminate spatial and temporal manifolds where the formal intuitions are regarded as unitary spatial and temporal intuitions. Rather she takes “form of intuition” in that context to stand for the merely potential form of the receptive faculty to receive sensations, upon external affection, and present these in a spatial and temporal ordering – in the intuition of space and the intuition of time. Formal intuition is, on the other hand, just the pure intuition with its unity to which Kant was referring in the \textit{Aesthetic}. On her analysis, what Kant presented as merely “given” in the Aesthetic – the formal intuitions of space and time, he now reconceives in light of the results of the Deductions. Space and time as intuitions in which the empirical manifold can be ordered are in fact a product of figurative synthesis, which is occasioned by the potential form being called to actualization by external affection of the mind. Prior to the reception of actual empirical manifolds, there is only the potentiality of form in the subject. This is what Kant means by “form of intuition” in the relevant footnote, according to Longuenesse’s analysis (Longuenesse 221). Her detailed defense of this interpretation has a lot to recommend it, especially its appeal to Kant’s distinctive “epigenetic” conception of the \textit{a priori} conditions of representation (220-25). While I think her general characterization of Kant’s epigenetic conception of space and time as conditions of representation must be right, I doubt that it is being invoked in the context of that footnote to section 26. Longuenesse’s reading of that passage depends on the plausibility of interpreting Kant’s claim that the “form of intuition merely gives the manifold” as saying that the form of intuition gives the empirical manifold in the sense that the form is the potentiality to receive the empirical manifold and thus represent the latter in the intuition of space. But Kant is seemingly talking about the pure manifold of space in that footnote and is abstracting from any reference to the empirical manifold. The strongest reason to believe that is the character of the introductory sentence at B 160n is that he considers space as an object of geometry (clearly as a pure intuition or a pure object). Kant says that it “contains more than the mere form of intuition, namely the comprehension of the manifold” (B 160n). Kant’s exposition would be downright misleading if he starts out considering the form of intuition and its relation to the manifold of space where space is considered as a pure object, and yet goes on to develop the point he makes in that first sentence by introducing the empirical manifold. Now, it is possible that Longuenesse is ultimately right here. But even if that is the case, the central arguments of this section will remain unaffected. I will, accordingly, leave the matter unsettled for present purposes.
formal intuition. Nevertheless, what should become clear in light of this passage is that time as a pure intuition is a product of a synthesis by the understanding – determination of sensibility by the understanding. How is any such determination of the sensible forms of intuition in general effected, according to Kant?

Importantly, the understanding’s supreme function is to combine (or synthesize) a manifold of representations in such a way as to bring it under the unity of apperception (B135). It may appear that the understanding can bring a given manifold under the synthetic unity of apperception only through the application of the categories on the basis of which the manifold is determined with respect to one of the logical functions of judgment. In other words, if we take the result of the deduction summarized in section 20 of the B-edition, we can regard a synthesis in accordance with the categories as primary (B143). Yet, if we regard the pure intuitions of space and time as products of the understanding’s effect on sensibility in this sense, namely as a product of the application of the categories, it would seem that the formal intuitions would already have a conceptual character. Kant, however, explicitly denies this, as he writes that the unity contained in formal intuitions “precedes all concepts,” even though it is a product of synthesis (B 160n).

Furthermore, at the end of his note on the formal intuitions, Kant refers to section 24 of the Deduction. Given that he is primarily concerned with elucidating the so-called transcendental figurative synthesis of the imagination in that section – the cognitive act by means of which understanding determines the form of sensibility – Kant’s reference would seem to suggest that this is the very same synthesis as the synthesis reflecting the understanding’s effect on sensibility whose product is the formal intuitions. As Beatrice Longuenesse notes, the characterization of the formal intuitions as products of a synthesis
corresponds to the *synthesis speciosa* – the figurative synthesis – which stands at the center of Kant’s earlier exposition in section 24 (Longuenesse 216).

If the formal intuitions are indeed a result of the transcendental synthesis of the imagination, then there must be an intimate connection between the formal intuitions and the transcendental schemata insofar as the latter are conceived as transcendental products of the imagination resulting from the understanding’s effect on the pure manifold of time. Understanding this relationship will be one of the most difficult tasks to occupy us below. Alternatively, the question is how to understand the relationship between Kant's two references to the understanding’s effect on sensibility – the figurative synthesis that yields the formal intuitions and the transcendental synthesis of the imagination that yields the schemata. For Kant maintains that the unity of formal intuitions precedes all concepts and that its origin is not in the understanding but in sensibility. Yet, not only does Kant maintain that pure concepts constitute the unity of the transcendental schemata but he also characterizes the transcendental synthesis of the imagination in the B-Deduction (sec. 24) as the effect of the understanding on sensibility *in accordance with the categories*. So whatever the product of the figurative synthesis in focus in section 24 is supposed to be, it will seem to be, in some sense, a product of the application of the categories to sensibility and hence to have a conceptual character.

Again, however, these characteristics of the workings of the transcendental synthesis of imagination – the apparently conceptual character of its products and the discursive origin of the synthetic unity of the resulting representations – mark a distinction between the transcendental schemata and the formal intuitions. In what way are they both a product of the figurative synthesis? First, it should be noted that there could be a sense in which the
transcendental schemata too may not be properly characterized as conceptual in nature insofar as we take the categories, as they are first applied to the pure manifold of time, to be merely logical functions of judgment, as Longuenesse notes in her analysis of the sensible syntheses (244). It is the schemata that first give content to the categories or make the latter concepts of possible objects, according to this analysis (203). The blind syntheses of the imagination — the transcendental schemas — are undetermined by concepts (244).

Longuenesse’s distinction between the two senses in which the categories can be applied - the “blind” application in which the categories are not “reflected as concepts” but as mere logical functions of judgment to yield the pure combinations of a manifold, on the one hand, and the empirical application to objects where the categories are already applied through the corresponding sensible schemas, on the other - is indeed an important one. But even if the foregoing characterization of the categories as mere logical functions that cannot qualify as concepts prior to their “schematization” is to be accepted, the following still seems to be the case. Even if the schemata are a product of the blind “application” of the categories

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14 Even though I find myself generally sympathetic to Longuenesse’s view that the categories should not be seen as full-fledged concepts prior to their association with the corresponding sensible syntheses, I think that there may be room for some resistance to this interpretation. The basis for doing so could be the characterization of conditions that give enough transcendental content to the categories for the latter to be more than mere logical functions of judgment but one that falls short of associating the categories with the determinate pure syntheses of time, i.e. the schemas. For Kant first identifies the forms of intuition (or perhaps the formal intuitions) as necessary conditions for the categories to qualify as concepts, that is as concepts of an object in general. The pure manifold that the forms of intuition provide ensures, so to speak, the possibility of the categories representing or expressing a synthesis of a manifold, thereby the possibility of being concepts of objects in general. In effect, the presence of a manifold that is given a priori in us ensures that the categories could be given an object (a pure object in this case). This is what is necessary in order for them to qualify as concepts (for any representation for which no object could in principle be given cannot count as a concept). See Kant’s Letter to Beck (January 20, 1792). Of course, it is still possible to insist that a mere a priori manifold, the mere forms of intuition, without the more determinate pure syntheses of time, the schemas, gives only a necessary but not a sufficient condition for the categories to count as concepts. After all, if only the manifold of time and space were to guarantee that the categories can be expressions of synthetic unity of some manifold, i.e. concepts of objects in general, there will be no possibility of distinguishing the particular syntheses associated with the different categories (e.g. synthesis according to the category of substance insofar as an intuition is synthesized and determined in such a way as to yield sensible objects capable of being judged in accordance with the categorical form of judgment and so on). There will be thus no distinction between the different categories in this case, that is, on this condition for their characterization as concepts of objects in general. I think that one
in a different sense from the sense in which categories, as schematized and thus full-fledged concepts apply to empirical objects, the schemata still have an intellectual character. This much should be clear. Whether we call the resulting pure syntheses conceptual or somehow intellectual in character or not will not remove the original difficulty. The mere formal intuition of time is different in that it “precedes” all concepts. So it cannot have the intellectual character of the particular schemata. How we characterize the latter, as conceptual or not, does not affect the current point, which concerns only the difference between formal intuition and schema.

The clearest indication that the problem is not resolved is that the unity that distinguishes the formal intuition from the mere form of intuition is not given by the concept of the understanding, according to Kant, but belongs to sensibility (B 160n). If we recall Kant’s characterization of the transcendental time-determination as a universal representation based on an *a priori* rule, a representation whose unity is constituted by the category, we can see very clearly the difference between the transcendental time-determination and the formal intuition. So if both are a product of the figurative synthesis, we still need to find a way to harmonize the ways in which Kant conceives of the understanding’s effect on sensibility in

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can still adopt much of Longuenesse’ interpretation, maintaining that the categories cannot be full-fledged concepts unless they are applied in accordance with the sensible syntheses, and yet temper her claim somewhat by stressing that the categories do have extra-logical significance, i.e. that they count as concepts even in abstraction from the schemas, insofar as there are in us the pure manifolds of space and time for them to express a synthetic unity of these manifolds. The “full-fledged” character of the categories would come with what Kant calls their objective validity – their legitimate application to empirical objects alone. Insofar as the latter is possible only in accordance with the schemas, the schemas will indeed ground the possibility of the categories as full-fledged concepts with significance and validity. But I still see some interpretative space for the more tempered position identified above. The strongest evidence in support of the idea that the categories can be characterized as concepts, keeping aside questions of objective validity, even in abstraction from the schemas, comes from the structure of Kant’s exposition in the Analytic. Before we reach the Schematism chapter, Kant has presumably shown us the possibility of *a priori* concepts – the categories characterized as having transcendental, as opposed to merely logical content. As noted above, it is a very slim transcendental content, indeed. All that can be said about them prior to the Schematism chapter is that they are concepts of objects in general and the synthesis of a manifold that they expresses is not distinguished in any way (the schemas would need to be introduced for that purpose).
these various contexts. Let us first focus on the characteristics of the formal intuition in order to make some progress in addressing this problem.

(iii) Formal intuitions and transcendental schemas

One clue as to how the formal intuition of time can be both a product of synthesis, an effect of the understanding on sensibility, and yet precede all concepts and thus a product of synthesis not “in accordance with the categories” comes from Kant’s more thorough discussion on the representation of “unity” in section 15 in the B-Deduction. There Kant identifies “the qualitative unity” as the ground of the possibility of any combination or synthesis – intellectual or sensible. This is to say that the higher qualitative unity in question makes possible any intellectual unity thought in judgments (as syntheses of concepts). Hence, Kant writes, it is a unity that is higher than the unity represented in the category (B 131). The qualitative unity he has in mind is clearly the transcendental unity of apperception, which “precedes all concepts of combination a priori” (B 131). In other words, it is the unity that makes the categories possible as representations of synthetic unity of consciousness.

Insofar as the unity that precedes any intellectual syntheses, i.e. the logical use of the understanding, or any sensible syntheses of appearances is the transcendental unity of apperception, it seems that one way we can think of the synthesis of the formal intuitions is to think of them as resulting from the subject’s bringing space and time under unity of apperception. This would be a synthesis or the “comprehension of the manifold” that precedes any more determinate synthesis yielding the schemas, as the latter already “carry” the intellectual character of the associated categories. It would thus meet the stricture against synthesis in accordance with concepts that Kant refers to in the account of formal intuitions.

In her analysis of Kant’s account of formal intuitions, Longuenesse suggests the
following line of interpretation, which can shed light on the original problem we encountered in trying to account for the different character of the formal intuitions, on the one hand, and the transcendental schemata, on the other:

“…space and time, as formal intuitions, are the first, most original “effect of the understanding on sensibility.” Within these formal intuitions are achieved the figurative syntheses generating the given multiplicities that are to be reflected under concepts under concepts according to the logical forms of our judgments. Not only do these intuitions precede any determinate concept (whether empirical or mathematical), they also precede the universal concepts (the categories). For they are prior to (and a necessary condition of) each specific synthesis making possible reflection under one or the other of the logical forms of judgments and thus, a fortiori, prior to the categories, “universal representations of synthesis” (223).

Longuenesse’ proposal, summarized in the above passage, is to view the pre-conceptual synthesis that yields the formal intuitions as the first, original “effect of the understanding on sensibility” and in turn to treat this original synthesis as the precondition for the specific or particular figurative syntheses. Since her reference is to the multiplicities, i.e. sensible objects, resulting from these specific figurative syntheses it may not be evident where the transcendental time-determinations or the schemas come in her discussion above. Yet, the specific figurative syntheses that enable the reflection of sensible objects under concepts combined in accordance with the logical forms of judgment are, according to Longuenesse’s analysis, the schemata of the pure categories (245). They are the specific results of synthesis speciosa (ibid.). There are, according to Longuenesse, as many aspects of the synthesis speciosa as there are intellectual syntheses according to the logical forms of judgment (241). Hence it is clear that the specific figurative syntheses that are employed in generating the sensible objects to be reflected under the concepts combined in accordance with the logical forms of judgments are the schemas.
I cannot at present explore in more detail Longuenesse’s reference to the generation of multiplicities and the latter’s role in her interpretation of the schematism and its relationship to the logical forms of judgment.\(^\text{15}\) However, one feature of Longuenesse’s account can be fruitfully employed for our present purposes and bring some clarity to the question that spurred this investigation – the relationship between the formal intuition of time and the schemas. If we take the figurative syntheses mentioned above in the sense of results or products of the work of transcendental imagination rather than processes, we can see the relationship between schemas and the formal intuition as follows. The pre-conceptual synthesis that brings time under unity of apperception counts as the first or original “effect of the understanding on sensibility.” This original effect can be viewed as the figurative synthesis that yields the formal intuition within which any further and specific syntheses (i.e. pure syntheses of time or the schemas) can be realized.

The formal intuition of time, and thus the original figurative synthesis, can in effect be viewed as a precondition for the schemas. The formal intuition can be consistently

\(^{15}\) It is not entirely clear to me how to correlate some of the features of Longuenesse’s account of the schemas with the present analysis. For Longuenesse sometimes seems to characterize the schemas as concepts that reflect the rules according to which the specific figurative syntheses associated with the different schemas are generated. For example, this seems to be her contention in the discussion on number (256). I would agree that there are of course the schematized concepts, which I take to be concepts of transcendental schemas construed as intuitive representations. As concepts, the schematized categories would indeed reflect rules for the generation of the schemas as transcendental determinations of time, i.e. determinate intuitions of time. But I am primarily concerned to stress the nature of the schemas as transcendental intuitive representations, as this seems to me to be the central way in which they fit into Kant’s various characterizations of the transcendental synthesis of imagination and its products. For what could be the result of figurative synthesis applied to the pure manifold of time besides an intuitive, determinate representation rather than a concept? My emphasis is thus different. But in all fairness it must also be acknowledged that Longuenesse is not in general concerned with classifying the schemas in this sense. Her focus is rather different: to trace out in significant detail the particular productions of the schemas, i.e. to provide a bridge between “the general explanation of synthesis speciosa (section 24) and the list of the schemata (Schematism chapter) and provide a case-by-case explanation of the productive syntheses of imagination as they relate to the logicodiscursive forms for which they are produced, thus generating the schemata of the pure concepts of the understanding” (245). As long as Longuenesse’s project in the third part of the book is to provide this kind of explanation rather than any form of justification or deduction of the schemas, I have no quarrel with her guiding motive. In contrast, to charge Kant with neglect to justify the schemas as a newly contrived set of concepts that may seem to be arbitrarily paired up with the corresponding categories, as Guyer seems to do, is problematic, as I seek to show below.
described as pre-conceptual, possessing its own intuitive unity (though one that is a product of synthesis) whereas the schemas are to be described as intellectual representations insofar as their unity is constituted by the associated categories whose original application yields these schemas. Thus the different character of the general intuitive representation, the formal intuition, and the particular representations, the transcendental determinations of time, which are all a product of figurative synthesis, can be explained.

As already observed, Kant does insist that the unity of the formal intuition belongs to sensibility (B160n). So even if the above account of the generation of formal intuition, inspired by Kant’s general discussion on the transcendental unity of apperception, is correct, we must be sure to stress that bringing the manifold of space and time under the transcendental unity of apperception does not make the characteristic unity of the formal intuitions a product of the understanding. For this would go against Kant’s own strictures. Yet, it is clear that if the formal intuitions are a product of synthesis, preceding any conceptual unity, they must also be marked by the unity of apperception, as a representation of unity is, by Kant’s own lights, what first makes possible the application of the concept of synthesis (B 131).

We may well have reached the point where no more can be said about this strictly intuitive unity that must belong to sensibility and its relationship to the unity of apperception. Still, one significant result of the foregoing discussion is that Kant’s description of the formal intuition of time not only provides a way to link the Deduction and the Schematism but has also allowed us to see the continuity between the intuitive nature of the schemas as pure and determinate intuitions of time, i.e. specific syntheses, and the formal intuition. This result will be significant for treating the problems that are the topic of the next section. But before
turning to that, the case for this particular interpretation of the schemas must be strengthened by garnering further evidence for one of the primary claims in this section of the paper. The transcendental schemas are best understood as intuitive representations, determinate intuitions of time – a characterization that allows us to investigate important connections between the preceding Deductions of the categories and the Schematism chapter.

Above, I identified the transcendental schemas with the intuitive products of the understanding’s determination of the pure intuition of time. A good way to draw a connection between some of Kant’s characterizations of the transcendental schemas and the intuition of time in particular is to identify the general role of pure syntheses in empirical cognition. This suggestion has the clear advantage of bringing the transcendental, i.e. figurative synthesis to the forefront of the present account.

Section 24 in the B-deduction suggests that the application of the categories to the pure sensible intuitions of space and time is effected through a figurative or transcendental synthesis of the imagination:

“This synthesis of the manifold of sensible intuition, which is possible and necessary a priori, can be called figurative...Yet the figurative synthesis...must be called, as distinct from the merely intellectual combination, the transcendental synthesis of the imagination...insofar as its [the imagination’s] synthesis is still an exercise of spontaneity...and can thus determine the form of sense a priori in accordance with the unity of apperception, the imagination is to this extent a faculty for determining the sensibility a priori, and its synthesis of intuitions, in accordance with the categories, must be the transcendental synthesis of the imagination...” (B151-52, emphasis added)

What is it for a synthesis to be possible and necessary a priori, according to Kant? It is for the synthesis to apply to a pure material or an a priori manifold. This is confirmed at B103 where Kant defines a pure synthesis as a synthesis whose manifold is given a priori
(space and time). The result of such a pure synthesis must then be a pure intuition which has been unified through apperception.

It is not entirely clear from Kant’s discussion at section 24, however, what general role any pure synthesis of the forms of intuition is supposed to have in experience. A crucial piece of evidence that can clarify Kant’s reasoning comes from A79 where Kant identifies, in three stages, the synthesis of the manifold of pure intuition through the operation of the understanding as necessary for any cognition of objects (A79). There, Kant claims that for any object to be cognized, the \emph{a priori} elements in its representation, the spatial and temporal elements, must be synthesized or determined by the understanding. So for any apprehension and cognition of objects in space and time to be possible, the \emph{a priori} spatial and temporal manifolds must be synthesized by the imagination guided by the understanding:

“The first thing that must be given to us \emph{a priori} for the cognition of all objects is the manifold of pure intuition; the synthesis of this manifold by means of the imagination is the second thing, but it still does not yield cognition. The concepts that give this pure synthesis unity, and that consist solely in the representation of this necessary synthetic unity, are the third thing necessary for cognition of an object that comes before us, and they depend on the understanding” (A79)

The first thing to notice here is that Kant does not single out the pure intuition of space as the pure material that must be synthesized for any cognition of objects to be possible. We thus have the important result that for any cognition of objects to be possible, the categories must be applied to the pure intuitions of both space and time. If we focus on the pure intuition of time, we thus have additional evidence that Kant accorded a prominent role to the pure synthesis of time and, correspondingly, the product of this synthesis.

How does this conclusion help with the clarification of the status of the transcendental schemas? Recall that Kant variously describes the schema as a “pure synthesis, determined
by a rule of that unity, in accordance with concepts, to which the category gives expression,” (A142/B181), “transcendental determination of time,” (A139/B178), “transcendental product of imagination, a product which concerns the determination of inner sense in general according to its form (time).” (A142/B181). All these conceptions of the schema are importantly prefigured in Kant’s discussion of the synthesis of the pure manifold of space and time in general as an integral part of the empirical cognition of objects.

The description of the schema of the category as a transcendental time-determination can now be seen to play its important unifying role. A transcendental time-determination is just the result of the application of the categories to the pure intuition of time, a synthetic result of the action of the imagination, which is intellectual, given that it constitutes the application of the categories, and yet necessarily related to the form of sensibility, given that its material is the pure manifold of time. This accords with Kant’s constraints on the intellectual and sensible aspects of the “mediating representation” that the schema is supposed to be (A138/B177). This conception of the schema as a mediating representation also accords with Kant’s description of the imagination as a mediating faculty, which produces the schema. The imagination has both intellectual and sensible characteristics since it is related to the understanding, on the one hand, and to sensibility, on the other (B151-2).

One important piece of evidence that the schema as a transcendental time-determination is the result of a pure synthesis of time or the result of the application of the categories to the form of intuition comes from Kant’s Reflektionen. In R 6359, Kant identifies a transcendental time-determination as itself a “product of apperception in relation to the form of intuition,” which according to him raises the question “how the application of the
categories to the form of intuition is possible.”

So Kant’s language suggests that transcendental time-determinations, the schemas of the categories, are the result of the application of the categories to the unconceptualized, pure manifold of time.

As an important programmatic note and systematic piece of evidence for this characterization of the transcendental schemas, we should draw attention to Kant’s formulation of the task of transcendental logic in general. At A79 he writes: “Transcendental logic, however, teaches how to bring under concepts not the representations but the pure synthesis of representations” (A79). What could Kant mean by the pure synthesis of representations as opposed to the representations themselves? First, we must observe that Kant’s use of “synthesis” is typically ambiguous between the process of synthesizing and the result of synthesizing representations. Still, context usually determines what is meant. Here, it makes sense to take him to be referring to the result of synthesizing pure representations (i.e. an a priori manifold) rather than any process of synthesizing.

Second, any empirical manifold of representations includes a priori representations of space and time (in addition to the empirical element, i.e. the sensation). These a priori representations whose synthesis is in question are presumably the general and universal representations through which the pure concepts of the understanding apply to the corresponding empirical representations (for it is the pure concepts that form the subject matter of transcendental logic). It seems then that the pure synthesized manifolds of space and time are conditions under which a pure concept applies, as the schematism requires, because the synthesis gives the case to which the pure concept is applied. Hence, the schematism appears in harmony with the programmatic requirements of transcendental logic,

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16 It is important to note in passing that Kant thought that the application of the categories to the form of intuition (time) raises a problem. I return to this problem at the very end of the paper.
at least if we construe the schemas as synthesized pure manifolds of time (or in Allison’s description “determinate pure intuitions”). We can say then that transcendental logic teaches how to bring the schemas of objects under the pure concepts of the understanding.

If we take seriously the claim that the transcendental schemata are pure syntheses of time, in particular, we have the important result that transcendental logic teaches how to bring the general and universal temporal form of any empirical representation under the categories. Consider Kant’s important characterization of the role of the schema in the subsumption of objects under the categories: “If this condition of the power of judgment (schema) is missing, then all subsumption disappears; *for nothing would be given that could be subsumed under the concept* [the category]” (A248/B304). So if the schema is removed, nothing would be given for the categories to apply to. The schema must be conceived as an intuitive representation rather than a conceptual one, as it becomes clear from this passage. The schema is something that is given and thus suggests a sensible, passive representation. So if an object or an appearance is to be brought under the categories, then its universal and general sensible form - the schema - must be subsumed under the categories.

Initially, however, we characterized the transcendental schema as a result of the application of the categories to the manifold of time. We have now shifted to talking about the temporal schemata of empirical objects. Is this a consistent picture to advocate? In fact, as we will see below, Kant presents the transcendental schema in a double aspect. The transcendental schema is a schema of the understanding and a schema of sensibility in that it guarantees objects are given “in harmony with those concepts [the pure concepts of the understanding]” (A136/B175). The task of transcendental philosophy is to characterize the schemata as those conditions or forms under which objects can be given to the
understanding. In this respect, it is important to notice that Kant speaks of the transcendental schemas not only as a result of the procedure of schematism of the understanding, but as *schemata of sensibility*, which restrict the application of the categories (A147/B186). In line with the double-aspect life of the transcendental schemas, he also describes the latter as only the “phenomenon or sensible concept of an object, in agreement with the category” (A147/B186). Far from threatening the coherence of this view, these various ways of describing the schemas track the important function of the schema as the link between sensibility and understanding.

Here is one way to forge the connection between the schema of the category and the schema of the empirical object on the basis of which its concept is seen as homogeneous with the category. The transcendental time-determination that would result from the application of the category to the pure manifold of time is the same determination or general temporal form with which the imagination must present the empirical object for the category to apply to it – the object’s temporal schema. This construal allows us to see why Kant thinks of the schemata as both the “realizations” and the “restrictions” of the corresponding categories. Moreover, it allows us to see the connection with Kant’s promissory note that transcendental logic teaches how to connect the pure syntheses in the empirical representations, i.e. the synthesized *a priori* material in the empirical representations, with the pure concepts of the understanding. The transcendental schema is introduced to fulfill that function by being the relevant pure synthesis.

Finally, we are in a position to see how Kant can formulate the solution to the problem with which he begins the chapter. We can now revert to a discussion on the level of concepts. The concept of a universal or general time-determination is that mediating concept
of “a synthesized material derived from the representations of inner sense,” which Kant adverted to in his letter to Tieftrunk.\textsuperscript{17} The mediating concept is a concept of a pure synthesis of the temporal form of intuition - the general and universal conditions of time under which the representations of objects must stand. Along Allison’s lines, it is a concept of a determinate pure intuition. Every appearance or object is representable by an empirical concept that contains those temporal conditions. So the empirical concept of every appearance thus turns out to be homogeneous with the concept of the transcendental schema. The latter concept, i.e. the mediating concept of a pure synthesis of the manifold of time, is the concept that contains the synthetic unity which only the category can express. Hence the mediating concept is a concept of an \textit{a priori} synthesized material, a determinate pure intuition whose unity results from the application of the category. This concept is thus also homogeneous with the category.

Can we say more about what precisely a transcendental time-determination is, according to Kant? We have spoken freely of the general temporal conditions under which objects must be given. But that can be somewhat inaccurate since some of the particular transcendental schemas are described in a way that shows that the nature of the schema is not illuminated by simply calling it “a condition of time.” The expression is too vague. Consider the mathematical categories of quantity and quality. According to Kant, the schema of magnitude is \textit{number} since \textit{number} is a synthetic representation of the \textit{generation} of time in the successive addition of homogeneous units (A143/B182). Also, the schema of a reality “as the quantity of something insofar as it fills time, is just that continuous and uniform generation of that quantity in time” (A144/B183). But here, when we focus on the schemata of the mathematical categories, we can see that a transcendental time-determination should

\textsuperscript{17} Letter to Tieftrunk, December 11, 1797 (p.538).
not be conceived in narrow terms to include only the ordering of moments of time. A
determination of time is equally well described as the generation of time by the imagination
as it successively apprehends the homogenous manifold of an appearance. The section on the
*Axioms of Intuition* makes the details of Kant’s account on this score clearer (B202-06).

Allison’s focus on the dynamical categories may explain why he presents a
transcendental time-determination as “a determination of objective relations of appearances
in time.”\(^\text{18}\) The temporal relations in question hold *between* distinct appearances. But this is to
ignore the determination of time with respect to the individual intuitions of appearances,
which are the proper province of the mathematical schemas, and to focus exclusively on the
relations of appearances. It should be emphasized that Kant’s notion of a transcendental
determination of time is significantly broader than it is suggested by Allison’s remarks. The
foregoing, necessarily brief, reflection on the schemata of the mathematical categories attests
to this. An *a priori* time-determination is not just a “determination of objective relations” but
also a time-determination construed as the *generation* of time.

(iv) A problem for the present interpretation

An important difficulty for the present interpretation stems from the observation that
transcendental time-determinations are supposed to be general and universal conditions under
which objects of experience stand. Yet, intuitions are, according to Kant, singular
representations. Does not such a general and universal representation as the transcendental
time-determination really indicate the conceptual character of the schemas?\(^\text{19}\) The foregoing
discussion has assumed that the schema is a synthesized pure manifold or a determinate

\(^{18}\) p. 175

\(^{19}\) The general outlines of this objection can be found in Allison (p.71).
intuitive representation. Can we account for the suggested conceptual character of the
schema as well?

As Allison correctly notes, transcendental time-determinations are conceptualized
pure intuitions so it is to be expected that they have a corresponding conceptual character. If
we take Longuenesse's criticism of this characterization of the schemas seriously, we can still
regard the schemas as intellectual representations in some sense, and hence as universal in
character. But given that Kant also characterizes the schemas as concepts of the phenomenon,
it will bring greater coherence to his descriptions, if we assume the corresponding intuitive
representations, i.e. the transcendental-time determinations, to have a conceptual character.
The schemas can then be seen as sensible concepts just like the mathematical concepts which
have “an essential reference to the pure intuition of space, wherein it is exhibited or
constructed, that is, realized” (72). In the case of the transcendental schema, when construed
as a sensible concept, the given concept also has a similar essential reference to the pure
intuition of time.

Just as pure sensible concepts have a double-aspect life, i.e. the constructed concepts
can be characterized as intuitions, so we might see the transcendental schemas as having a
double-aspect life. We will be in a position to recognize how the underlying character of the
schemas as determinate intuitions of time, but ones that have a universal or conceptual
character, can justify their description as concepts too. This is another reason to resist
Longuenesse's reservations about the characterization of the schemas as conceptual in nature.

Allison is thus correct to observe that we can construe the transcendental schemas as
formal intuitions and sensible concepts at the same time just as we can construe the realized
or constructed mathematical concept as a formal, spatial intuition. In general agreement with
Allison, I see the intuitive character of the schemas as deserving the clear emphasis. This is because it is precisely by focusing on the characterization of the transcendental schema as a determinate pure intuition that we can display the systematic connections between Kant’s writings on the schematism and his transcendental psychology in the context of the deductions, as shown above.

But an important additional difficulty with the present construal may seem to emerge at this juncture, according to Allison. This problem stems from the clear separation that Kant makes between the categories, on the one hand, and the pure sensible concepts (e.g. geometrical concepts), on the other. It may be objected that one ignores the crucial distinctions between the pure sensible concepts and the categories by availing oneself of the analogy with the pure geometrical concepts. These are radically different, according to Kant. As Allison observes, it might seem that “the basic justification for characterizing the realized (constructed) mathematical concept as a pure (formal) intuition seems to be totally lacking with regard to the schemata of the pure concepts of the understanding” (72).

In order to address this residual worry, it is instructive to display both the characteristics of the pure sensible concepts that set them apart from the categories and the relevant characteristics that allow us to construe the pure sensible concept, equally validly, as a formal intuition. The following brief discussion thus offers the necessary context to resolve the remaining difficulty with the present interpretation, as it is articulated by Allison.

According to Kant, geometrical concepts can be constructed in space (A713/B741-A716-B744). These concepts already contain pure intuitions in themselves, which is what indicates that they can be so constructed (A720/B748). But the pure concepts of the understanding, as mere concepts of objects in general, contain nothing but rules for the
synthesis of possible intuitions (A720/B748). This is an essential ground for the distinction between the two kinds of cognition that Kant identifies in the *Discipline of Pure reason in Dogmatic Use*. Mathematical cognition is importantly different from philosophical discursive cognition, i.e. cognition from concepts, precisely because it proceeds through the construction of its concepts in intuition and the determination of its objects (A723/B751). Philosophical cognition “confines itself to general concepts,” like the concept of a cause, which cannot be exhibited in general *in concreto* or in intuition in the way mathematical concepts can be so exhibited (A715-16/B743-44). Clearly, the mathematical (pure sensible) concepts, even if also *a priori*, are very different from the categories. It is precisely the constructability of the mathematical concepts that lead Allison to articulate the doubts about the analogy with mathematical concepts. Mathematical concepts can be “presented in intuition” or constructed whereas the pure concepts of the understanding cannot be so constructed (72).

Have we not strayed away from Kant’s intended meaning in availing ourselves of the comparison with mathematical concepts in the explanation of the double-aspect life of the transcendental schema? Are we implausibly identifying the transcendental schema with a constructed category? Allison chooses to address this worry by taking an indirect course, i.e. by showing that there is a ground for construing the transcendental schemas *as special* forms or conditions of appearances, in the way that space and time are seen as *general* forms of appearance in the *Aesthetic* (A20/B34-45; qtd. Allison 72). If we can rightfully regard a transcendental time-determination as a special though still universal form or condition of appearances (in an epistemic sense), then we can construe it as a pure intuition, given that space and time as pure intuitions function as such forms of appearances. According to
Allison, transcendental schemata have a clear epistemic role of the required kind (73).

Such a response to the aforementioned challenge, however, puts a very strong burden on the epistemic role of schemata that cannot entirely build the case for according a primary role to their characterization as pure intuitions. Kant does indeed describe the schema as a “formal condition of sensibility” (A140/B179). But in this context the schema is so described as a condition on the use of the category itself – a sensible condition to which “the use of the understanding is restricted,” not as a form of appearances (ibid.) Moreover, the pure concepts of the understanding are also formal conditions of experience, albeit intellectual ones. To describe the schema as forms or conditions of appearances, even if it were warranted by the text, would not be sufficient evidence to construe them as pure intuitions. For as concepts, the transcendental schemata would equally well qualify as formal conditions of experience (in an epistemic sense). A different strategy is needed to address the foregoing worry.

The strategy that one should pursue here is direct. To show that the distinction between the categories and the pure sensible concepts has not been blurred, one should emphasize two things. First, it is the application of the categories to the form of time that yields determinate intuitions – the transcendental time-determinations. The relation of the categories and time as a form of intuition is not a relation of construction but one of application. A pure sensible concept like a geometrical concept can be constructed because one can “exhibit a priori the intuition corresponding to it” (A713/B741). But there is no content in a category prior to its application to the form of time which would show what kind of intuition can be exhibited that corresponds to the category simply because there is no intuition that corresponds to the categories – neither a spatial nor temporal one.

The transcendental time-determination is thus not a result of the construction of the
corresponding pure concept of the understanding. For there is no sense in which the latter contains any pure intuition or has essential reference to the temporal form of intuition in the way that the mathematical concept can be said to have essential reference to the spatial form of intuition (A720/B748). On the contrary, given the special character of the categories, they “can have a determinate significance and relation to any object only by means of the general sensible condition,” but this condition is “omitted from the pure category, since this can reflect nothing but the logical function for bringing the manifold under a concept” (A245).

The relevant concept that is constructible in our case, which grounds the analogy with the mathematical concept, is not the category at all. It is the transcendental schema as it is characterized conceptually. For it is the transcendental schematized concept that contains essential reference to the corresponding pure intuition of time and thus meets the conditions for being analogous to the mathematical concept. One does not need to claim that the category is constructible in order to justify characterizing the formal intuition of time resulting from the category’s application as a pure sensible concept. The justification rests solely on the fact that the temporal concept – the schema - will also have the same kind of essential reference to the corresponding pure intuition that the mathematical concept has with respect to space. As the mathematical concept is constructible so one may say that the transcendental schema, construed as a concept, is similarly constructible.

Admittedly, there are important qualifications we should keep in mind in using this language of “construction.” For even if the mathematical transcendental schemas, e.g. the schema of the category of magnitude, can admit of construction, it may be downright misleading to speak of the schema of substance as “the persistence of the real in time” as admitting of construction. In fact, Kant explicitly mentions only the temporal concept

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coinciding with the schema of magnitude, i.e. number, as falling under reason’s use through the construction of concepts:

“But to determine an intuition a priori in space (shape), to divide time (duration), or merely to cognize the universal in the synthesis of one and the same thing in time and space and the magnitude of an intuition in general (number), which arises from that: that is a concern of reason through construction of the concepts, and is called mathematical” (A725/B753).

In the Schematism chapter, number is identified as a representation that summarizes the generation of time in the successive addition of homogeneous units in the apprehension of intuitions (A143/B182). So we have at least one case of a temporal concept - a schematized concept - that admits of construction. More importantly, however, the foregoing passage clearly shows that, according to Kant, temporal concepts are on a par with mathematical concepts as cognitions of “the universal in the synthesis of one and the same thing in time and space.” But, as argued above, the transcendental schemas are just such pure and universal syntheses of time under which appearances must be apprehended. The corresponding temporal concepts of such intuitive syntheses will thus qualify as cognitions of the universal in things given in time, and, as the foregoing quote suggests, at least some of these temporal concepts will admit of construction.

It is a good question whether important differences between the dynamical and the mathematical schemas will not emerge at this juncture. Such an investigation is beyond the scope of this paper. The important lesson to draw here is that we can justify, on Kantian grounds, the double reference to the transcendental schemas as determinate intuitions of time (pure syntheses) and pure sensible concepts on grounds similar to the double reference of the realized mathematical concepts.

Second, we should notice another characteristic of the pure sensible concept that
clearly distinguishes it from the category. To exhibit a pure intuition that corresponds to a given geometrical concept is to give it its real definition, according to Kant (A241). But in a passage that seems to identify the transcendental schema with the result of an application of the category to sensibility, Kant denies that the category can be defined at all. So a transcendental schema, even if it could be said to correspond to a given category in some loose sense, would not count as the real definition of the corresponding category in the way that a geometrical concept, can be given its real definition in the form of an intuition.

Consider Kant’s characterization of the categories at A245:

“..the categories require, beyond the pure concept of the understanding, determinations of their application to sensibility in general (schema), and without these are not concepts through which an object can be cognized and distinguished from others, but only so many ways of thinking of an object for possible intuitions and of giving its significance in accordance with some function of the understanding…they themselves cannot therefore be defined” (A245).

It should thus become clear that we have not blurred the distinction between the categories and the other a priori concepts. As argued above, Allison is correct to observe that we can regard the transcendental schemas as both formal intuitions and sensible concepts at the same time just as we can construe the realized or constructed mathematical concepts as formal spatial intuitions. However, the comparison does not have to rely on any relation of construction holding between the category and the schema. Rather, the corresponding sensible concept of the schema is what one would expect to have, given that the schema as a transcendental time-determination is an application of the category to the pure manifold of time. It is this sensible concept that has essential reference to the corresponding pure intuition of time. Hence there is no need to ask for Allison’s indirect defense of the view that transcendental schemata should be seen as determinate pure intuitions.
Both Allison and Guyer have offered an illuminating discussion of the relationship between Kant’s characterizations of the transcendental schemas in the Schematism chapter and his increasing emphasis on outer spatial intuition in specifying the objective validity of categories by the time the General Note on the System of Principles has appeared.\textsuperscript{20} I will not be repeating this discussion here. It suffices to note that Kant’s conception of the transcendental schemas as essentially temporal representations (whether we think of these as intuitions or concepts) does not conflict with the further observation that the transcendental schemas may stand in need of their own schematism in space to ground the objective validity of the corresponding categories.\textsuperscript{21} Temporal schemata are necessary because they are truly universal \textit{a priori} representations that belong to all intuitions – both inner and outer.\textsuperscript{22} As such, their status as the transcendental imagination’s necessary and universal pre-conditions of any empirical synthesis is not jeopardized by Kant’s further reflections in the General Note on the System of Principles.

To sum up, we have so far seen that pure syntheses of time, which result from the workings of the figurative synthesis, are a product of the application of the categories. We have also in effect found important connections between Kant’s exposition of the syntheses of imagination in the preceding deductions and the transcendental schematism.\textsuperscript{23} The details

\textsuperscript{20} Allison pp.79-80 and Guyer pp.166-72.

\textsuperscript{21} See especially Kant’s claim that the schema of substance, “the persistence of the real in time” itself needs a corresponding outer intuition in order to establish the objective validity of the category (B291).

\textsuperscript{22} Guyer makes a similar observation (167).

\textsuperscript{23} Longuenesse gives a detailed and informative discussion of the relationship between the figurative synthesis expounded in section 24 and the transcendental schemas of the categories. See especially ch.8 in her \textit{Kant and the Capacity to Judge}. Her analysis of the figurative synthesis also makes it clear that the B-Deduction prefigures the transcendental schematism in important ways. There is also a clear affinity between the present account of the sensible syntheses, i.e. the schemas, as products of the application of the categories and her analysis of the sensible syntheses insofar as she regards the \textit{synthesis speciosa} as a source for the initial “application” of the categories (244). The schemata are “nothing other than the specific results of the \textit{synthesis}...
of this interpretation will be essential to addressing the key question that animates the second part of this paper. In what follows, I focus on the following question. What could explain why Kant did not see any need to give a deduction or justification of the particular schemas he associates with the categories? I proposed that an adequate account of the nature of the transcendental schemas should respect the following constraint. It should demonstrate why, in light of Kant’s conception of the transcendental schemas, the demand for such a deduction would appear misplaced, by his own lights. Below, I offer a way to meet this constraint.

speciosa, that is the results of “the determination of inner sense by the understanding” that aims at reflecting the sensible given under concepts combined according to the logical forms of judgment” (245). Since Longuenesse takes the sense in which the categories are first “applied” in order to yield the schemata as rather different from the sense in which they are applied to empirical objects, her focus is instead on how there comes to be this correspondence between intellectual syntheses, i.e. categories as logical forms of judgment, and transcendental sensible syntheses that first give content to the categories as full-blown concepts. In the first sense of “application,” the categories “are not reflected as concepts” as they are mere logical functions. So the combinations, the products of synthesis speciosa, remain “undetermined” or “blind syntheses of the imagination” (244). I find her analysis to be correct. Longueness gives the following reason for the correspondence between category and sensible synthesis: “The reason for the correspondence between logical forms of judgment (forms of “intellectual synthesis” mere forms of thought reflected in categories) and sensible syntheses (which alone give a content to the categories, i.e. make them concepts of possible objects) is that the latter are the effects of the acts that tend to produce the former” (202-3). As her analysis of the power of judgment and the acts by which schemata and categories are associated runs through her entire work, it would not be possible to engage with this aspect of her interpretation at present. The systematic link between the logical forms of judgment and the transcendental syntheses of the imagination that Longuenesse builds seems to me to speak in favor of her interpretation of the schematism. The latter is thus shown in its full import as an integral part of the critical system.
II. The Demand for a Deduction

Allison and Guyer are two commentators who have explicitly or implicitly supposed Kant’s presentation of the transcendental schemas to stand in need of justification. Allison’s charge that Kant “dogmatically asserts” a relation between the various categories and their schemas is quite straightforward. According to Allison, any judgment that asserts a connection between any one of the categories and its associated schema can only be a synthetic *a priori* judgment. As with any synthetic *a priori* claim, we can thus legitimately ask for a deduction of the particular pairings between schemas and categories (77). We should not be tempted to assume the connections between schemas and categories to be analytic, even though Kant simply gives a list of the schemas associated with the corresponding categories (ibid.).

According to Allison, Kant seems to suggest that one could give an *a priori* specification of the schemas (76). An important passage that seems to suggest this occurs in the Introduction to *the Analytic of Principles* where Kant writes about transcendental philosophy that “besides the rule (or rather the universal condition of rules), which is given in the pure concept of understanding, it can also specify *a priori* the instance to which the rule is to be applied” (A136/B175). We are to understand that the instance to which the rule is applied is the schema. This claim may be seen in relation to our previous discussion on the nature of transcendental logic, whose task is to teach how to bring pure syntheses under the pure concepts. Kant seems to suggest that such syntheses, i.e. what we have identified as the schemas, can be specified *a priori*. Kant also notes that transcendental philosophy must be
able to formulate “by means of universal but sufficient marks the conditions under which objects can be given in harmony with these [pure] concepts” (A136/B175). And we have seen that one of the ways in which the transcendental schemas are identified is precisely as such universal conditions under which sensibility must present the objects of experience.

According to Allison, Kant does not offer “a trace of justification” for these claims (76-7). We are thus left with the need to give a deduction of the schemas as instances to which the pure concepts are to be applied. Or so Allison argues. Guyer does not issue a direct challenge along Allison’s lines but seems to presuppose that Kant still owes us a justification of the schemas he offers, given the kinds of criticism he advances against Kant’s temporal “interpretations” of the categories. For example, Guyer suggests that Kant gives an implausible account of the category of necessity as “existence at all times” and imposes a problematic restriction on the meaningful use of the category of possibility to the temporal form of intuition (174). Guyer also casts doubt on Kant’s alleged claim that number, as a schema of the category of quantity or magnitude, is a temporal phenomenon. On this basis, Guyer then casts doubt on the view that the corresponding category of magnitude should have a specifically temporal schema.24

It seems that, at least partially, Guyer’s general critical commentary on Kant’s particular associations between schemas and categories presupposes that the schemas function as a kind of translation of the category in temporal terms or, more accurately, its extra-logical description.25 This explains why Guyer’s criticism leaves the impression that

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24 Guyer notes that “it is unclear that the category of number should have a temporal schema” (173). I take it that there is a mistake in the text. The relevant category is not number. The latter is not a category but a schema of the category of magnitude. Guyer’s intended meaning is clear, nonetheless.

25 At least in one place, Guyer suggests that the function of the schematism is to give an extra-logical description of the categories (163). I take it to be misleading to say that Kant has only established a purely logical content of the categories at the point of the Schematism chapter. As expressions of the pure syntheses of
Kant has somehow given wrong interpretations of the categories. One possible diagnosis of this tendency to challenge Kant’s specification of the temporal schemata is that the latter are primarily seen as temporal concepts whose role is either to supply the extra-logical content of the pure concepts or to interpret them in sensible terms. If the interpretations do not seem to do justice to the pure categories, then it seems Kant has given wrong temporal interpretations of the categories. Allison is even more explicit in the assumption that Kant has given “a set of translations” of the categories into temporal terms. He reflects on the categories of modality:

“…what Kant has provided us with here [in the listing of the schemas and comments on them] is a set of translations of logical into real modalities. To claim that something is really, not merely logically, possible, is to claim that it is subject to the conditions of time…” (78)

“Taking our clue from the brief discussion of the modal categories and their schemata, we can assume that this “deduction” must consist in the determination of the temporal expression or translation for the intellectual function which is thought in the pure concept” (80).

The importance of the last quote lies specifically in the connection that Allison forges between the view according to which the schemas function as a kind of translation of the categories in temporal terms, on the one hand, and the justificatory strategy he goes on to offer on behalf of Kant, on the other. Allison seems to be thinking that in order to justify the particular schemas Kant associates with his categories, we will need to offer convincing translations and, we might add, thereby try to assuage the doubts of commentators like Guyer.

I do not mean to cast doubt on the value of any deduction of the schemas in such intuitions and general concepts of objects, the categories also have a transcendental content, though indeterminate enough to leave them without the necessary relation to intuition and give them real significance (A140/B179). Elsewhere, Guyer uses the language of “correlation,” where the schemas are supposed to give the sensible correlates of the categories for their use in experience (p.168).
terms. It may indeed be instructive to display the resources Kant has for a possible deduction of the particular schemas he lists. My present concern is that Allison does not seem to take seriously enough his own argument for construing the temporal schemata as determinate pure intuitions. Above, I have identified these determinate pure intuitions with the results of the application of the categories to the pure manifold of time. But if the temporal schemata are construed in such a way, then they should be seen not so much as conceptual translations of the corresponding categories but precisely the kind of representations that the imagination produces in the hidden “depths of the human soul” (A141/B181). As products of the transcendental imagination guided by the functions of the understanding, i.e. pure syntheses of the manifold of time, the schemas are in effect an essential part of the transcendental psychology that Kant resorts to in key places of both the A and B-deductions.

The foregoing discussion, which highlighted an important way in which the schematism is prefigured in Kant’s writings on the syntheses of the imagination in the Analytic of Concepts, was also intended to set the ground for addressing Allison’s charge that Kant needs a deduction of his schemas. So how can we explain Kant’s apparent lack of justification for giving the particular list of schemas that he gives? The answer suggested by the account of the schemas given in the first part of this paper is that the transcendental schemas stand on a par with the other elements of Kant’s transcendental psychology. To ask for a deduction or justification of the particular schemas Kant associates with the categories

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26 Admittedly, the above quotation occurs within the context of Kant’s discussion of the schemas of empirical concepts at B181 so it may be that he does not intend it to cover the action of the imagination with respect to the transcendental schemas. After all, we have given names to the latter representations and can meaningfully refer to them through concepts. There may be nothing comparable in the case of empirical schemas, whatever their nature may be. It is unclear how to understand Kant’s discussion of empirical concepts here. Yet, it is unlikely that Kant will think our access to the actions of the transcendental imagination is any clearer with respect to its products. Even if we can specify a priori the pure syntheses of time that result from applying concepts to the manifold of time, this does not mean we can invoke into our mind such representations in the way we can invoke an image. At least, Kant is not committed to saying so in characterizing the transcendental schemas as determinate pure intuitions.
is to ask for a justification of the view that such and such pure determinate intuitions result from the action of the understanding on sensibility.

Now this is not to say that one may not press Kant on his warrant for advancing any doubtful transcendental theses about the constitution of the cognizing subject. But this kind of criticism would be separable from a criticism based on the supposition that Kant has extracted a priori conceptual translations from the categories. This kind of criticism, I am suggesting, would be misplaced given Kant’s primary conception of the schemas as determinate pure intuitions (pure synthesized manifold of time). As such, the assigned place of the schemas in the epistemological space of the Critique is the same as that of the other elements in Kant’s transcendental psychology (e.g. his various syntheses in experience).

True, it may be seen as legitimate to speak of the temporal concepts associated with the schemas, as already shown above. But the primary conception of the transcendental schemas as intuitive representations that result from the syntheses of the imagination explains why these temporal concepts are derivative and become possible only on the picture suggested by Kant’s transcendental psychology.

On the present account of the schemas, the demand to justify the particular schemas associated with the corresponding categories would be equivalent to the demand to justify the view that the imagination produces just these pure synthesized intuitions under the different categories. This is arguably an answer that Kant cannot give on anything like the model of the deduction of the pure concepts of the understanding. To seek a deduction of the particular schemas, on this conception of the transcendental schemas, is to seek for the wrong kind of justification. To give a deduction of the schemas would be much like giving a deduction of the different processes of synthesis of imagination he identifies at various places in his
deductions (A79; A94/B127; A99-102; B150-52; B160-61).

If Kant conceived the transcendental schemas first and foremost not as temporal concepts but instead as essential links in the synthesis of apprehension in any possible empirical cognition of objects, i.e. as universal *intuitive representations*, then the status of the schemas is not equivalent to that of the pure concepts. In light of his conception of the schemas, Kant may be right, by his own lights, to have neglected any question about a justification of the schemata. It is in this sense that the present account of the schemas can offer resources for an explanation of this apparent omission in the *Critique*.

Arguably, the most persuasive way to show that, according to Kant, the problem with the transcendental schematism is not that the particular schemas call for a deduction is to show what Kant found to be really problematic in the schematism. Again, Kant’s reflections in R 6359 prove to be most revealing:

“The difficulty seems to arise because the transcendental time-determination is itself already a product of apperception in relation to the form of intuition and thus itself raises the question how the application of the categories to the form of intuition is possible, since the categories and the form of intuition are heterogeneous. In general, the schematism is one of the most difficult points.” (R 6359).

Kant sees the difficulty concerning the relationship between the categories, on the one hand, and time as the form of our sensible intuition, on the other, as analogous to the original difficulty he posed for himself in the Schematism chapter – the heterogeneity between category and appearance. First, this passage speaks to Kant’s conception of the form of intuition as the “matter” to which the category is applied to yield a transcendental time-determination. The nature of his question here, “how the application of the category to the form of intuition is itself possible,” betrays not a concern about the adequacy of the time-

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27 p. 394-5
determinations as concepts corresponding to the categories but a concern about the very possibility of time-determinations in the subjective sense, given the separation between the sensible and intellectual forms of our experience. In other words, given the initial, radical separation between sensibility and understanding in the constitution of the subject’s cognitive faculties, the problem seems to be one of understanding how the subject’s constitution allows for the application of the category to the form of intuition.

If we grant that temporal schemata, i.e. the *a priori* time-determinations, are necessary for the application of the categories to appearances, and the application of the categories is itself necessary for any possible empirical cognition, Kant would take himself to have shown the objective necessity of the transcendental time-determinations. In other words, if the schemata are the necessary intermediate links in the demonstration of the possibility of any of sensible experience of objects, in accordance with the results of the second part of the B-deduction of the categories, then they are shown to be objectively necessary.  

But this is not yet sufficient to show exactly how the application of the categories to the manifold of time is subjectively possible. Indeed, the tenor of Kant’s question in R 6359 suggests that he stands in need of yet another schematism between the understanding and the pure manifold of time. Now Kant does not suggest that such a schematism can indeed be

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28 I am modeling the above discussion on Kant’s distinction between objective and subjective proofs in the case of a priori principles in the second chapter of the *Analytic of Principles* (A149/B188). There, he distinguishes the need to give a subjective proof of the possibility of a priori cognition with respect to the pure principles from the need to give an objective proof. Arguably, since the pure principles are just applications of the categories to experience, the objective validity of these principles is indirectly established by establishing the objective validity of the categories. Still, Kant seems to suggest that in the exposition of the principles he will be giving a kind of subjective proof of the possibility of these principles’ application to experience. I take the latter to mean that he will make central use of the results of the schematism where he has shown how sensibility and understanding are linked via the schemas. To show the subjective possibility of the application of the categories is to show how the gap between sensibility and understanding can be bridged in particular, i.e. how the categories manage to apply to appearances, even if we antecedently know from the deductions that they *must* apply to appearances. A similar point is made in Woods (p.207). It is a good question whether Kant’s exposition of the pure principles conforms to this programmatic note at the beginning of the chapter.
given or should be. We can only guess what he meant to say in the immediately following passage before he breaks off his writing, but it is clear that he would not have suggested an additional schematism:

“The intuition of time is not homogenous with the categories, rather the determination of time, the unity of the representations in the synthesis (composition) of the given manifold [breaks off]” (R 6359, 18:687)

In the Schematism chapter, Kant takes himself to have answered the original difficulty by showing that the empirical concepts representing the appearances and the categories are indirectly homogeneous. Here, it seems that he would not have striven to show in a similar way that the forms of intuition or the associated concepts (the concepts of space and time as pure intuitions) are in fact homogenous with the categories. The categories after all lack any reference to the sensible manifold. Whatever Kant may have thought about this difficulty, the lesson to draw at this juncture is that the kind of problem he identifies for his account betrays an understanding of the schemata and their role in the schematism chapter that accords well with the present interpretation. It showcases the role of the transcendental time-determination in the workings of the imagination that is guided by the unity of apperception to determine sensibility. There is little concern for the transcendental time-determination as a correct or incorrect translation of the category in temporal terms.

One may try to harmonize these two perspectives on the transcendental schemas on some more fundamental level. But I submit that pending such an attempt, we have good reason to emphasize the role of the schemas in Kant’s transcendental psychology, their systematic connections with the discussion in the deductions, and their nature as intuitive representations. Most importantly, this perspective has both allowed us to make sense of
Kant’s apparent lack of awareness of any need to provide a deduction of his schemas and to ground our explanation in the role of the schemas in his transcendental psychology.

Yet, even if Kant’s transcendental schematism does not call for any deduction, it still leaves us with the above mentioned problem of which Kant was acutely aware. The consistent application of the homogeneity requirement seems to re-introduce the original difficulty the schematism was designed to address but on a higher level. The task of the final section is to solve this problem. It is, in effect, an attempt to demonstrate the coherence of Kant's position on the heterogeneity between the form of intuition and the category (which is non-negotiable for him, as we saw above) and the necessity of the category's application to the form of intuition.
III. The Regress of Homogeneity

In the last section of the paper, I identified what, according to Kant, is the real problem with his account of the transcendental schematism. Even when the appearances are shown to be homogeneous with the pure concepts of the understanding via the transcendental time-determination, the latter is itself already a product of the understanding, i.e. the application of the category to the form of intuition. But, according to Kant, this just raises the question of how it is possible for the categories to be applied to the form of intuition, given that they are heterogeneous in nature.

Recall that Kant’s original demand for homogeneity between categories and appearances gives expression to a demand for intelligibility – a subjective explanation of how the application of the former to the latter is possible. But then one might issue a related challenge that grows out of Kant’s own strictures on the application of the categories. If a third thing, i.e. a mediating representation, is not introduced to account for the way the pure concept applies to the form of intuition, then how could such application be intelligible? The problem is particularly pointed, given Kant’s conclusive rejection of the possibility of showing some further way in which the form of intuition and the category can indeed be rendered homogeneous.

The notion of transcendental homogeneity cannot be appealed to in this context. The form of intuition is not based on any a priori intellectual rule expressed in the pure concept in the way that the determinate pure intuitions of time are. Kant’s own insistence on
heterogeneity seems to seal off the matter. His principled position also carries an additional implication. The condition of homogeneity is not a general condition for the application of the categories that can be legitimately invoked irrespective of what the categories are supposed to apply to and the sense in which they are said to “apply.”29 Otherwise, we would have to assume that Kant single-handedly violates this general condition in taking the foregoing principled position on the radical heterogeneity between form of intuition and category. As this assumption should be avoided, I take the results of the previous sections to provide good grounds for rejecting it. There is no such general condition of homogeneity.

As shown in the first part of this paper, Kant’s demand for homogeneity in the Schematism chapter should be interpreted as having a fairly specific, narrowly confined function, namely to express the need for showing the continuity between the conditions under which the application of ordinary empirical concepts to appearances is made possible and the conditions under which the empirical application of the pure concepts is made possible. This

29 How does the thesis that Kant’s requirement of homogeneity is not a fully general one square with the observation that the need for homogeneity at the conceptual level, expressed in Kant’s correspondence with Tieftrunk, appears to be a fully general one? After all, the logical basis on which Kant seems to justify that requirement when the subsumption of concepts is in question suggests that it is general logic that imposes such constraints. General logic, by definition, takes no account of the difference in objects represented by the relevant concepts in judgments. So it would seem that if there is a corresponding concept that represents the form of intuition (the concept of time first generated through the synthesis Kant refers to at B 160n, which represents the formal intuition of time), then that concept would have to be shown to be homogeneous with the categories, if its subsumption under categories is to be possible. This possibility raises a host of additional questions about the relationship between space and time and the categories, and the nature of judgments that bring the representations of space and time under the categories. A full discussion that explores the possibility of “transcendental subsumption” of the pure sensible concept under the category would be needed. Further clarity about the relationship between space and time as continuous magnitudes, on the one hand, and the category of magnitude, on the other, would be essential to answer the question about the nature of the propositions that assert of space and time as continuous magnitudes, on the one hand, and the category of magnitude, on the other, whether the conditions of the application of the concepts to appearances is made possible and the conditions under which the empirical application of the pure concepts is made possible. This
is an alternative expression for the claim that the transcendental application of concepts needs to be rendered comprehensible. Even though the condition of homogeneity turns out to differ in the two cases – in the case of empirical concepts and the case of pure concepts - the underlying task of the schematism is still accomplished – the subjective explanation is constructed. Crucially, this perspective on the schematism allows us to see why the homogeneity requirement should not be seen as a general one. At least, it must not be immediately assumed to be such. Kant is not compelled, by his own initial commitments, to demonstrate the homogeneity between form of intuition and categories for the application of the latter to be possible.

Nevertheless, one could still insist that Kant’s original concern with intelligibility can be extended to give rise to the same problem, as already noted above. One might argue that even if the homogeneity requirement was not intended as a fully general one, nothing in what I have so far argued suffices to show that the requirement should not be made into a general one. Kant may have restricted it but in one’s assessment of the schematism, one might seem warranted in pressing the demand for homogeneity further. It may seem that the original restriction of the homogeneity requirement to the level of objects, i.e. the application of category to appearances, is unprincipled. After all, the categories are said to apply both to the appearances and to the form of intuition. Why should homogeneity be required only for the first case of categorical application and not the second? Hence if there is no independent way to show, in a principled way, that the homogeneity requirement is misplaced with respect to the form of intuition, nothing in the aforementioned considerations about Kant’s original motivations for introducing that requirement will seem to be sufficient to dispel the problem in light of such possible objections. There is a need for a different strategy.
I suggest that we adopt the following broad outline of a solution to the problem. The demand for homogeneity must be shown to be misplaced on grounds that make the transcendental philosophy’s own prohibitions against the application of this condition of homogeneity explicit. In other words, it must be shown that if one were to demand that a third thing mediate the application of category to form of intuition, then one would be asking for something that the transcendental philosophy cannot legitimately give. Any further mediation must appear illegitimate. I pursue two complementary strategies to establish these claims. The first strategy exploits the fact that we can find in the transcendental philosophy a certain divide between the conditions of representation, i.e. the *a priori* conceptual representation of empirical objects, on the one hand, and, on a higher level, the conditions of the possibility of such *a priori* representations. The second strategy appeals to another key transcendental principle that is threatened by the hypothetical demand for homogeneity between form of intuition and category.

As argued above, we must first recognize that the homogeneity requirement arises from a particular view on the way concepts in general should apply to objects. In the Schematism chapter, Kant was focused exclusively on the level of objects. So if one were to ask for a second-order schematism demonstrating the possibility of something that can establish the homogeneity between the form of intuition and the category, i.e. homogeneity but on a very different level of the application of the categories, then one would be violating the transcendental division between the conditions of the possibility of pure concepts, on the one hand, and the conditions under which pure concepts apply to objects.

However, do we have good reasons to suppose that there is this transcendental division to which I am referring? Given Kant’s frequent insistence on the empirical
conditions for the objective significance or validity of the pure concepts, it may seem
doubtful that one can plausibly separate the conditions of the application of the categories,
where the transcendental schema is clearly relevant, and the conditions of the possibility of
the pure concepts as *a priori* representations that can legitimately apply to empirical objects
or appearances.\(^{30}\) If the original introduction of the transcendental schema was motivated on
the basis of considerations about the conditions of the application of the categories to
empirical objects, then it will seem that insofar as the prior application of the categories to
the form of intuition to yield these schemas is necessary, there is no distinction between such
conditions. The possibility of the pure concepts and the possibility of the latter’s application
to appearances are two expressions for the same idea.

There are good grounds to resist the foregoing reply. For the categories must not only
be applicable to the form of intuition for their application to appearances to be possible. It
must be possible for them to apply to the form of intuition in order for them to even *be*
concepts, i.e. qualify as the kind of *a priori* conceptual representations that are distinguished
from the intuitive *a priori* representations in the Kantian scheme. The possibility of the pure
concept’s application to the form of intuition is necessary as a definitional condition.
According to Kant, it must be the case that the pure concepts have a possible object, that is, a
pure material that is composable in order for them to even express that synthetic unity of a
manifold, which is precisely what makes them concepts of objects in general. This need for a
pure material is most clearly articulated in Kant’s correspondence with Beck in the context of
his analysis of experience, i.e. the necessary elements of any empirical cognition. He writes:

\(^{30}\) For some of Kant’s claims about objective validity, see A242/B 300; A 245; B 346.
“But since concepts to which no corresponding objects could be given, being therefore entirely objectless, would not even be concepts (they would be thoughts through which I think nothing at all), just for that reason a manifold must be given a priori, it must be given in an intuition without any thing as object, that is, given in just the form of intuition, which is just subjective (space and time)” (To Beck, January 20th, 1792)

As the category expresses a synthetic unity of a manifold, it must be possible for it to ground the synthesis of an *a priori* manifold, i.e. *a priori* composition. But the generation of the transcendental schemas in the application of pure concept to the form of intuition, as a pure manifold, is just such composition. It is also important to notice that Kant’s appeal to a pure manifold is strictly different from the related claim that the particular results of this *a priori* composition, i.e. the schemas, are necessary for the application of the categories to the empirical objects. The schemas are also presumably necessary to give specific transcendental content, i.e. to give the particular nature of the different syntheses associated with the pure concepts (synthesis in accordance with the categorical form of judgment, synthesis in accordance with the relational form of judgment, etc.). Even if we abstract from the transcendental schemas, there is still the need for a pure manifold as such and the mere possibility of its composition to render the categories conceptual representations – representations of objects. This is the basis for Kant’s claim that the categories are concepts of objects in general, i.e. concepts in accordance with which a manifold can be synthetically united.

The foregoing considerations should provide support for the claim that there is an implicit transcendental divide in the background of the schematism to which we must attend. This is the basis on which one must resist the assimilation of the level of objects on which the
application of the categories can be subject to a homogeneity condition and the level of inquiry on which Kant is concerned with how pure concepts are themselves possible. Keeping in mind the origin of Kant’s homogeneity requirement in his exclusive concern with the pure concept’s relationship to the appearances, we thus have one strong reason to resist the move that imports an alien demand to the higher transcendental level. In other words, we must resist the call for yet another representation to mediate the application of the pure concept to the form of intuition, thereby setting a regress.

As much as I think this should settle the matter, since we seem to have reached an outer limit and cannot ask transcendental philosophy for any further explanation of how it is possible for categories to apply to the form of intuition, there may be some dissatisfaction with the foregoing solution. One might object that it is not sufficient to show that there is some subtle transcendental divide of the kind identified above. The fact that there is one does not yet show why the homogeneity requirement would be illegitimately imported on the higher one. Kant may have been motivated by concerns about the relationship between concepts and objects and there may be yet a different level he was not considering in the Schematism chapter but this shows nothing about the strong notion of illegitimacy that is being employed in the outline of the solution I proposed to this problem of regress. Such residual objections make it necessary to use a complementary strategy.

Let us consider what it would imply if one introduced a third thing that showed the category and the form of intuition to be ultimately homogeneous. It would show that in fact intuition and concept, which are the two very different elements of any possible cognition, are not as different as Kant contends them to be when he speaks of his radical divide between pure concept and pure intuition. Given that there will be some representation in virtue of
which we recognize them to be ultimately homogeneous, then we will have violated the fundamental divide of the transcendental philosophy. And so I would argue that insofar as the very attempt to further explain how it is possible for the pure concept to apply to the pure intuition yields the result that the pure concept and the pure intuition must not be so different after all, then we have cut the fabric of Kant’s philosophy.

That we cannot explain further how it is possible for the pure concept to apply to the pure intuition is the symptom of the fact that we have these two fundamentally different elements of cognition in the transcendental philosophy. So we should not be left with the impression that there is some inadequacy in the transcendental psychology insofar as Kant now cannot explain something. We should rather think that we find a confirmation of what Kant told us in the very beginning when he gave his analysis of experience.
References


