

CAN THERE BE MORE THAN ONE SET OF
CATEGORIES?

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Introduction

Kant's aim in the transcendental deduction is to show that the categories, i.e., a specific set of categories, are a necessary condition for *all* possible experience. Some philosophers have extended this idea in the following way: Kant solely identified a set of a priori concepts, which are a necessary condition for all possible epistemic claims within a framework of Newtonian physics; however, there exist other sets of epistemic claims, which can solely be justified by means of alternative sets of a priori concepts. This extension of Kant's view has been very influential in various disciplines. Within philosophy of science the idea has been advanced as truly Kantian that alternative sets of a priori concepts ('conceptual frameworks') allow for radically different ('incommensurable') sets of epistemic claims about the world. Within the sociology of knowledge, K. Mannheim has argued that epistemic claims which express our interpretative understanding of the world are gaining importance in our age. This set of claims is so radically different from the set of natural scientific claims, that the Kantian question, 'How is a judgment (of such and such form) possible?', calls for radically different answers within both sets.

What are we to think of such views in the light of the *Critique*? I believe a critical reading of a more systematic defense within Kantian scholarship itself of this extension of Kant's results from the transcendental deduction may be a good strategy for dealing with this question. J. Rosenberg presents an argument of this form in his article, "Transcendental Arguments Revisited". In this paper I will address the following questions concerning this article: (1) What claims are precisely

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involved in this alleged extension of Kant's results of the transcendental deduction? (2) Is it merely an historical accident that Kant could only identify one set of categories, or, are there, apart from Kant's explicit commitment to one particular set of categories, any other claims within the Transcendental Analytic, which are incompatible with this extension of Kant's view?

1. Brief Outline of Rosenberg's View

A deduction is an argument which establishes a right for an action [B 117]. Kant is concerned with the right to make use of certain concepts. There are two different sets of concepts which can be used rightfully:

(a) There exists a set of concepts which can be obtained through experience and whose origin can thus be shown by means of an empirical deduction, i.e., a presentation of "the manner in which a concept is acquired through experience and through reflection upon experience" [A 85].

(b) There exists, however, a set of concepts, which we employ rightfully, but whose origin cannot be shown by means of an empirical deduction. These concepts are a priori concepts. The set of a priori concepts must *apply* to all objects of possible experience. A justification of these concepts requires a proof that we need precisely these concepts to have any experience of an object at all. It is this proof which is presented in the transcendental deduction.

Rosenberg calls set (b) a 'conceptual core'. Kant believes there is only one possible conceptual core. Rosenberg calls this the 'Principle of Core Invariance'. I will present a reconstruction of Rosenberg's argument against this principle.

Consider first Kant's central thesis in the Transcendental Analytic: the set of categories is the set of a priori concepts of the understanding which are a necessary condition to have any experience of an object [A 95-7]. Rosenberg broadens this thesis in the following way: a conceptual core is a set of concepts which are a necessary condition to have any experience of *a type of representation of an object*. Rosenberg then argues that the only type of representation of an object which was known to Kant was the representation of an object in Newtonian physics. Thus, Kant could only identify one unique and invariant conceptual core. Since Kant, natural science has presented us two

types of representations of an object which are very much different from the Newtonian object, viz., the molecule and the quantum. Thus the development of natural science allows us to identify a plurality of conceptual cores.

How is the role which these concepts of our conceptual core(s) play in our experience of the world different for Kant and Rosenberg? For Kant our conceptual core, i.e., the set of categories, contains the a priori concepts of the understanding: by this Kant means that they cannot be derived from any particular experience, but are themselves a necessary condition of our understanding for *any* experience of the world to be possible at all. For Rosenberg, a conceptual core is also a set of a priori concepts. This set of a priori concepts, however, is intrinsic to a physical theory, and is a necessary condition for the possibility of all experience *within this particular physical theory*. The set of Kantian categories is not considered to be an a priori condition of *all* possible experience, but only of our experience within the theory—system of Newtonian physics. Thus, Rosenberg believes that the application of a conceptual core to a particular experience is contingent upon the theoretical system to which this experience belongs.

The following problem now arises: if experience in successive scientific theories is mediated by different conceptual cores, what then is our criterion to accept or reject a candidate conceptual core in science?

Rosenberg's contention is that this criterion must be stated in reference to an 'epistemic end'. This epistemic end requires that a conceptual core satisfy certain features. When these features are better satisfied by a successor core than by a predecessor core, a shift of conceptual core is obligatory.

But what is the content of this epistemic end? Rosenberg essentially makes use of Kant's result of his argument for the synthetic unity of apperception in the transcendental deduction [B §16]: all knowledge requires a unity of synthesis of a given set of representations in one consciousness. This unity of synthesis in one consciousness requires an active principle, viz., the employment of the categories of the understanding. Rosenberg defines this unity of synthesis as an 'epistemic end', an ideal of all knowledge. This epistemic end can be realized in various degrees by different conceptual cores. Rosenberg calls the degree to which this end is realized the 'integrative success' of a conceptual core. The criterion for accepting or rejecting a candi-

date conceptual core in science is its measure of integrative success.

2. Critique of Rosenberg's Argument.

I will first reiterate Rosenberg's claims:

- (1) successive shifts in the type of representation of objects (Newtonian object, the molecule, the quantum) require a succession of conceptual cores.
- (2) All experience within a specific scientific theory requires the employment of a conceptual core intrinsic to that scientific theory.
- (3) The choice for a conceptual core is determined by its integrative success.

Can we consistently hold these claims?

From claims (1) and (2) it follows that the way in which we structure the 'given' into an experience is different within Newtonian physics, molecular theory and quantum physics. I will clarify this point. The manifold of intuitions contained in an object is given in sensibility. Experience of this object requires that this manifold be brought into synthesis by the faculty of understanding. The functions which establish this synthesis are subject to the a priori concepts contained in the conceptual core of a scientific theory and are thus different in Newtonian physics, molecular theory and quantum physics. This claim has the following radical consequences. According to Kant, the concepts of space and time require a synthesis of a manifold of representations and thus the employment of the set of a priori concepts.¹ Thus, if Rosenberg's contentions hold true, then our experience of space and time will be subject to different conceptual cores (and thus radically different) within the major scientific theories.

¹Cf. "But space and time are represented a priori not merely as forms of sensible intuition, but as themselves intuitions which contain a manifold [of their own], and therefore are represented with the determination of the *unity* of this manifold In the Aesthetic I have treated this unity as belonging merely to sensibility, simply in order to emphasize that it precedes any concept, although, as a matter of fact, it presupposes a synthesis which does not belong to the senses but through which all concepts of space and time first become possible"[B 160-1].

Consider now Rosenberg's original thesis: scientific theories involving different types of representations of an object require different conceptual cores. In order for this claim to be meaningful, we must be able to make sense of the expression 'different types of representations of an object'. Thus it must be possible to make a statement in the following form: the set of statements x in theory X and the set of statements y in theory Y are different representations of the same object. But in order to make this claim we must be able to identify this object within theory X and theory Y . But what can our criterion be to determine that the set x and set y describe the *same* object, other than the object's location in space and time? Theory X and theory Y , however, do not have a common standard to determine the object's location in space and time, since their concepts of space and time must differ on Rosenberg's theory. In this sense I do not see how Rosenberg can meaningfully hold this original thesis.

I will now consider claim (3). The decision to adopt a conceptual core is of the following form:

- (a) if conceptual core_{successor} (core_s) allows for more integrative success in our experience of the world than conceptual core_{predecessor} (core_p), then it is obligatory to adopt conceptual core_s.
- (b) Conceptual core_s allows for more integrative success than conceptual core_p.
- (c) Therefore it is obligatory to adopt conceptual core_s.

Rosenberg claims that it must be possible for each successor core to justify itself by a judgment of this form. It is obvious that we are in need of (1) a principle of inference and (2) the principle of non-contradiction in order to define what can consistently be integrated in a system of sentences. It is thus required that at least a minimal set of *logical* principles remains identical across scientific theories.

Does this in any sense support Kant's principle of core invariance? Kant writes in the metaphysical deduction:

The same function which gives unity to the various representations in a judgment also gives unity to the mere synthesis of various representations in an intuition. [B 104]

This thesis of the identity of the function of judgment and the function of synthesis is the essential move of the metaphysical deduction. In this move Kant introduces the table of categories as a translation (although sometimes obscure) of the logical forms of judgment.

I have argued that Rosenberg's decision procedure for the adoption of a conceptual core commits him to accept at least a minimum of invariance in logical form across scientific theories. On Kant's thesis in the metaphysical deduction, it now follows from this requirement of minimal invariance in logical form, that the principle of core invariance needs to be at least minimally satisfied. I must grant however that Kant's justification of his thesis in the metaphysical deduction is not without problems. I will not further pursue the latter question here.

I believe, however, that there is even a stronger objection. What does it mean to say that a core_s has *more* integrative success than another core_p in our experience of the world? In

order to make such a claim meaningfully, I believe it must be at least possible to make a statement of the following form: 'At least one experience X which could not be integrated in a system P, given core_p, can be integrated in a system S, given core_s'.

I can think of three different interpretations of the sentence, 'experience X cannot be integrated in a system P, given core_p'.

(a) The intuition through which the object of experience X is given, did not appear in system P at all.

(b) The intuition through which the object of experience is given, appeared as an uninterpreted intuition in system P, i.e., could not be synthesized within the bounds of core_p into an experience.

(c) Experience X was anomalous, i.e., could not be made consistent with a set of other experiences within system P, given core_p.

If (a) were correct, what would be our incentive for changing our system? The incentive for adopting a new explanatory system S is either that we want to systematize an experience X which appears as an anomaly in system P (interpretation (c)), or, that we want to bring unity into a set of intuitions (interpretation (b)).

If (c) were correct, meaningful talk about a shift in conceptual core would require that we can have the same experience X, given core_p and given core_s. But since all experience within a specific scientific theory is contingent upon the conceptual core intrinsic to that theory, if experience X occurs in system P and in system S, then core_p and core_s must be identical. Thus all talk about successive conceptual cores on interpretation (c) is either meaningless or false.

Thus, it is only on reading (b) of our original sentence ('experience X cannot be integrated in a system P, given core_p') that Rosenberg's theory can possibly hold. I will argue in the next section that this reading relies on an incorrect interpretation of the transcendental deduction (B).

3. The Notion of an Uninterpreted Intuition

within the Transcendental Deduction (B).

In this section I will look at Kant's argument for the invariance of his conceptual core as presented in the transcendental deduction. I will follow D. Henrich's reconstruction of the argument and thus defend the thesis that reading (b) relies on a partial reading of Kant's proof in the transcendental deduction (B), and is untenable within a full interpretation.

For Rosenberg the criterion for adopting a new conceptual core is its degree of integrative success. I have already indicated how Rosenberg establishes this criterion in reference to Kant's results from his argument for the synthetic unity of apperception [B §16]. I believe that this reference contains a very telling suggestion concerning Rosenberg's reading of the transcendental deduction (B). Consider the question: what is the force of this argument within the transcendental deduction (B)? I will argue that Kant's argument in this section is consistent with our reading (b) of the claim, 'experience X cannot be integrated in the system P given core_p'. However, this argument only establishes a *partial* conclusion of the transcendental deduction (B). The actual conclusion of the transcendental deduction is more radical and does not allow for reading (b).

Consider the following more extensive reconstruction of Kant's argument in [B §16]:

- (1) If a set of *intuitions* belongs to *my experience*, then they must all be integrated in a universal and necessary unity of (self)–consciousness [B 132].
- (2) If a set of intuitions is integrated in one self–consciousness, then a synthesis of the manifold of representations which are contained in each intuition is required [B 133].
- (3) This synthesis requires that I can unite the manifold of my representations [B 134].
- (4) This unity does not lie in the object [B 134].
- (5) Thus, the unification of the manifold of my representations requires the a priori act of understanding [B 134–5].
- (6) Thus, the unification of the manifold of my representations requires the a priori concepts of understanding, i.e., the categories.

The argument relies on the implicit premise that I am justified in calling a set of intuitions 'my intuitions'. This premise allows me to affirm the antecedent of (1) and thus derive the consequence that the set of intuitions which belongs to my experience is subject to the categories.

If one believes this to be the essential conclusion of the transcendental deduction (B), it is possible to consistently hold the following claim: there exists a set of uninterpreted intuitions (a set of intuitions which are not subject to the categories), viz., the set of intuitions which is not integrated in experience. The truth of this claim is essential to make sense of our reading (b) of the claim, 'experience X cannot be integrated in a system P', and thus is essential to make sense of the notion of an 'epistemic end' in Rosenberg's theory. On this claim, there is a whole set of intuitions which are merely chaotic and thus cannot be united into an experience by our consciousness. The adoption of a new conceptual core_s is justified when it brings to experience intuitions which could not be brought to experience within core_p, or in other words, core_s is justified by a surplus of integrative success.

I believe that Rosenberg overlooks a substantive part of Kant's argument in the transcendental deduction, due to the weight he attaches to a Kantian fill-in of our criterion for scientific progress. I will defend the view that the existence of an uninterpreted intuition is not consistent with Kant's argument

in §26. In §26 Kant writes:

All synthesis, therefore, even that *which renders perception possible*, is subject to categories. [B 161, emphasis added]

Since '(empirical) intuition' and 'perception' are used interchangeably in the *Critique of Pure Reason*², Kant thus explicitly *denies* the possibility of an uninterpreted intuition in this quote. How does Kant establish this stronger result? I will argue:

(a) that the argument in §16, of which I have presented a reconstruction, cannot be the essential argument of the transcendental deduction (B), since it relies on a highly controversial premise, and

(b) that the actual proof in the transcendental deduction succeeds §16 and establishes this stronger result in two separate steps.

Consider the original premise in my reconstruction of Kant's argument in §16: "I am justified in calling a set of intuitions 'my intuitions'". In "Kant on Self-identity", P. Kitcher argues that Kant had knowledge of Hume's scepticism concerning personal identity. (Kitcher, p. 41-5) Hume claims that, since there is no impression from which the idea of a *self* can be derived, no justification for the existence of this *self* can be advanced. If no justification for the existence of a *self* can be advanced, certainly Kant cannot assume as a premise of the transcendental deduction that there exists a set of intuitions, such that I can ascribe this set to a particular *self*, viz., my own *self*, since it is precisely the existence of this self which Hume calls in question.

²Consider the following definition of 'perception' in Kant: "...perception (that is representation accompanied by sensation)..."[B 147] Since the set of empirical intuitions is a subset of the set of representations [B 125] and since only empirical intuitions "stand in relation to the object through sensation"[B 34], there is good reason to believe that 'perception' and 'empirical intuition' are synonymous in Kant. More evidence can be found in the following quote, in which 'empirical intuitions' may clearly be substituted for 'perceptions': "... All perceptions are grounded in pure intuition..."[A 115] (It should be noted that this equation only holds for 'perception' as a translation of 'Wahrnehmung' and not as a translation of 'Perception' as in B 376).

If, as Kitcher argues, Kant took Hume's scepticism concerning personal identity as a challenge worth responding to, we cannot take this argument in §16 to be the cornerstone of the transcendental deduction. Thus, this argument, from which Rosenberg derives his notion of an epistemic end, cannot be the main argument in the transcendental deduction. I will now show how the possibility of an uninterpreted intuition, which is essential to make sense of Rosenberg's criterion for a legitimate shift of conceptual cores, is inconsistent with D. Henrich's more complete interpretation of the transcendental deduction.

The actual proof for the employment of the categories in the transcendental deduction succeeds §16 and is meant to establish that all intuitions are subject to the categories, even the intuitions which are not integrated into experience. This proof contains two steps:

A. In §22 Kant defines 'experience' as 'empirical knowledge'. Empirical knowledge of an object requires two necessary components: (a) a concept through which an object is thought and (b) an intuition through which the object is given. The source of all intuitions is sensibility. What is given in sensibility is the manifold of representations contained in the object. However, in order to be an object of knowledge, the object needs to be thought in one concept. Thus a unification of the manifold of representations, contained in the object is required in order for it to become an object of empirical knowledge, i.e., an object of experience.

How does this lead us now to the categories as the formal criteria of combination of the manifold of representations contained in the object of experience? In §19 Kant claims that a judgment is a proposition which brings together two representations which can be integrated within the objective unity of consciousness.³ Now on this interpretation of the notion of

³A full discussion of Kant's notion of "the objective unity of consciousness" would reach far beyond the limits of this paper, but I would like to make some suggestions. Kant distinguishes between the *subjective* and the *objective* unity of consciousness. The former type of unity, Kant claims, has "only subjective validity. To one man for instance, a certain word suggests one thing, to another some other thing"[B 140]. The latter unity provides for objective validity: "what we are asserting is that [two representations] are combined *in the object*, no matter what the state of the

'judgment', all unification of a manifold of representations contained in a possible experience within the objective unity of consciousness must have a judgmental form and thus be subject to the logical functions of judgment [B §20]. In the metaphysical deduction, Kant has argued that the categories agree with the logical functions of judgment. He thus concludes that all objective unification of a manifold of representations contained in a possible experience must conform to the categories.

This result too is consistent with the existence of an uninterpreted intuition. The possibility of an intuition which is not brought into the unity of synthesis and is thus not subject to the categories still remains open. Kant will use the outcome of this first argument however to outrule this possibility in the second step of the deduction [B §26].

B. Consider the following reconstruction of the second step of the transcendental deduction (B):

- (1) (from the Transcendental Aesthetic) Any intuition must conform to the a priori forms of intuition, i.e., space and time.
- (2) Space and time are a priori intuitions themselves.

subject may be" [B 142]. In both cases a connection is made between two (or more) representations. This connection does not have the same character. I propose the following interpretation. Two representations stand in the subjective unity of consciousness if and only if there is connection between both representations, which is idiosyncratic to *x*. In this case, it is meaningful to ask *why* *x* connects both representations. A particular fact in *x*'s life—history may then in accordance with a law of empirical psychology explain the subjective connection in *x*'s consciousness. Consider the following examples. In the winter of 1980, I suffered from a kidney—infection; since that time, I associate the representation of snow with the representation of pain in my lower back, i.e. both representations are united within my subjective unity of consciousness. Or, closer to my first quote, due to my upbringing in English, I associate the representation of the word 'carrot' with the representation of a carrot. Now in case of a set of representations which stand in the objective unity of consciousness of *x*, no reference to *x*'s life—history or laws of empirical psychology come into play. If, in forming a representation of snow, I unite a representation of whiteness and a representation of coldness in my consciousness, then this connection does not stand in need of any psychological explanation in terms of some event in my personal life—history.

(3) The intuitions of space and time contain (objective) unity [B 160].

(4) (from step A) This unity must conform to the categories of understanding.

(5) (from (1) and (4)) All intuitions must conform to the categories [B 161].

This second step of the transcendental deduction in D. Henrich's reconstruction can thus account for Kant's contention that the synthesis which underlies all intuitions is subject to the categories (cf. quote from [B 161]). On this conclusion it becomes impossible to make sense of an uninterpreted intuition, i.e., an intuition which is not subject to a conceptual core. Since any intuition must conform to the a priori intuitions of space and time, and since the latter must contain a unity of synthesis which is subject to the categories, Kant has an argument to the effect that simply all intuitions are subject to the categories. If we can indeed deduce this conclusion from the transcendental deduction (B), then Kant has a reason not to accept reading (b) of the clause, 'experience X cannot be integrated in a system P, given core_p', since the possibility of an uninterpreted intuition does not stand up in the transcendental deduction (B). Since reading (b) was the only reading on which we could make sense of Rosenberg's notion of 'integrative success' as a criterion for the adoption of a successor core, I can conclude that Kant has a reason for not accepting Rosenberg's view of progress as a shift in conceptual cores.

Conclusion

Rosenberg regards Kant's principle of the invariance of a conceptual core as a mere historical accident. He regards his own theory as an extension of Kant's theory which became possible by the development of science. I have argued that (a) the central thesis of Rosenberg's theory (scientific theories involving different types of representations of an object require different conceptual cores) is inconsistent given Kant's view of the role of the categories in the representation of space and time, (b) that the decision to adopt a new conceptual core presupposes a constancy of logical principles, which is, on the meta-physical deduction, inconsistent with the idea of core progression itself and (c) that Rosenberg's account of scientific pro-

gress is grounded on a partial interpretation of the transcendental deduction (B). Thus, Kant does have reasons for not accepting Rosenberg's view. Within Kant's theory no coherent view of 'a representation of an object, relative to a conceptual core', nor a criterion of core progression can be advanced, as Rosenberg attempts to do in his alleged 'extension' of Kant's view. It is thus not true that Kant's commitment to a principle of core invariance is, as Rosenberg (and many other) have claimed, merely 'an expression of [Kant's] historicity' (Rosenberg p. 623).⁴

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