





ARTICLE

Synthetic Attributes and the Schematized Categories

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Abstract

Within Kant scholarship, there is an entrenched tendency to distinguish, on Kant's behalf, between pure and 'schematized' categories. There is also a widespread tendency to view the schematized categories as conceptually richer than the pure categories. I argue that this reading of the distinction, which I call the standard view, should be rejected. In its place, I draw on a neglected part of Kant's theory of marks – namely, his account of 'synthetic attributes' – to propose an account of the distinction that preserves a strict identity between pure and schematized categories at the level of analysable content.

Keywords: categories; schematism; marks; power of judgement; synthetic attributes

I. Introduction

In the Critique of Pure Reason, Kant famously argues that a special set of a priori concepts systematically corresponds to the functions of unity in judgement. In a nod to Aristotle, he names these concepts 'categories', and indeed Kant's own list of categories, like Aristotle's, includes many of the familiar concepts of metaphysics - <cause>, <substance>, <unity>1 and others. In the transcendental deduction, Kant argues that our application of these concepts, subjectively necessitated by the very act of judging, is also objectively validated by the objects of possible experience. With the transcendental deduction complete, Kant moves, in the Analytic of Principles, from justificatory to explanatory considerations. Even if the deduction has shown that the application of the categories to objects of experience is legitimate, a transcendental doctrine of the power of judgement is needed to elucidate how that mode of application actually takes place, given the specific spatiotemporal form of human intuition. The framework for an account of the application conditions of the categories is supplied in the opening chapter of the Analytic of Principles, 'On the schematism of the pure concepts of the understanding', where Kant's stated aim is to detail 'the sensible conditions under which alone pure concepts of the understanding can be employed' (A136/B175).2 His claim in that chapter is that the categories only admit of sensible employment because they admit of 'schematism', which facilitates the sensible application of the categories by

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coordinating them with 'transcendental time-determinations' (transcendental schemata). To use the example that I will most frequently recur to in what follows, the schema of <substance> is 'persistence (*Beharrlichkeit*) of the real in time', and it is only as connected to this schema that the concept of substance admits of application to sensibly given objects (A144/B183).

In the secondary literature on Kant, there is a widespread tendency among commentators to distinguish between 'schematized' and 'unschematized' categories. Kant himself never uses these terms, but there is nonetheless good reason to think that the labels get at a distinction he would accept. In the Phenomena and Noumena section of the first Critique, Kant does develop an account of the status of what he calls 'pure' categories, and it is very clear that by 'pure categories' he understands categories considered in isolation from their schemata: the pure category, we are told, 'omits' (A244–5) or 'abstracts from' (A247/B304) the general sensible conditions under which categories can have significance. The pure category of substance, for example, makes no reference to persistence, and instead represents the bare notion of a being that can never occur as predicate of anything else (A242-3/ B301). Apparently, then, Kant is prepared to acknowledge a distinction between the categories as connected to their schemata (the categories as 'sensibly significant' concepts), and the categories as isolated therefrom (the 'pure' categories). But what, exactly, does this distinction amount to? What philosophical resources does Kant offer us for understanding the nature of the difference between so-called 'schematized' and 'unschematized' categories? These are the questions that I will pursue in the present article.

S All substances are persistent,

between

S1 All substances[schematized] are persistent

and

S2 All substances[pure] are persistent.

S1 is analytically true, since <persistence> is analytically contained in the schematized concept of substance; *S2* is synthetic and either false or at least unverifiable.

Why might one hold the standard view? First of all, there is at least one text that lends strong *prima facie* textual support to the view, for, in the First Analogy,

Kant declares that the proposition that substance persists is 'tautological' (A184/B227). This passage seems to straightforwardly motivate the standard view, for the context makes it clear that Kant is discussing the schematized concept of substance, and Kant thinks of tautologies as a kind of analytic proposition. Here, then, is one passage in which Kant explicitly seems to commit to the claim that <persistence> is analytically contained in the schematized concept <substance>, just as the standard view would have it. But beyond the specifics of this passage, another reason for endorsing the standard view, which I suspect is the more prevalent among commentators, is simply that it is unclear what an alternative would even look like. Granting that pure categories and schematized categories are in some important sense distinct concepts, it is hard to see what this difference could consist in if not a difference in analysable content. Until we can spell out a Kantian model for understanding how two concepts with identical contents could nevertheless be distinct, the standard view will seem mandatory.

My aim in this article is precisely to spell out such a model and to argue that it should inform our account of the distinction between pure and schematized categories. I will argue that a textually well-motivated alternative to the standard view opens up to us when we scrutinize Kant's theory of marks (Merkmale), and especially his distinction between essential and extra-essential marks. My own proposal becomes visible once we get clear on the relationship between a concept's analysable content and its essential marks. Although the analysable content of a concept consists in essential marks, there is nevertheless a special class of essential marks, called synthetic attributes, that fall outside of a concept's analysable content. The schematism of the category, I argue, does not touch its analysable content; instead, schematism connects the category with its synthetic attributes in such a way as to facilitate its significant deployment in acts of judgement.

I begin, in section 2, by presenting an important passage from Kant's 1790 response to Eberhard, which, I argue, is inconsistent with the standard view. This passage is the launchpad for my own positive alternative to the standard view, which I develop throughout the rest of the article. In sections 3-4, I examine the doctrinal context of Kant's remarks in the Eberhard essay, showing that his remarks there belong to a cluster of distinctions within his theory of marks, and especially his distinction between essential and extra-essential marks. I develop an interpretation of the doctrine of essential marks with a view to explaining what it could mean to say that a special kind of mark, namely, a 'synthetic attribute', could 'belong' to the essence of a concept without being part of its analysable content. With that account in place, in section 5, I turn to the theory of synthetic attributes directly. Synthetic attributes, I argue, are a special class of concepts that articulate the a priori conditions of rendering a given concept spatiotemporally significant. Finally, in section 6, I use my account of synthetic attributes to explain the relationship between pure and schematized categories. Pure categories, I argue, do not admit of significant employment because they are in an important sense divorced from their synthetic attributes. The schematism of the category, I argue, does nothing to enrich the conceptual content of the pure category; instead, it connects the category to its synthetic attributes in such a way as to facilitate the significant employment of the category. The result is a picture of schematism that contradicts the standard view by preserving a strict identity between the analysable contents of the pure and schematized categories.

2. Substance and persistence in the Eberhard essay

We have seen that there is at least one published passage that appears to lend strong prima facie support to the standard view. Before we conclude, however, that the standard view is obligatory, we should confront a second passage from published works that appears to speak equally strongly against it. In the course of his dispute with Eberhard (hereafter OD), Kant makes the following claim:

Persistence (Beharrlichkeit) ... [is] an attribute of substance; for it is an absolutely necessary predicate thereof, but it is not contained in the concept of substance itself, and so cannot be derived from it by any analysis (by the principle of contradiction), and thus the proposition 'every substance is persistent' is a synthetic proposition. (8: 229–30; my emphasis)

Now, the proponent of the standard view does have a strategy to reconcile this text with her view: she can simply maintain that when Kant says in this passage that persistence is not contained 'in the concept of substance itself', he is referring to the *pure* concept of substance, not the schematized concept. It is true, she can agree with Kant, that the *pure* category does not contain the concept of persistence, but this is entirely compatible with thinking that the *schematized* category *does* contain the concept of persistence. Thus, if this passage is going to motivate a narrowly exegetical objection to the standard view, we will need to make the case that Kant is referring to the schematized category of substance.

The key to seeing that Kant does have the schematized concept in mind here is to notice that he does not just commit to the *syntheticity* of the proposition that every substance is persistent; he also commits himself to its *truth*: after all, he says that persistence is an 'absolutely necessary predicate' of substance. But if Kant took the judgement in question to involve only the pure category of substance, I do not believe that he would commit himself in this way. In the *Phenomena and Noumena* section, Kant is quite explicit in denying that the pure categories are fit for use in substantive, synthetic knowledge claims (A258–9/B314–15). To help himself to a synthetic knowledge claim involving the pure category of substance would thus be to retract a central claim of the first *Critique*, which Kant gives no indication that he is doing.

If this escape route is blocked, I do not see that the advocate of the standard view has any way of making this passage consistent with her view: in a context in which Kant could not be talking about the pure concept of substance, he denies that the concept of substance contains the concept of persistence.

On the basis of these considerations, I think that an alternative to the standard view is at least worth looking for; and I also think that such an alternative can be found if we investigate more closely the doctrinal context of Kant's remarks in the response to Eberhard. In the next two sections, I will begin the positive work of spelling out that alternative by attending to the context of the passage more closely.

3. Analytic and synthetic attributes in OD

The passage we have been considering occurs in the context of Kant's criticism of Eberhard's account of synthetic *a priori* judgement. Eberhard has missed the originality of the critical philosophy, Kant argues, because he has not understood the nature

of synthetic *a priori* judgement, and this misunderstanding surfaces in Eberhard's own proposed characterization of such judgements as judgements that 'have attributes for their predicates'. Kant will argue that this characterization is inadequate and that its inadequacy rests on a misunderstanding of the nature of *attributes*.

The term 'attribute', for Kant, is part of a cluster of distinctions he draws throughout the logic lectures. In order to set up his critique of Eberhard, Kant explicitly rehearses those distinctions in the paragraph leading up to our passage. The most fundamental distinction is between 'essential' and 'extra-essential' marks.5 Extra-essential marks fall into two kinds: modi, which are marks of internal but contingent features of objects - for example, < learnedness > is amongst the possible modi of <man> (24: 728; 9: 61); and relational marks, which are marks of contingent relational properties of objects - for example, <father> is among the relationes of <man> (24: 728). In contrast to extra-essential marks, essential marks 'belong to the essence or inner possibility' of a concept (8: 229; cf. 9: 60-1). Such marks also fall into two kinds. The first kind Kant tends to call the essentialia (24: 115) of a concept. What is distinctive of essential marks of this first kind, Kant tells us, is that they 'contain no predicate that might be derived from others contained in the same concept' (8: 229); for this reason, the essentialia of a concept stand in relations of 'coordination' to one another, as opposed to 'subordination' (9: 59). Kant holds that, strictly speaking, only essentialia constitute the 'logical essence' of a concept: 'their totality constitutes the logical essence (essentia)' (8: 229). Now, a full discussion of logical essence is beyond the scope of this article, but we can safely conclude from this claim that the essentialia of a concept belong within its analysable content, since Kant holds that the logical essence of a concept is discoverable through analysis: '[t]he logical essence is very easy to cognize. For with this one has nothing to do but analyze concepts' (24: 728).

We are now in a position to introduce Kant's account of attributes. Recall that Kant asserts that there are *two* kinds of mark that pertain to the essence of a concept and thus belong among its essential marks. So far, we have seen that Kant privileges a special class of coordinated marks – the *essentialia* – as together constituting the logical essence of a concept. The second class of essential marks are what Kant calls *attributes* (8: 229; 24: 838–40; 24: 728–29; 9: 61). Although attributes 'belong to' the essence of a concept, they do not strictly constitute that essence. Nevertheless, such marks do belong to the essence insofar as they, unlike extra-essential marks, can be 'derived from' the *essentialia* of the concept (8: 229; 9:61).

Up until now, every claim that Kant rehearses in OD has numerous obvious precedents in the logic corpus. However, he now draws a *further* distinction, within the class of attributes, which to my knowledge is not anticipated in the logic lectures and was therefore presumably prompted by reflection on the deficiencies of Eberhard's definition of synthetic judgement. Attributes, we have seen, can be 'derived from' the logical essence of a concept. But Kant now distinguishes two ways in which the derivation can go (8: 229). *Either* it proceeds in accordance with the principle of contradiction, in which case the attribute in question is an analytic attribute and the judgement connecting attribute and subject is itself analytic (8: 229); or the derivation proceeds synthetically, 'by some other principle' (8: 229), in which case the relevant attribute counts as a 'synthetic attribute' (8: 230). Kant is now in a position to articulate his criticism of Eberhard's account of synthetic a priori judgement: the definition is either false or trivial. If Eberhard claims that a synthetic a priori

judgement is any judgement that connects a subject with its attributes, then the definition is false, since analytic judgements also connect a subject with its analytic attributes via the principle of contradiction. But if Eberhard modifies the definition to claim that synthetic *a priori* judgements connect a subject with its *synthetic* attributes (8: 230), then the definition is tautological because the notion of syntheticity appears within the definition.

Kant appears, then, to advance a picture on which the essential marks of a concept outstrip its analysable content. The analysable content of a concept – the set of marks which, when combined with the concept in subject-predicate judgements, yield analytic truths – consists of its *essentialia* and its analytic attributes. Its essential marks, however, consist of its analysable content *plus* some further set of marks to which it stands in an essential but non-analytic relation, which Kant calls the *synthetic* attributes of the concept. It is in illustrating this picture that Kant presents the verdict we are interested in, for he holds that persistence> is a *synthetic attribute* of <substance>, hence the synthetic *a priori* status of the judgement that every substance is persistent. The judgement registers an essential, albeit non-analytic, connection between the two marks.

The doctrine of synthetic attributes will be absolutely key in what follows, for I will argue for an alternative to the standard view on which the role of a transcendental schema is to combine a category with its synthetic attribute(s). But that picture will only be as clear as the notion of a synthetic attribute, which is itself bound up with Kant's theory of essential marks. In the next two sections, I develop an account of synthetic attributes that situates them within Kant's theory of essential marks. The ultimate goal of these sections will be to work up to an account of how, in a Kantian framework, a mark could belong 'essentially' to a concept and yet not be a part of its analysable content.

4. The inseparability thesis

Though he criticizes Eberhard's definition of synthetic *a priori* judgement, Kant does agree with Eberhard on one important point: judgements that connect a concept to one of its attributes, for both authors, will always be necessary, hence *a priori* judgements. On Kant's account, this necessity reflects the nature of the connection between concept and attribute. Kant endorses what I will call the Inseparability Thesis:

Inseparability Thesis: No attribute of a concept can be separated from its concept.

Since concept and attribute are 'inseparable', they are necessarily connected, which means that any judgement connecting them will itself be necessary. Here are some examples, from within the logic corpus, of Kant endorsing the Inseparability Thesis:

Necessary marks, finally, are those that must always be there to be found in the thing represented. Marks of this sort are also called *essential* and are opposed to *extra-essential* and *accidental* marks, *which can be separated from the concept of the thing.* (9: 60; emphasis of final clause mine)

Necessary marks cannot be separated at all from the concept of a thing; rather, they belong ad esse. (24: 838; my emphasis)

And here, finally, is his continued endorsement of the Inseparability Thesis in OD:

[Predicates attributed to a subject by an a priori proposition] are also called predicates that belong to the essence or inner possibility of a concept, so that all propositions which are valid a priori must contain them; the others, namely those that are separable from the concept (without detriment to it), are called extraessential marks (extraessentialia) ... The extra-essential marks cannot serve as predicates in propositions a priori, because they are separable from the subject, and therefore not necessarily connected with it. (8: 229, my emphases)

So far, we have seen evidence of Kant's endorsement of the Inseparability Thesis, but we do not yet know what it means. Two points in particular require clarification: first, we do not know what it would be to 'separate' a concept from its attribute; second, we do not understand the sense in which such a separation 'cannot' be effected. Let us address these points in turn.

First of all, I take it that on Kant's view, the act by which discursive marks are combined or 'separated' is *judgement*. The basic work of combining or separating marks is undertaken by the qualitative function of judging. Affirmative judgements *combine* subject and predicate, by thinking the subject 'under the sphere' of the predicate (9: 103); negative judgements *separate* marks by positing the subject 'outside the sphere' of the predicate (9: 103); and infinite judgements separate marks while additionally representing the separated subject-concept as itself combined with some further, as yet unspecified concept (9: 103–4). Thus, any categorical judgement that is either negative or infinite in quality, regardless of quantity or modality, will accomplish a separation of marks, for such a judgement posits the subject-concept outside the sphere of the predicate-concept. To 'separate' a concept from its attribute, then, is to arrange the concept with its attribute respectively in subject- and predicate-positions in a negative or infinite categorical judgement.⁶

We are now one step closer to understanding the Inseparability Thesis, but what does Kant mean when he denies that a concept *can be* separated from its essential marks? Recall, in OD, Kant says that the essential marks of a concept, unlike its extra-essential ones, cannot be separated from the concept 'without detriment to it' (8: 229). This is an intriguing lead: we are being told that the separation of a concept from its attribute is somehow 'harmful' to the concept. I suggest that the following passages from the logic corpus enable us to understand what this harm consists in:

Necessary marks are such as are ad essentiam pertinentia, without which the thing cannot be thought at all ... Contingent marks are extra essentialia, however, marks without which the thing can nonetheless be thought. (24: 113; my emphasis)

The tabular division of marks would thus be

- 1. ad essentiam pertinentia, without which the thing cannot be thought . . .
- 2. extraessentialia {without which the concept | can be thought}. (24: 728, my emphasis)

In both of these passages, the distinction between essential and extra-essential marks is located at the level of *conditions on thought*. Essential marks of a concept, unlike extra-essential ones, are conditions of using the concept to think of a thing. Separating a concept from its extra-essential marks – judging, say, that man is not learned – does not impugn its ability to figure in thought. Separating it from its essential marks, however, does.

We are now in a position to give a more perspicuous formulation of the Inseparability Thesis:

Inseparability Thesis (Expanded): The combination of a concept with one of its attributes in a categorical negative or infinite judgement produces a representation that violates the conditions on thought.

Now, it is straightforward to see why Kant endorses the Inseparability Thesis in the case of *analytic* attributes. None of the marks in the analysable content of a concept – neither its *constitutiva* nor its analytic attributes – can be separated from the concept without producing a contradiction. Kant, however, treats non-contradictoriness as a condition on a representation's qualifying as thought: 'I can **think** whatever I like, as long as I do not contradict myself, i.e., as long as my concept is a possible thought' (Bxxvi n.).

Thus, the result of separating a concept from some element of its analysable content (including its analytic attributes) is a representation that lacks the formal cohesion characteristic of a thought. A 'thought' of the form *C* is not-AA, where *C* is a concept and AA is one of *C*'s analytic attributes, is a contradiction.

It is, however, much harder to see why Kant should endorse the Inseparability Thesis for *synthetic* attributes. In what sense does the separation of a concept from one of its synthetic attributes produce a representation that violates a condition on thought? Kant cannot, and does not, claim that such a representation would contradict itself, on pain of collapsing the distinction between analytic and synthetic attributes. But it is unclear that he takes the requirements on thought to include anything over and above non-contradictoriness, and so it is hard to see how separating a concept from its synthetic attributes could violate a condition on thinking. If a thought of the form *C* is not-SA (where *C* is a concept and SA is one of *C*'s synthetic attributes) is not contradictory, in what sense does such a representation violate a condition on thinking?

My strategy at this point is to highlight a distinction that I believe runs through the first *Critique*, between 'empty' and 'significant' thought.⁷ This distinction dovetails with a distinction between two kinds of condition on thought: formal conditions and conditions on *contentful* thought. The relevance of that distinction to present purposes is as follows: whereas the *formal* conditions on thought are indeed restricted to noncontradictoriness, the requirements on *contentful* thought are more demanding. Representations that only satisfy the formal conditions on thought are empty thoughts; significant thoughts, by contrast, satisfy *both* the formal conditions on

thought and the more demanding content-level conditions. If this distinction can be sustained, we will have an explanation of how Kant could have applied the Inseparability Thesis to synthetic attributes: the result of separating a concept from one of its synthetic attributes, he could say, is a representation that satisfies the formal conditions on thought (since it does not contradict itself) but violates the conditions on contentful thought.

That thoughts are subject to distinctive content-level conditions, and that thoughts that fail to meet such conditions are empty, is signalled in Kant's famous declaration that 'thoughts without content are empty' (A51/B75). This passage goes on to declare that the emptiness of a thought is alleviated when we 'make' its constituent concepts 'sensible': '[i]t is thus ... necessary to make the mind's concepts sensible (i.e., to add an object to them in intuition)' (A51/B75). A thought only has 'content', then, in such a way as to preclude emptiness, if its constituent concepts can be 'made sensible'. There are some concepts, however, that cannot be 'made sensible', and these concepts, for that reason, cannot feature in non-empty thoughts. Accordingly, in the Amphiboly chapter Kant calls such concepts – that is, 'concepts to which no intuition can be given' (A290/B347) - 'empty concepts', and he assigns them to Position 1 on the Table of Nothing (A292/B348). Now, Kant is at pains to emphasize that empty concepts can be thought 'without contradiction, to be sure' – that is to say, these concepts do satisfy the formal conditions on thinking - and in this respect the object of such a concept, as a mere ens rationis or 'thought-entity', differs from the object of a self-contradictory concept, which Kant calls a nihil negativum or 'nonentity' and assigns to Position 4 on the Table. Clearly, then, the conditions on contentful thinking outstrip the formal conditions on thought, and a concept can satisfy the latter set of conditions while failing to satisfy the former.

But what, exactly, is it for a thought to be empty? We already know that emptiness cannot equate to contradictoriness, and attention to Kant's examples of empty concepts shows us that emptiness cannot equate to falsity, either. Aside from the concept of a 'new fundamental force' beyond attraction and repulsion, Kant's other example of an empty concept in the Amphiboly is the concept of noumena (A290-1/B347). Since such a concept is empty, it follows that all thought pertaining to noumena is itself empty, but, regardless of his exact position here, Kant surely cannot have held all such thought to be false. If that is right, empty thoughts are not by their nature false (though presumably they might be). What, then, is the distinctive flaw of empty thoughts? The problem with empty thoughts, I suggest, is not that such thoughts are false but rather that human cognizers lack the resources to evaluate their truth or falsity. A judgement is true, according to Kant, just in case it 'agrees with' or corresponds to its object (this is the nominal definition of truth that Kant tells us he 'grants' and 'presupposes' (A58/B82)), and when a thought is empty, I suggest, human cognizers are not in a position to evaluate whether this agreement obtains. For us, evaluating the truth of a thought is a matter of (i) specifying a spatiotemporal intuition (or set of such intuitions) that 'corresponds to' the thought, and (ii) determining whether the relevant intuition(s) belong to experience. But if a thought is empty, this process cannot get off the ground: we cannot complete step (i) because some part of the representational content of the thought cannot be 'brought to' an intuition, and hence we cannot specify an intuition that 'corresponds to' the total thought. An empty thought, then, is not contradictory, nor is it

necessarily false, and nor is it devoid of representational content altogether. But, for human cognizers bound to spatiotemporal intuition, it does lack *intuitively specifiable* representational content, with the result that we are not in a position to adjudicate its truth or falsity.

The notion of emptiness pairs with the notion of *significance (Bedeutung)*. In numerous places, Kant holds that intellectual representations can only be 'significant' if they can be given an object in intuition, with the consequence that empty thoughts and concepts lack significance. Now, Kant's terminology here raises an important question about what intellectual 'significance' amounts to, and why it is reserved for representations that can be related to spatiotemporal intuition in the required manner. I will not take a stance on this issue in this article;⁸ I bring up Kant's use of terminology here simply to have a textually grounded and less awkward way of referring to non-empty thoughts and concepts. Given that all empty concepts and thoughts lack significance, I will accordingly use the expressions 'significant concept' and 'significant thought' to refer to non-empty concepts and thoughts.

To return now to the Inseparability Thesis, my proposal is this. A concept is 'inseparable' from its synthetic attributes because any separation of a concept from its synthetic attributes would produce an empty thought: a representation that fails to satisfy the content-level conditions on thinking, its formal cohesiveness notwith-standing. Any thought of the form *C is not-SA* is empty, I suggest, because we cannot specify a spatiotemporal intuition (or set of such intuitions) that corresponds to the content of the thought, with the result that we are not in a position to assess the thought for truth or falsity. That is the reason why, and the sense in which, synthetic attributes belong necessarily to a concept. Synthetic attributes necessarily belong to a concept insofar as it can feature in significant thought.

That is the proposal, and it has at least one thing going for it, which is that it helps us make out a sense in which the synthetic attributes of a concept could qualify as essential marks (i.e. ones that belong to the concept necessarily), but it does not tell us anything about what synthetic attributes are, or why they should be tied in this way to the significance of concepts. In the next section, I present my positive account of synthetic attributes, which I then draw on to explain the linkage between synthetic attributes and intellectual significance.

5. The derivation of synthetic attributes

When Kant claimed in OD that both analytic and synthetic attributes 'pertain' to the essence of a concept, he made clear that what he meant is that both kinds of attributes can be 'derived' from the logical essence of the concept. The difference between them, recall, had to do with the mode of derivation: whereas analytic attributes derive from logical essence by the principle of contradiction, synthetic attributes are derivable by some 'other principle'. The question I want to pursue in this section is what exactly this alternative principle is. Here, our investigation must be constrained by the results of the previous section: our account of the derivation of synthetic attributes must explain why the separation of a concept from its synthetic attributes creates an empty thought.

My own proposal ties synthetic attributes to the conditions of giving a concept sensible significance. The synthetic attributes of a concept, I suggest, are derivable from the *a priori* conditions of giving that concept an object in spatiotemporal intuition. In what follows, I spell out this proposal both abstractly and with examples, and I explain how the proposal makes sense of the linkage between synthetic attributes and conceptual significance.

In order to show that a given concept can be 'made sensible' or 'brought to' a spatiotemporal intuition (i.e. in order to show that the concept is significant), we need to specify an intuition or set of intuitions *i* such that, first, *i* corresponds to the concept, and second, *i* is compatible with the constraints on human discursive cognition. Showing that *i* is compatible with the constraints on human discursive cognition is itself a threefold matter of showing that it is compatible with the constraints imposed by the faculties of sensibility, imagination and understanding. In each case, the relevant faculty places both empirical and *a priori* constraints on the intuition:

- 1. With respect to sensibility, *i* must incorporate the kind of sensational matter that can be given via the human sense organs (empirical constraint), and its form must agree with the spatiotemporal form of human sensibility (*a priori* constraint).
- 2. With respect to imagination, *i* must agree with both the empirical laws of reproductive imagination (empirical constraint) and the transcendental laws of productive imagination (*a priori* constraint).
- 3. With respect to the faculty of understanding, *i* must agree with the subjective unity of consciousness (empirical constraint) and it must be capable of being 'brought' to the 'I think', which is to say that it must agree with the transcendental unity of apperception (*a priori* constraint).

To make a significant use of a concept, human cognizers must 'relate' that concept to an intuition *i* that both corresponds to the concept and satisfies these constraints. It is by being related to such intuitions that concepts are 'made sensible' or 'given an object' in spatiotemporal intuition; concepts that we cannot apply in this manner, by contrast, are empty. Emptiness is thus a subject-relative notion: the significance of a concept is relative to a subject, and relies on both (i) the existence of an intuition or set of intuitions that both corresponds to the concept and satisfies the constraints just outlined, and (ii) that subject's capacity to 'relate' the concept to intuitions of the relevant kind.

We can apply this model to the empty concepts discussed in the Amphiboly. Take the concept of a noumenon. In its negative guise, this concept represents an object that is not an object of spatiotemporal intuition; in its positive guise, it represents an object that is an object of intellectual intuition. In either case, such an object would fail to be spatiotemporal, given that space and time are not properties that pertain to objects unrestrictedly but only insofar as they are objects of specifically human intuition. Thus, any intuition i that corresponded to the concept of a noumenon (whether the positive or negative concept) would be the intuition of a non-spatiotemporal object, which would ipso facto violate the a priori constraint imposed in condition 1 above. Thus, no intuition could both correspond to the concept and satisfy the constraints on human cognition.

The concept of a new fundamental force is slightly trickier. Kant ties the emptiness of this concept to the fact that 'one thinks [it], without contradiction, to be sure, but

also without any example from experience even being thought' (A290–1/B347). Now, to specify an 'example from experience' would, I suggest, just be to specify an intuition that both corresponded to the concept and satisfied the several constraints on human discursive cognition. At present at least, we do not know what such an exemplar would be like, which means that our thinking about new fundamental forces is empty relative to our current state of knowledge. But whereas in the case of the concept of noumena, we can know in advance that no intuition corresponding to the concept is possible for us, it is hard to see how we could foreclose the possibility that an intuitive exemplar of the concept *could* exist for us. Perhaps new empirical discoveries could put us in a position to specify such an example and thus confer significance on the concept – in which case its emptiness would be less final than that of the concept of a noumenon – but this is a tricky issue that I will not explore further here.

If, by contrast, a concept is significant, then there is some intuition or set of intuitions i that both corresponds to the concept and satisfies the constraints laid out above, and we are able to relate that concept to i in the appropriate way. Now, we saw above that each of the constraints imposed on i by the requirements on human cognition has both an a priori and an empirical specification. Accordingly, i will possess a set of features in virtue of which it satisfies the a priori constraints on human discursive cognition, just as it will possess a set of features in virtue of which it satisfies the empirical constraints. For that reason, the total representational content of i will supervene on two sets of features: the features in virtue of which i satisfies the a priori constraints on human cognition, and those in virtue of which it satisfies the empirical constraints. If we delimit the part of i's representational content that depends on the first set of features, we can ask how this part of i's content relates to the representational content thought in the concept that *i* renders significant. In particular, we can investigate whether there are any properties that i represents in virtue of satisfying the a priori constraints on human cognition that are not also represented through the relevant concept.9

Now, if we find any such properties, they will be properties that exhibit a unique combination of features: on the one hand, they must be represented by any intuition that renders the relevant concept significant, but on the other hand, they are not properties that are represented by the concept itself. Thus, any concept of such a property is a concept of a property that must be present in any spatiotemporal instance of the concept, but since it is not contained in the original concept, this concept cannot be derived through the principle of contradiction. Nevertheless, it is subject to an a priori derivation from the original concept via the a priori conditions of giving that concept significance. And this concept, I want to claim, is a synthetic attribute of the original concept.

This proposal has a number of advantages. First, it explains why any judgement linking a concept with one of its synthetic attributes is synthetic *a priori*: it is synthetic, because the synthetic attribute is not contained in the original concept, and it is *a priori*, because the concept is derived solely with reference to the *a priori* conditions of giving the subject-concept an intuition. Second, it dovetails with my account of the Inseparability Thesis in the previous section. According to my proposal, the synthetic attributes of a concept *C* represent properties that any object must possess if it is to be the object of an intuition that renders *C* sensibly significant.

Alternatively put, the synthetic attribute represents a property that must be possessed by any object just insofar as it is a spatiotemporal instance of *C*: something could not both fail to possess the relevant feature *and* be a spatiotemporal instance of *C*. And this explains why any separation of a concept from its synthetic attribute, of the form *C* is not-SA, must be an empty thought. For any object to be a spatiotemporal instance of *C*, it must instantiate *SA*; nothing that failed to satisfy *SA* could simultaneously be a spatiotemporal instance of *C*. Thus, there can be no spatiotemporal intuition that corresponds to the complex content *C* is not-SA, because nothing could be given in spatiotemporal intuition that is both an instance of *C* and an instance of not-SA. Accordingly, the thought must be empty.

It will help to clarify this proposal with some examples. Take, first, an example of geometry. The concept of a triangle is the concept of a three-sided figure. Now, any intuition that both corresponds to this concept and conforms to the *a priori* conditions of spatiotemporal intuition will present an object whose interior angles add up to 180 degrees. Thus, this is a property that must be represented by any intuition that confers significance on the concept of a triangle, and the thought that some triangle has interior angles that do not add up to 180 degrees is accordingly a thought to which no spatiotemporal intuition could correspond. Nevertheless, the concept of this property is not contained in the concept of a triangle. Thus, the concept is not derivable from the concept of a triangle by the principle of contradiction; however, it is subject to an a priori derivation from the a priori conditions of giving the concept of a triangle an object in intuition. It is therefore a synthetic attribute of the concept. Now, the synthetic a priori cognition that results from our derivation of this synthetic attribute is of a particular kind, namely, mathematical. The geometer, according to Kant, is in the fortunate position that she can generate a pure intuition in a priori sensibility that corresponds to her geometric concepts; she can accordingly study that intuition to glean any properties that must be represented in the intuition but are not already contained in the concept to which it corresponds. Thus, geometry derives synthetic attributes through what Kant calls the 'construction' of its concepts in pure intuition.

Moving now to the categories, let us return to the claim in OD from which we started, namely that <persistence> is a synthetic attribute of <substance>. On the interpretation we have developed, a synthetic attribute of a concept C is the concept of a property that must be represented by any spatiotemporal intuition that gives C sensible significance, where that concept is not already contained in the analysable content of C. If that is right, then Kant's position is that any intuition that both corresponds to the concept of substance and satisfies the a priori constraints on human discursive cognition must represent a persisting object. Accordingly, the judgement that some substance does not persist could never correspond to any spatiotemporal intuition. Nevertheless, the concept of persistence is not already contained in the concept of substance, hence its status as a synthetic attribute of the latter. Now, the derivation of this synthetic attribute cannot proceed in the same manner as a mathematical derivation, and the synthetic a priori cognition in which the derivation culminates is of a kind that Kant calls transcendental rather than mathematical (A720-2/B748-50). The reason for this asymmetry is that the categories are not constructible, which is to say that it is not possible to generate a pure intuition in a priori sensibility that corresponds to the category (ibid.). Now, this of course leaves us with an important question about the alternative philosophical methodology for

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deriving synthetic attributes: how, given that she cannot avail herself of an *a priori* intuition corresponding to the category from which to glean its synthetic attributes, is the philosopher in a position to conduct an *a priori* derivation of the features that must be represented by any intuition that is to give the category significance? That is an important and difficult question, but one that goes beyond the scope of the present article.

Before closing the present section, it will be important to clarify the exact relationship between the synthetic attributes of a concept and the conditions of its significance. My claim is that the synthetic attributes of a concept are derivable from the conditions of giving that concept significance; this claim does not entail that any given subject must in fact have performed the derivation in order to make a significant use of the concept. That would be a disastrous consequence, since it would push a significant use of concepts out of the reach of all but the most intellectually sophisticated. To illustrate the distinction I am drawing here, a subject could perfectly well use the concept <substance> without any thoughts one way or the other on whether substances persist, or indeed under the false impression that some substances do not persist, just as a subject could perfectly well recognize instances of the concept <triangle> in spite of not having derived all or any of the synthetic attributes of the concept. What is important is that any intuition in relation to which a subject makes a significant use of a given concept does in fact instantiate the properties represented by its synthetic attributes. Whether that subject is intellectually conscious of the instantiation of those properties, or indeed of their necessary instantiation by any significance-conferring intuition, is a further matter that has no bearing on that subject's ability to use the concept in significant thought. 10

6. Synthetic attributes and schematized categories

Now that we have a deepened understanding of the doctrine of synthetic attributes, we can return to the topic of the categories and the so-called 'schematized categories'. In this final section, I work up to an explanation of why, as against the standard view, we should not think that the schematism of the categories leads to any enrichment of their analysable content.

To reach this conclusion, it will be helpful to begin with a very brief and cursory sketch of the theory of schematism. We have seen that a concept is only significant if it can be given an object in spatiotemporal intuition, and the theory of schematism, as I understand it, is part of Kant's explanation of how human subjects in fact 'match' intuitions to their concepts so as to make a significant use of those concepts. A different way of putting the points we have been making so far about conceptual significance is to say that a concept is only significant if it can be used to 'subsume' the objects given in spatiotemporal intuition. Now, this act of subsumption is carried out by the 'power of judgement', which is a faculty Kant distinguishes from the understanding precisely in terms of the notion of subsumption: whereas the understanding (as the faculty of 'rules') produces concepts, it is the power of judgement (as the faculty of 'subsumption under rules') that deploys those concepts in acts of subsumption (A132/B171). Accordingly, it is only if a concept formed by the understanding can be deployed by the power of judgement that it has significance: concepts that cannot transition from the one power to the other are empty. The schema of a concept is

then introduced as presiding over this transition from the one faculty to the other. The following passages make especially clear the connection between schemata, subsumption and conceptual significance:

Now to the use of a concept there also belongs a function of the power of judgement, whereby an object is subsumed under it, thus at least the formal condition under which something can be given in intuition. If this *condition of the power of judgement (schema)* is missing, then all subsumption disappears. (A247/B304; my emphasis)

[T]he schemata of the concepts of pure understanding are the true and sole conditions for providing them with a relation to objects, thus with significance. (A146/B185; cf. A147/B187)

The schema of a concept is the condition under which the power of judgement can operate with it; when this condition is not in place, the concept is not fit for use in acts of subsumption and accordingly its significance is voided.

Now, how exactly schemata condition subsumption is not a topic we can dwell on at any length here; nevertheless, it will be helpful to have a very rough working model. On my understanding, the schema of a concept is a representation of a rule, the following of which results in a subject's consciousness of an intuition that corresponds to the relevant concept. The following of this rule is the 'schematism' of the relevant concept, and the faculty that follows the rule is the *imagination*. As I understand it, the rule in question is one that tells the imagination what features to, as it were, 'scan for' in the manifold of intuition in order to become conscious of an intuition that corresponds to a given concept. The intellectual power to subsume objects under concepts is thus underwritten by the imaginative power to detect and apprehend certain features given in intuition. It is only as connected to a schema that a concept is fit for use by the power of judgement, and thus it is only as so connected that the concept has significance.

Kant thinks that the schemata of the categories present a unique and acute philosophical difficulty. The nub of the issue is this: schemata of concepts represent rules for recognizing intuitions that 'correspond' to concepts – this is a notion to which I have been helping myself throughout this article – but it is not at all clear what it would even be for an intuition to correspond to a category. The reason for this unclarity is that the properties represented by the categories are simply not the kinds of properties that could be directly represented through intuition. Here is Kant making this point in the set-up of the chapter:

Now pure concepts of the understanding, however, in comparison with empirical (and indeed in general sensible) intuitions, are entirely unhomogenous, and can never be encountered in any intuition. Now how is the **subsumption** of the latter under the former, thus the **application** of the category possible, since no one would say that the category, e.g., causality, could also be intuited through the senses and is contained in the appearance? (A137–8/B176–7)

Categorial properties such as cause, Kant is explicit here, can never be 'encountered in any intuition'. But if subsumtpion requires that we match a concept with intuitions that 'correspond' to it, it is utterly unclear how the categories could feature in acts of subsumption, for it is utterly unclear what it would be for an intuition to correspond to a category given that categorial features cannot be intuited.

The reason that this issue arises for categories and no other concept of understanding is that the categories are wholly devoid of spatiotemporal representational content. To be sure, categories have intuition-oriented representational content, but they represent the most general features of an object of intuition as such without any reference to spatiotemporality (see e.g. 20: 272). Given the unrestricted significance of the categories to objects of intuition as such, no analysis of the logical essence of a category could possibly retrieve any spatiotemporal content. The situation is different, of course, with a pure sensible concept such as the concept of a triangle, which is precisely a concept of a particular way of enclosing space. We thus have an important asymmetry from the point of view of schematism. Simply analysing the concept of a triangle will uncover a set of properties of a kind that could be intuited in spatiotemporal intuition, and thus our analysis puts us in a position to state what a spatiotemporal intuition corresponding to the concept would represent. We can thus use this analysis of the concept to state its schematic rule: the concept of a triangle is the concept of a three-sided figure, and its schema represents a rule of the imagination for drawing three-sided figures (A141/B180). But the path from category to schema is nothing so straightforward as this. The pure concept of substance, for example, is just the concept of that which can only be thought as subject (A241-2/B300), and the property of thinkability-only-as-subject is not one that can be directly intuited. Thus, we cannot derive the schema for the category from an analysis of its content. I take Kant to be pointing to this difficulty as well as its uniqueness in the following passage:

Only in the case of the categories is there this special circumstance, that they can have a determinate significance and relation to any object only by means of the general **sensible condition**, but that this condition is omitted from the pure category, since this can contain nothing but the logical function for bringing the manifold under a concept. (A244–5)

We are in a bind: for the categories to be significant, they must be subject to deployment under conditions of spatiotemporal sensibility, but the pure category itself does not contain any content that we could appeal to in spelling out what those sensible conditions look like.

Kant thus owes us a new account of intuitive-conceptual correspondence. It cannot be that, in every case of correspondence, the very properties that are intellectually represented through the concept are sensibly represented through the intuition, because on that model of correspondence it would be impossible for a category and an intuition to correspond to one another. Now, spelling out on Kant's behalf what an alternative model would like is certainly not a task for the present occasion; what is important to note here is that Kant presumably takes himself to be in possession of such a model, for rather than despairing of the possibility of providing categorial schemata, he boldly states twelve such schemata at the opening of the Analytic

of Principles. Whatever exactly the model of conceptual-intuitive correspondence that lies in the background of Kant's list of categorial schemata, what we know, given the non-spatiotemporality of categorial content, is that the properties presented in intuitions that correspond to each category – that is, the properties represented in the schematic rule for each category – cannot be properties already thought in the relevant category. Now, this finding puts us in a position to connect the doctrine of schematism with the doctrine of synthetic attributes. For the properties mentioned in the schematic rules for the categories must exhibit exactly the two features that we highlighted in the previous section: on the one hand, they must be present in any intuition that confers significance on the category, but on the other, they are not already thought in the category. And thus the concepts of these properties must be synthetic attributes of the category.

To return, then, to the question of schematized categories, if we use the term 'schematized category' as a name for the categories insofar as they are subject to schematism – that is, insofar as they are subject to significant deployment by the power of judgement in acts of subsumption – we see that the schematized category does not differ at all from the pure category at the level of analysable content. What is new with the schematism of the category is not the injection of some extra conceptual content into the analysable content of the concept itself. What is new is that the productive imagination generates a schema, which facilitates the significant deployment of the category by directing the imagination toward specific spatiotemporal features of intuitions that in some sense 'correspond' to the category. But the category, as schematized, does not incorporate concepts of those spatiotemporal features into its analysable content. Instead, the concepts of those features relate to the category as synthetic attributes: concepts that necessarily belong to the category in virtue of its meeting the conditions on significant thought, which, however, cannot be analytically derived from its logical essence.

7. Conclusion

In this article, I have engaged with a familiar account of the relationship between pure and schematized categories, one that understands the schematized category as a conceptual enrichment of the pure category. Now, this picture will seem obligatory to us as long as we maintain both (i) that the pure and schematized categories are non-trivially distinct, and (ii) that only concepts with different analysable contents can be non-trivially distinct. But I have argued that Kant's theory of synthetic attributes gives him the resources to resist this second claim, and, moreover, that we as interpreters should draw on these resources in explaining the relationship between pure and schematized categories. Throughout sections 2-5, my aim was to explain what it would be for one concept to belong necessarily to another without being part of its analysable content. The synthetic attributes of a concept C, I argued, are a special class of concepts that (i) do not belong to C's analysable content, and (ii) are derivable from the a priori conditions of giving C an object in spatiotemporal intuition. In section 6, I argued, given the non-spatiotemporality of categorial content, that the temporal concepts featuring in the schematic rules for the categories must be synthetic attributes of the categories. The schemata of the categories, I argued, connect the categories to their synthetic attributes in such a way that

human subjects are capable of relating categories to intuitions that (in some sense) 'correspond' to the categories. But nothing in the schematism of the categories registers at the level of analysable content; and thus, as against what I have taken to be the standard view, we can maintain that the schematized categories and the pure categories are analytically identical. Whatever distinctively spatiotemporal content pertains to the schematized category, that content does not enter into its strictly analysable content.

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Notes

- 1 Here and throughout, I follow convention by referring to concepts using angle brackets.
- 2 All references to Kant's works will cite the *Akademie* edition (Kant 1902–) by volume and page number, except references to the first *Critique*, which use the standard A/B pagination. I have relied upon the translations in the Cambridge edition of Kant's works (Kant 1992–). I use the abbreviation OD for Kant's 1790 response to Eberhard, 'On a Discovery Whereby any New Critique of Pure Reason is to be made Superfluous by an Older One' (8: 187–251, trans. Henry Allison in Kant 1992–).
- 3 Buroker, drawing on Allison (2004: 126–7), argues for a view on which categories are 'pure concepts of the understanding' as subject to a 'real use' (2006: 93). A pure concept of the understanding, on her reading, is a second-order concept of some syntactic property of judgements (p. 84), and such concepts only admit of a real use when they are combined with schemata to form categories (p. 99). Thus, on Buroker's reading, the notion of a pure or unschematized category would make little sense, since she reads the term 'category' as a name for a representation that essentially includes a schema. I am grateful to an anonymous referee for familiarizing me with Buroker's view. More recently, de Boer (2016) has argued for the opposite view: she argues that Kant thinks of categories as constituents of pure concepts, rather than vice versa, and accordingly proposes that we substitute talk of 'unschematized categories' for talk of 'deschematized pure concepts'. For all of the interest of these views, in this article I situate myself in the tradition of scholars who accept the legitimacy of the distinction between pure and schematized categories.
- 4 For explicit endorsement of the view, see Bennett (1966: 151); Van Cleve (1999: 106); Rosenberg (2005: 152). Furthermore, I take it that commentators are assuming the standard view when they say, for instance, that the schematized category of substance is the concept of a temporally enduring subject (e.g. Guyer 1987: 213): it is natural to hear the 'of' in these formulations as specifying the analysable content of the concept. Another reader who is plausibly regarded as endorsing the standard view is Eric Watkins (2002), for he holds what he calls the 'additional' view of the schematized categories, on which transcendental schemata 'add' to the 'meaning' of the categories (Watkins 2002: 202). If by 'meaning', Watkins means 'analysable content', he is committed to the standard view. Since he does not specify whether he identities the two notions, though, I do not categorically attribute the view to him here. Colin Marshall is also plausibly read as endorsing the standard view in the following: 'The schematized categories have temporal content that the pure (unschematized) categories lack, and so cannot be correctly applied to non-temporal things in themselves' (Marshall 2018: 28; my emphasis). See also Colin McLear (2020: 3).
- 5 Kant rehearses the distinction at 8: 229; for instances of the distinction in the logic corpus, see 24: 838–40; 24: 728–9; 9: 61.
- **6** Note that, in what follows, my examples of judgements in which a concept is separated from a mark will all be infinite judgements, but nothing hangs on this choice of example.

- 7 The distinction I am about to develop is very close, if not identical, to the distinction between 'determinate' and 'indeterminate' employments of logical functions drawn by Seung-Kee Lee in his important (2004). I arrive at my distinction via a different route to Lee, however, for Lee does not appeal, as I do, to the Table of Nothing.
- 8 Nevertheless, it is worth briefly describing some options. Perhaps the most radical proposal, often associated with Strawson's notorious 'principle of significance' (1966: 16), equates significance with representational content tout court, such that empty concepts and thoughts are entirely devoid of representational content (and so only questionably 'concepts' at all). On a second, less radical proposal, empty concepts (and the thoughts in which they feature) do not lack representational content: with or without 'content', on this proposal, concepts represent properties; nevertheless, empty concepts cannot be employed to refer to specific objects that instantiate those properties. Watkins (2002: 202-5) argues against the first, in support of the second proposal. There is, however, a third alternative on which empty concepts represent properties, and, moreover, can be employed so as to refer to specific objects; however, the subject who employs an empty concept can never be certain that she has successfully referred to an object through her use of the concept. For the sake of labels, we can distinguish the three conceptions of significance implied by these three characterizations of emptiness, respectively, as representational significance, referential significance and epistemic significance. For an interesting treatment of the issue that treats significance as a primarily epistemic notion, see Roche (2010). Though my own sympathies lie at the less radical end of this scale, none of what I say in what follows will depend on a particular interpretation of Kant's notion of significance.
- 9 The reader will notice that, throughout this paragraph, I have adopted a representationalist idiom in my discussion of intuition, and this is controversial. McLear (2016) and Allais (2015) both argue for a view that eschews the notion that intuitions have representational contents, instead arguing that intuition is a primitive relational state in which the mind is 'acquainted with' or 'given' objects, where this acquaintance or givenness is understood non-representationally. There is, I think, a way of spelling out the notion of intuitive-conceptual correspondence that would be germane to such a reader. We could say that an intuition *i* corresponds to a concept C just when the properties thought in the concept C are instantiated by the object with which *i* acquaints us. We could then circumscribe the set of properties of such an object with which we are capable of being acquainted in virtue of the *a priori* features of our cognitive faculties, and we could go on to ask whether any of the concepts of these properties are not already contained in the relevant concept. For convenience, I will continue to use the representationalist idiom, but a non-representationalist reader can translate my claims into her terms. Nothing that I say hangs on which model of intuition we opt for.
- 10 I am very grateful to an anonymous referee for pushing me to think through this issue more thoroughly.

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