Schematism, Homogeneity, and a Third Thing

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Abstract

Kant's Schematism chapter begins with three inconsistent premises: subsumption requires homogeneity between representations, appearances are heterogeneous with categories, and appearances are subsumed under categories. Kant introduces schemata as "third things" to avoid this inconsistency. In this paper, I argue that if homogeneity means similarity, Kant's strategy is incoherent, because no third thing can make two different things similar except with regard to relational properties. I argue instead that two representations are homogeneous when one is in the extension, logical or non-logical, of the other, and schemata are conditions of judgments: grounds for attributing appearances to the non-logical extension of categories.

Introduction

Kant notoriously held that the Schematism chapter of the *Critique of Pure Reason* was "important, nay completely indispensable, though utterly dry" [*Prol.* 4:316], and that "In general, the schematism is one of the most difficult points [...] I hold this chapter to be one of the most important" [*Refl.* 18:686].[1] This is perhaps unsurprising. The Schematism is concerned arguably with the central question of transcendental philosophy, "how are synthetic judgments *a priori* possible?", by explaining how it is that categories are applied to appearances. In addition, the Schematism displays the actions of the transcendental imagination, perhaps one of the most obscure concepts in Kant's corpus as a whole. It is not uncommon to think that fundamental questions about the argument of the Deduction, where the transcendental imagination plays a key role, are answered by Kant's more extended discussion of the imagination in the Schematism.[2] So understanding the nature of a schema should be something of a priority for readers of the Transcendental Analytic. Finally, Kant regularly draws analogy to schemata in some of the most puzzling parts of his work,

[1] All references to Kant's works are to the Akademie edition by volume and page number, except references to the first Critique, which use the standard A/B pagination. I use the following abbreviations: *CJ = Critique of the Power of Judgment*; *CPrR = Critique of Practical Reason*; *Prol. = Prolegomena to Any Future Metaphysics*; *LBlom. = Blomberg Logic*; *JL = Jäsche Logic*; *LDW = Logic Dohna-Wundlacken*; *LVienna = Logic Vienna*; *Kästner = On Kästner's Treatises*; *MMron. = Metaphysics Mrongovius*; *Refl. = Notes and Fragments*; *Corr. = Correspondence*. All translations are from the Cambridge Edition unless noted.

[2] See [Longuenesse, 1998, 242] for discussion.

like his doctrine of aesthetic judgment, the relation between freedom and nature, or the nature of regulative ideas.[3]

However, Kant's dryness and obscurity has meant that there is little consensus as to what the argument of the Schematism in fact is.[4] A natural point of orientation would be the explicit framing of the chapter, that constitutes its first two paragraphs. Here Kant claims that categories and appearances need to be homogeneous for the former to be applicable to the latter, and that this homogeneity can only be achieved by the addition of a third thing, or schema. But this passage is perhaps the most poorly-regarded section of the Schematism as a whole: as Bennett memorably puts it, "The incoherence of Kant's problem about category-application is matched by the vacuity of its supposed solution." [Bennett, 2016, 160]. My task here is to show that the framing of the Schematism is neither incoherent, nor is its solution vacuous. In the first section, I show that the vast majority of commentators find incoherence in the framing of the Schematism because they understand homogeneity to mean *similarity*. I concur; if homogeneity meant similarity, Kant's strategy would fail, because no third thing can bring about the similarity of two distinct things with regard to their essential properties. So what we need is a new account of homogeneity, and a new account of third things. In the second section, I show that for Kant, if two representations are homogeneous, one is contained within the extension of the other. For example, "body" and "divisible" are homogeneous, because "body" is contained within the extension of "divisible". In the third section, I show that third things are conditions of judgments: they are facts that ground why one representation is in the extension of another. For example, "extended" is the condition of the judgment "bodies are divisible", because "body" is in the extension of "extended", "extended" is in the extension of "divisible", and thus by transitivity grounds why bodies are divisible. This leads us to an appealing picture of what schemata must be. They must be facts that explain why appearances are in the extensions of categories, thereby bringing about the homogeneity of the two.

1 Homogeneity and similarity

Here are three inconsistent premises:

Subsumption-Homogeneity-Requirement If A is subsumed under B, the representation of A is homogeneous with B

Appearance-Category-Heterogeneity Appearances are not homogeneous with categories

Appearance-Category-Subsumption Appearances are subsumed under categories

[3] See [*CPrR* 5:68], [*CJ* 5:218, 287], [A674/B702, A679/B707].

[4] Nick Stang goes as far as to suggest that "None of the commentators I am aware of (see Bibliography at the end) reconstruct the Schematism *as an argument*" [Stang, 2023, 55 fn9]. See footnote 14 below for a summary of some of the major debates.

Kant seems committed to all three at the start of the Schematism. This is a problem.[5] He writes

> [**Subsumption-Homogeneity-Requirement**] In all subsumption of an object under a concept the representations of the former must be **homogeneous** with the latter, i.e., the concept must contain that which is represented in the object that is to be subsumed under it, for that is just what is meant by the expression "an object is contained under a concept." [...]
>
> [**Appearance-Category-Heterogeneity**] Now pure concepts of the understanding, however, in comparison with empirical (indeed general sensible) intuitions are entirely unhomogeneous, and can never be encountered in any intuition. [**Appearance-Category-Subsumption**] Now how is the **subsumption** of the latter under the former, thus the **application** of the category to appearances 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? This question, so natural and important, is really the cause which makes a transcendental doctrine of the power of judgment necessary, in order, namely, to show the possibility of applying **pure concepts of the understanding** to appearances in general. [A137-8/B176-7]

Two caveats are required here. First, Kant does not directly state **Appearance-Category-Subsumption**, but his aim is to show subsumption is possible; arguably the conclusion of the Deduction is that it is necessary, but showing how it is possible and how it works remains significant.[6] Second, freely moves between "appearances", "objects" and "intuitions". I am going to assume that the objects in question are appearances, and they are represented in intuitions: the first sentence of the Schematism discusses how the *representation* of the object must be homogenous with its concept.[7]

Kant's solution is curious. He asserts that there must be a "third thing" which is homogenous with both appearances and categories, called a transcendental schema. Kant writes:

> Now it is clear that there must be a third thing, which must stand in homogeneity with the category on the one hand and the appearance on the other, and makes possible the application of the former to the latter. This mediating representation must be pure (without anything empirical) and yet **intellectual** on the one hand and **sensible** on the other. Such a representation is the **transcendental schema.**
>
> The concept of the understanding contains pure synthetic unity of the manifold in general. Time, as the formal condition of the manifold of inner sense, thus of the connection of all

[5] This objection goes as far back as at least Kemp Smith, who writes "if category and sensuous intuition are really heterogeneous, no subsumption is possible; and if they are not really heterogeneous, no such problem as Kant here refers to will exist" [Kemp Smith, 2003, 334]. See also Prichard's comment that "we see that the process said to be necessary because a certain other process is impossible is the very process said to be impossible" [Prichard, 1909, 255], endorsed at [Warnock, 1949, 82].

[6] There are multiple ways one could cash out the modalities in question here. E.g. [Freuler, 1991, 404] takes the distinctive view that the Deduction is merely problematic whereas the Schematism is assertoric.

[7] See [Detel, 1978, 38] for this point.

> representations, contains an *a priori* manifold in pure intuition. Now a transcendental time-determination is homogeneous with the **category** (which constitutes its unity) insofar as it is **universal** and rests on a rule *a priori*. But it is on the other hand homogeneous with the **appearance** insofar as **time** is contained in every empirical representation of the manifold. Hence an application of the category to appearances becomes possible by means of the transcendental time-determination which, as the schema of the concept of the understanding, mediates the subsumption of the latter under the former [A138-9/B177-8]

So Kant holds:

Appearance-Schema-Homogeneity Appearances are homogenous with schemata

Schema-Category-Homogeneity Schemata are homogenous with categories

This immediately is troubling on two fronts. First, how do **Appearance-Schema-Homogeneity** and **Schema-Category-Homogeneity** prove **Appearance-Category-Homogeneity**? Second, even if they do, how does Kant seek to avoid the contradiction that emerges from the initial inconsistent trio? Which of the three is he denying? I will begin with the second question, and then turn to the first.

The first strategy to resolve the inconsistency would be to deny that homogeneity is a requirement on all subsumption.[8] That is, perhaps Kant is introducing a requirement from general logic, only to show that the requirement does not hold for transcendental logic. On the face of it, it would be extremely strange to begin a chapter with a principle you in fact deny, whilst nowhere stating that denial. But perhaps worse, Kant remains committed to **Subsumption-Homogeneity-Requirement** in the letter to Tieftrunk from 1797, writing that to deny with requirement would be "would be contrary to logic" [*Corr.* 12:224].

Another strategy would be to deny that Kant holds that appearances are subsumed under categories. Perhaps instead some alteration happens to appearances, such that they are changed into some more intellectual form, appearances*, which are homogenous with categories. Or perhaps instead some alteration happens to categories, such that they are changed into some more sensible form, categories*, which are homogenous with appearances. Or perhaps *both* happen and really what we learn from the Schematism is that appearances* are homogenous with categories* and thus the former can be subsumed under the latter.[9] The issue with this view is that Kant simply never states it, or anything like it. Another issue is that one can make up new representations that are homogenous with each other, but the critic can always ask what they mean. After all, what I care about are the appearances that my senses in fact give me, and the form of my understanding as such. What gives us the right to call appearances* "appearances", or categories* "categories" other than the fact we have called them that and added a star?

[8] This seems to be the view of [Host, 2025, 892].

[9] For example Melnick [2001] thinks the schemata bring appearances to subject-predicate form. See too Matherne [2014] and Matherne [2024], Lau [2015], [Gardner, 1999, 166], and Woods [1983] who takes it that the categories rather than appearances are transformed.

This leaves us with denying that Kant thinks that appearances and categories are heterogeneous. Given Kant certainly states **Appearance-Category-Heterogeneity**, the standard way to do this is to deny an *unrestricted* version of it. Instead, one would attribute to Kant two principles:

Restricted-Appearance-Category-Heterogeneity Without schemata, appearances are heterogeneous with categories

Restricted-Appearance-Category-Homogeneity With schemata, appearances are homogenous with categories

Given the failure of the other two strategies, I think this is the right way to go. But it immediately raises the question of how Kant understands this move, which is to say how he understands homogeneity. According to a popular view, homogenous means *similar*. That is a natural way to read the word in English, as well as its German equivalent "Gleichartig".[10] For the argument to run, Kant would have to argue like this:

Subsumption-Homogeneity-Requirement If A is subsumed under B, the representation of A is homogenous with B

Restricted-Appearance-Category-Heterogeneity Without schemata, appearances are heterogeneous with categories

Homogeneity-Transitivity If A is homogenous with B, and B is homogenous with C, A is homogenous with C

Appearance-Schema-Homogeneity Appearances are homogenous with schemata

Schema-Category-Homogeneity Schemata are homogenous with categories

Restricted-Appearance-Category-Homogeneity With schemata, appearances are homogenous with categories

Appearance-Category-Subsumption Appearances are subsumed under categories

The inconsistent trio is now resolved, and Kant's third thing solution is explained. The problem is that if homogeneity means similarity, several of the premises have obvious counterexamples. I take these in turn.

First, **Subsumption-Homogeneity-Requirement** cannot hold universally if homogeneity means similarity. As Wilkerson notes, "tomatoes are red, round, soft, and wet inside, but the concept of a tomato has no colour or shape or texture" [Wilkerson, 1976, 95]. Second, **Homogeneity-Transitivty** has clear counterexamples if homogeneity means similarity. Consider that two terms p and q are similar iff they both instantiate some property F. Now take three terms, x, y, z, where x and y instantiate H so are similar, and y

[10] Furthermore, Kant writes "different and heterogeneous" (*unterschieden und heterogen*) at [A138/B177] which might suggest that they are synonyms.

and z instantiate G so are similar. Now x and z are only similar if H and G are identical.[11] But in the case of the Schematism, H and G are not identical: Kant argues that schemata are homogenous with appearances and categories in different regards.[12] Just because farfalle pasta is similar to a bowtie in shape, and bowties are similar to a shirt in material, does not mean that farfalle pasta is similar to a silk shirt.

Third, and most fundamentally, **Restricted-Appearance-Category-Heterogeneity** and **Restricted-Appearance-Category-Homogeneity** are incompatible if homogeneity means similarity. A third thing can only make two different things similar as regards *relational* properties. So if I have two objects, and I place a third equidistant from them, the two initial objects have indeed become more similar insofar as they have both gained the property of being equidistant from the third. But the properties added by schemata are firmly *not* relational properties; schemata are "universal" and "temporal". Third things cannot alter the essential properties of things, which are the properties that are in question in the Schematism.

These objections are not new. But despite this, many commentators on the Schematism ignore this problem, whether deliberately or not. Some argue that the problem is just incoherent, so we should drop it and turn to the real details of the argument of the Schematism. Wolff himself for example holds that "Despite this confusion, the argument of the Schematism comes to an exceedingly important conclusion" [Wolff, 1963, 208].[13] But despite the fact this is widely felt, nobody is quite sure what that conclusion is. To get a sense of the variety, Bennett holds that schemata are a kind of concept, de Boer thinks that schemata are aspects of rules that can be expressed as concepts, Allison and Matherne think schemata are kinds of intuitions, there is a long-standing debate as to whether empirical concepts can be distinguished from schemata, and there is firm disagreement on whether schemata are conditions to acquire concepts, or whether we only possess them when a concept is acquired.[14] In such an interpretive landscape, it is a great loss to discard the framing of the chapter, which constitutes about a fifth of its length. Other commentators do not explicitly reject the framing, but provide accounts of the Schematism which fall victim to the problems raised above.[15] The most popular of these is to see schemata as having similar contents to both intuitions and concepts. That is, one might think that homogeneity is a relation of *contents* of intuitions and

[11] This objection goes back to [Wolff, 1963, 207].

[12] Given the properties that Kant appeals to are, as [Gram, 1968, 93-94] points out, contraries, appearances, schemata, and categories cannot be similar in the same regard. For example, Kant holds that a schema is homogenous with an appearance because time is contained within it, but categories simply do not contain time and are definitively atemporal.

[13] Even Heidegger, perhaps the most schematism-friendly commentator on record, refers to this formulation as the "most superficial form of the problem of Schematism" [Heidegger, 1997, 79, cf. 63], and so seeks to reframe the chapter away from subsumption. See too [Warnock, 1949, 80], [Kemp Smith, 2003, 334], [Prichard, 1909, 255], [Wilkerson, 1976, 95], [Bennett, 2016, 160], [Pendlebury, 1995, 782], [Krausser, 1976, 178], [Curtius, 1914, 363-5].

[14] For the debate as to what kind of representation schemata are, see [Bennett, 2016, 159], [de Boer, 2016, 466], [Matherne, 2024, 213], [Allison, 1981, 69], [Allison, 2004, 216]. For the debate about empirical concepts and schemata see [Guyer, 1987, 164], [Chipman, 1972, 42], and [Allison, 2004, 208-209]. For the question of whether schemata precede concepts or vice versa, see [Pendlebury, 1995, 878], [Ginsborg, 2014, 153], and [Longuenesse, 1998, 121]. With regard to Wolff's own vision of the exceedingly important conclusion, that categories must be only related to time, has been questioned by Franzwa [1978], Förster [1987], and Host [2025] who think Kant has omitted a spatial schematism.

[15] Commentators who have defended the Schematism in contemporary terms tend to ignore the third thing and homogeneity formulation, for example Bell [1987]. The problems go unaddressed in e.g. [Dicker, 2004, 218] and [Matherne, 2014, 187]. Two book-length treatments of schematism, Staton [2025] and Daval [1951] give no definitions of homogeneity.

concepts, such "the swan", "der Schwan", and a photo of a swan mean the same thing despite their representations having different forms (letters, spatial arrangement, etc), intuitions and categories on this reading can represent the same content despite being different in form.[16] But this won't do: if two things have similar content, they have it regardless of the a third thing.[17] No matter what one does, third things seem like they cannot make two different things similar, and Kant's indispensable chapter must be dispensed with.

Let us take stock. Kant seems to begin the Schematism with an inconsistent trio of premises. The best way to resolve this inconsistency is to argue that categories and appearances can be made homogenous, but are not unrestrictedly homogenous. But this solution to resolving the inconsistency will not work if we assume that homogeneity means similarity. We therefore, in order to understand Kant's argument in the Schematism, need a new definition of homogeneity, and how third things can bring it about.

2 Homogeneity

If homogeneity does not mean similarity, perhaps it is a technical notion. One does appear in the Kant literature, which I will call the "same genus" account. On this definition, two representations are homogenous when they share the same genus concept, see [Sutherland, 2021, 199], [Nunez, 2025, 113-114]. This is a definition known to the tradition, for example Tetens writes "But what is homogeneity and heterogeneity?[*Gleichartigkeit und Verschiedenartigkeit? Homogeneität und Heteogeneität?*] [...] What is homogenous, as some have expressed, is what can be grasped under the same generic concept, and what is heterogenous is what cannot" [Tetens, 2014, 143].[18] And Kant sometimes expresses something similar, writing for example "Homogeneity <*homogeneitatem*>, i.e., things from one and the same sort (<*genus*; G: *Gattung*>)" [*MK3* 29:991]. Perhaps more tantalisingly, Kant seems to indicate that his notion of homogeneity might not just refer to concepts, but to refer to objects and concepts, writing "It is true that there is a certain dissimilarity [*Ungleichartigkeit*] in objects and concepts, but concepts can nonetheless become homogeneous if one brings the manifold under a universal concept" [*LBlom.* 24:144-45]. Sadly, Kant never follows up on what this would mean. But we can get a general sense of what Kant *might* mean. Take judgements like "the meal smelled a deep red". The reason why this is nonsense is that smells are not the kinds of things that have colours. They do not fall under the genus concept "coloured objects". So it does seem like having the same genus is requisite for the meaningful use of concepts in judgements.

But there is a problem with assuming that homogeneity means falling under the same genus concept.

[16] See [Stang, 2023, 34], [Matherne, 2024, 147], [Guyer, 1987, 163], [Williams, 2020, 10], [Chipman, 1972, 39], [Buroker, 2006, 138], [Dunlop, 2012, 106], [Pendlebury, 1995, 781]. I take it [Detel, 1978, 38-9] who takes homogeneity to be identity of synthesis to hold a version of this view.

[17] Stang seems to admit this, giving two different definitions of homogeneity at [Stang, 2023, 36]. Pendlebury agrees that this will not serve the third-thing formulation, but curiously remarks in a footnote that there is "a workable interpretation on which transcendental schemata are, after all, intermediate representations" [Pendlebury, 1995, 782 fn10], and that this solution is Guyer's, though Guyer holds a content view, see [Guyer, 1987, 165].

[18] Citations to Tetens are to the original pagination found within the new edition, not the pagination of the new edition. Translations are mine.

It is one that Tetens himself pointed out: "Circles and ellipses are without a doubt homogenous lines, as conic sections: but from another perspective they are without a doubt entirely heterogenous and essentially different things" [Tetens, 2014, 144]. The point here is that homogeneity is always relative: circles and lines fall under some of the same concepts, but not all of them. This is a problem for attributing this definition of homogeneity to Kant in the Schematism. They key problem is that nothing *licences* Kant to claim that the relevant genus concept is a transcendental time determination. For flat footedly, "categories" and "appearances" *do* fall under a common genus, the genus "representation", as Kant seems to insist in the *Stufenleiter*. Indeed, *all* concepts have to fall under the highest genus. As Kant puts it, "the following universal law holds: *There is a genus that cannot in turn be a species, but there is no species that should not be able in turn to be a genus*" [*JL* 9:97]. If that is right, concepts are on this telling of the story *never* heterogenous, because they all trivially fall under the highest genus. This cannot be what Kant has in mind in the Schematism. So we need a more precise notion of homogeneity.[19]

My suggestion in this section will be to take seriously the account of containment which is at the heart of the genus concept proposal. After all, Kant introduces the Schematism problem by stating that "In all subsumption of an object under a concept the representations of the former must be **homogeneous** with the latter, i.e., the concept must contain that which is represented in the object that is to be subsumed under it, for that is just what is meant by the expression "an object is contained under a concept"" [A137/B176]. Here, homogeneity is couched in terms of containment. So to understand what Kant means by homogeneity, we will have to take a detour into what Kant means by containment.

Kant distinguishes between two ways a concept can be said to "contain" something. The first is what is "contained under" a concept, its extension or sphere. The second is what is "contained in" a concept, its content. To distinguish the two, take the example of three concepts: "cat", "animal", and "organism", which are three concepts ordered such that the first is the lowest species and the last is the highest genus. For Kant, for a concept to be "contained under" another is for it to be a species of it: so "cat" is contained under "animal", and "animal" is contained under "organism". But Kant also uses the word "contain" to describe the other direction. For Kant, for a concept to be "contained in" another is for it to be the genus of it: so "animal" is contained in "cat", and "organism" is contained in "animal". Both of these relations are transitive: "cat" is contained under "organism" and "organism" is contained in"cat".[20] So which direction is Kant discussing in the first sentence of the Schematism? Well, Kant's language indicated that subsumption means that the object is brought *under* a concept. So a natural gloss is that homogeneity is satisfied when an object is in the extension of another. And subsumption names a specific ordering: one thing, the object, is contained under the concept.

[19] Tetens' own version of homogeneity, which is defined as the property whereby two things vary only by degree, will also not work here. See [Tetens, 2014, 150].

[20] See [*JL* 9:95]. I am following here [Longuenesse, 1998, Ch4].

The reader may have noticed that in my discussion of containment, it was a relation between concepts. But Kant's discussion in the Schematism concerns objects and concepts. It is important to note here that Kant appears to have not only two theories of containment, but also two theories of extension.[21] To understand the opening sentence of the Schematism, it is important to draw the distinction between a concept's logical and non-logical extension. A concept's logical extension consists of the concepts it contains: so again, "organism" has in its logical extension "animals" and "cats". A concept's non-logical extension is the objects that it contains: so "cat" has in its non-logical extension all of the specimens in the alley. Given the topic of the Schematism is objects and concepts, it is this non-logical extension that must be at issue. It is important to point out how the difference between the two kinds of extension interface with Kant's distinction between analytic and synthetic judgments. In an analytic judgment, the predicate concept is contained in the subject concept; or said another way, the subject concept is in the logical extension of the predicate. So in the judgment "all bodies are extended", "body" is in the extension of "extended". All we need to do is analyse the concept "body" to find the concept "extended". But in a synthetic judgment, this is not so, because we instead attribute the subject to the non-logical extension of the predicate concept. Take the example "Some man is learned". In this case, one cannot analyse the concept "man" to get the concept "learned". Thus the judgment is synthetic.[22] What we see here is that attributing some particular man to the non-logical extension of a concept like "learned" requires going beyond the logical extension of that latter concept.

Does this work for Kant's example? Kant writes that "Thus the empirical concept of a **plate** has homogeneity with the pure geometrical concept of a **circle**, for the roundness [*Rundung*] that is thought in the former can be intuited in the latter" [A137/B176]. We should be immediately careful here. Kant has returned to asserting the connection between two concepts here, rather than a concept and an object. Furthermore, we have a third concept, "round" which is playing a role in bringing about homogeneity. I think two views are possible, the first which suggests the same genus interpretation of homogeneity, and one which suggests my own interpretation of homogeneity. Let us start with how the same genus interpretation would read this passage.[23]

To understand what is happening in this example, we need to attend to Kant's unusual account of the concept "circle". If we peer deeper into the book, we learn the following: "the common explanation of the circle, that it is a **curved** [*krumme*] line every point of which is the same distance from a single one (the centre-point), contains the error of unnecessarily introducing the determination **curved**. For it must be a particular theorem, which can be deduced from the definition and easily proved, that every line each point of which is equally distant from a single one is curved" [A731-32/B759-60]. This is a surprising result: "curved" is not contained within the definition of "circle" as we might expect. Rather "curved" is a

[21] I am following [Anderson, 2015, 63ff]

[22] This example is Kant's, see [*MMron.* 29:819].

[23] My discussion here is similar to that in [Curtius, 1914, 345-7], who also argues that homogeneity seems to be used in two ways, one of which is a same-genus proposal, but thinks the example cannot be saved.

determination, or synthetic predicate, with respect to "circle" like "learned" was with respect to "some man". This means that in turn, "circle" is in the non-logical extension of "curved". Now, obviously to be round and to be curved are non-identical, but presumably everything round is curved. Furthermore, presumably plates are paradigmatically or definitionally round.[24] So one can analyse the concept "plate" and get the concept "round". This means that both "plate" and "circle" are in the extension of "round", just as "cat" and "animal" were in the extension of "organism". Thus this reading would suggest that what Kant is getting at is that all that one needs for homogeneity between p and q is a concept r they both fall into the extension of. But again, there is something very unsatisfying about this. Why not simply say that "plate" and "circle" are homogenous because they both fall under "extended" or "object"? Why pass through "round"?

A different strategy is to suggest that Kant is being loose with his usage of the word *die Rundung*, the roundness. In German, like in English, *die Rundung* typically takes a genitive complement. We might say the roundness of a belly, or one might talk of *die Rundung der Straße*, the curvature of the road. What we mean in both German and English is the round part of something. If this is right, we can read "roundness" as an elliptical formulation for "the roundness of a circle", and thus Kant uses "roundness"' to name the formal curved shape that a plate has empirically and a circle exhibits purely. Now plates are in the extension both of "round" and of those things which possess "the roundness of a circle". But by contrast, things which possess "the roundness of a circle" are in the extension of "circle", whereas "circle" is in the extension of things which are "round". By transitivity, this passage would instead show that "plate" is in the extension of "circle", *because* plate is in the extension of things which possess "the roundness of a circle", which in turn is in the extension of "circle". This would support my view of homogeneity, as well as show why Kant bothers to include "roundness" at all.

This reading may seem on the face of it to be immensely forced. We move from "roundness" as an abbreviation of "roundness of a circle" to "thing which possesses the roundness of a circle". But I can find no better alternative. My argument in the next section will be that Kant's theory of third things suggests that schemata must be representations that bring about homogeneity not by being a genus of which appearances and categories are species, but rather by bringing appearances into the extension of concepts. This will hold even if Kant does have in mind in the circle-plate example homogeneity in the same genus sense. For now, it is enough to have shown that the definition that states that if two representations are homogenous, one is in the extension of the other, is plausible.

[24] Here is the definition of a plate in the 1854 Grimm dictionary: "im eigentlichen sinne ein scheibenartiges speisegeräth mit erhöhtem rande, worauf die speise gelegt und zerschnitten wird [In the proper sense a disc-like eating utensil with a raised edge, on which food is placed and cut]" Grimm and Grimm [1854–1961].

3 Conditions and Third Things

The two models of homogeneity discussed above pair with two accounts of third things. On a highest genus view, the third thing that brings about homogeneity is just a genus of which the two previously heterogenous things are species. This section will articulate an alternative account of the function of third things, and show that they bring about homogeneity in the sense described above: they bring one object or representation into the extension of another representation. To make this case, I will demonstrate that schemata are conditions of judgments, where conditions are to be understood as the ground or reason for attributing a subject to a predicate, which is to say for putting the subject in the extension of the predicate.[25] This solves our initial puzzlement about how third things bring about homogeneity.

3.1 Conditions and Containment

To understand what schemata, as third things, do, it is important to be attentive to Kant's language. Kant's discussion of schematism is subtly guided by the notion of a "sensible condition". When he introduces the chapter he writes that the "**transcendental doctrine of the power of judgment** will contain two chapters: the **first**, which deals with the sensible condition under which alone pure concepts of the understanding can be employed, i.e., with the schematism of the pure understanding" [A136/B175]. Schemata are specifically identified as sensible conditions of the categories within the main text, where Kant writes that "this formal and pure condition of the sensibility, to which the use of the concept of the understanding is restricted, the **schema** of this concept of the understanding" [A140/B179].[26] Sometimes the modifier sensible is dropped, for example immediately after the Schematism Kant writes that "In the previous chapter we have considered the transcendental power of judgment only in accordance with the general conditions under which alone it is authorized to use the pure concepts of the understanding for synthetic judgments" [A148/B187]. Finally, Kant writes in the introduction to the Analogies that "the category contains the function, unrestricted by any sensible condition, of their unity, as of a synthesis in general. These principles, therefore, justify us in compounding the appearances only in accord with an analogy with the logical and general unity of concepts, and hence in the principle itself we make use of the category, but in its execution (its application to appearances) we set its schema in its place, as the key to its use, or rather we set the latter alongside the former, as its restricting condition, under the name of its formula" [A181/B224]. It is less well known that "condition" is a term of art in Kant's logic.[27] Recall Kant's letter to Tieftrunk quoted above: here Kant insists that "this subsumption of an empirical concept under a category would seem to be the subsumption of something

[25] For another proposal that sees schemata as grounds, see [Chipman, 1972, 41].

[26] See also [A145/B185-A147/B186].

[27] An extremely rewarding treatment of this term is to be found in [Longuenesse, 1998, 95ff], though she sadly has little to say here about the relation of conditions to the Schematism. Allison [1981] and de Boer [2016] do tie the idea to Schematism, as I will discuss. I think [Scaglia, 2020, 122-125] endorses Allison on this note, but the discussion is raised in a literature review so it is hard to tell the degree of agreement.

heterogeneous in content; that would be contrary to logic, were it to occur without any mediation" [*Corr.* 12:224]. So what is the logical notion of a condition that can prevent heterogeneity?

The best way to understand what Kant means by a condition is with an example. Consider the following:

> Every judgment has the condition of truth - the ground for one's attributing to it a predicate. In every judgment, there must be something in the subject that makes the predicate be attributed to it, and this is called the condition. E.g., every body, as an extended being, is divisible. Or another example: all men, as finite beings, are capable of mistakes (*faillible*). Now this, again, is not called a conditioned judgment, but a restricted one. If the latter is removed, then it becomes conditioned. The restriction is called the determination of the judgment. - Sometimes these determinations lie in the concept, sometimes they are added. [*LDW* 24:764][28]

In this example, we have a judgment "every body is divisible". The subject concept is "body", and the predicate concept is "divisible". As we saw above, in a subsumption, we attribute the subject concept to the extension (logical or non-logical). So in this case, we place "body" into the extension of the concept "divisible", which has a larger extension. But a natural question emerges as to *why* something is in a predicate concept's extension. Conditions are answers to this question. In our example, the reason why "body" is in the extension of "divisible" is because "body" is in the extension of "extended" and "extended" is in the extension of "divisible". Given the transitivity of extensions, this explains that "body" is in the extension of "divisible". Alone, this suggests that, if homogeneity is brought about by conditions, it should be understood as I have described. Because note that "extended" is not a common genus between "body" and "divisible": concepts are divisible into their constituent marks (e.g. "human" into "rational" and "animal") but are not extended.

We can push the proposal further, however. One might notice that the two examples in the passage bear a striking resemblance to a more familiar philosophical device, the syllogism. Kant's example "every body, as an extended being, is divisible" looks a great deal like a condensed version of the syllogism "all extended beings are divisible, all bodies are extended, therefore all bodies are divisible". It should be no surprise then that Kant also uses the word "condition" in the context of syllogisms. Kant introduces syllogisms by writing

> In every syllogism I think first a **rule** (the *major*) through the understanding. Second, I **subsume** a cognition under the condition of the rule (the *minor*) by means of the **power of judgment**. Finally, I determine my cognition through the predicate of the rule (the *conclusio*), hence *a priori* through **reason**. Thus the relatione between a cognition and its condition, which the major premise represents as the rule, constitutes the different kinds of syllogisms.

[28] Cf. [*LBlom.* 24:275]. The conception of conditions at the level of judgment goes back to the rationalist logical tradition Kant's own theory of logic developed out of - see '[Meier, 2016, §297]. Kant in his Logic lectures broadly endorses the picture expressed in this passage and the ones that follow it, e.g. [*LDW* 24:764], [*LBlom.* 24:275], [*LVienna* 9:932].

[A304/B360-1][29]

What Kant says here is very condensed. Kant appears to be stating that the condition appears as the predicate concept in the minor premise of a syllogism. Given the general structure of syllogisms, that means they are also the subject concepts in the major premise.

We also see this idea in Kant's Logic. Kant writes that an inference of reason in general is defined as "the cognition of the necessity of a proposition through the subsumption of its condition under a given universal rule", and the "universal principle of all inferences of reason is "*What stands under the condition of a rule also stands under the rule itself*" [*JL* 9:120]. In the note he breaks down the parts of a syllogism: "1. a universal rule, which is called the *major proposition* (*propositio major*), 2. the proposition which subsumes a cognition under the condition of the universal rule, and which is called the *minor proposition* (*propositio minor*), and finally 3. the proposition which affirms or denies the rule's predicate of the subsumed cognition: the *conclusion* (*conclusio*)" [*ibid.*]. Let us use our example to clarify what Kant means here:

Major: All extended beings are divisible (CONDITION OF RULE is PREDICATE OF RULE)

Minor: All bodies are extended (SUBSUMED COGNITION is CONDITION OF RULE)

Conclusion: All bodies are divisible (SUBSUMED COGNITION is PREDICATE OF RULE)

Why draw attention to this arcane part of Kant's Logic? First, because it suggests that my account of the homogeneity of circles and plates has the right structure:

Major: Everything possessing the roundness of a circle is a circle (CONDITION OF RULE is PREDICATE OF RULE)

Minor: All plates possess the roundness of a circle (SUBSUMED COGNITION is CONDITION OF RULE)

Conclusion: All plates are circles (SUBSUMED COGNITION is PREDICATE OF RULE)

Second, because it seems like Kant requires a principle like the universal principle of all inferences of reason, that "*What stands under the condition of a rule also stands under the rule itself*" [*JL* 9:120], to make sense of the schematism. For Kant thinks that "the appearances must not be subsumed under the categories per se, but only under their schemata" [A181/B223]. For appearances thus to stand under the categories themselves, it must be the case that what stands under the condition of the rule (i.e. the subsumption of appearances under schemata), stands under the rule itself (the categories). Third, when we turn to the case of categories, schemata, and appearances, applying this model leaves us with conclusions that map nicely onto the principles; particularly in the A edition this is manifest. Take the axioms of intuition "All appearances

[29] See also [A330/B386-7].

are, as regards their intuition, **extensive magnitudes**" [A162] or "**All intuitions are extensive magnitudes**" [B202]. This is a judgment where "all appearances" are the subject concept and the category of magnitude as its predicate, where I take it that some part of the argument of the axioms itself is to show that this magnitude must be specifically extensive. Kant in the Schematism writes that the "**schema of magnitude** (*quantitatis*), however, as a concept of the understanding is **number**" [A142/B182]. This gives us the following inference:

Major Premise: Everything enumerable [Schema] is a quantity [Category]

Minor Premise: All appearances [Appearance] are enumerable [Schema]

Conclusion: All appearances [Appearance] are magnitudes [Category]

Of course constructing all of these inferences for all of the principles would be a different challenge, especially since not all of them are formulated explicitly as judgments that predicate categories of appearances (though it seems to me that fundamentally they all in fact do this). But I take this to be a benefit of understanding third things as conditions of judgments.

Finally, and most importantly, we have a way of solving our original problem. The question was how the following two principles could be compatible:

Restricted-Appearance-Category-Heterogeneneity Without schemata, appearances are heterogeneous with categories

Restricted-Appearance-Category-Homogeneity With schemata, appearances are homogenous with categories

On the reading I have suggested, we should understand **Restricted-Appearance-Category-Heterogeneity** as the claim that there is no ground for appearances being in the extension of categories. We are in a similar position to the mathematician before they have constructed their proof: they too do not know whether appearances can fall into the extension of a concept like "regular decahedron", they have not yet provided the ground.[30] When we have provided a reason, or a third thing, we have grounded why appearances are in the extension of categories. Thus we can make the two principles compatible, which was not possible when homogeneity was treated as similarity or as a highest genus. But before we declare victory, it is worth considering a few objections.

3.2 Objections

I am not the first to have suggested a connection between the third things of the Schematism and conditions in logic. Both Henry Allison and Karin de Boer have made a very similar case.[31] But both of them deny

[30] I take this example from [*Kästner* 20:414-5].
[31] In fact, the idea goes back at least as far as [Curtius, 1914, 348].

that Kant can literally mean that schemata are conditions in the sense described above.[32] In what follows, I am going to argue that we should take Kant at his word. On the face of it, it isn't clear how far an analogy can take you. If two logical forms stand in analogy to each other, they are just the same logical form, but we do need to explain apparent disanalogies between schematism and inference.

The first objection is that subsuming, for example, plates under circles, doesn't feel like inferring. This is perhaps what Allison means when he says that "Kant hardly wished to construe the application of the categories to appearances as a bit of syllogistic reasoning". Immediately, this point is by the by. Kant's claim need not be that we in fact do ratiocinate, but that we are always in a position to when we subsume something in a judgment. This is because Kant is answering a "how possible" question. That is to say, *if* categories and appearances could not be made homogenous, then we could not apply categories to experience, so how is it possible that categories and appearances can be made homogenous? And Kant's answer can include the claim that appearances and categories are made homogenous only if they can be used in syllogisms like the above. The point is simply that the process described is not phenomenological, it is rather a semantic notion of what it takes for a judgment to be grounded. My claim is just that we are always in a position to formulate a syllogism concerning appearances, schemata, and categories.[33]

The second objection states that inference cannot be relevant to the Schematism, because inferences involve only concepts, whereas the Schematism is concerned with relating appearances to concepts.[34] I take it this what de Boer means when she writes that "there is one important difference: in the case of pure concepts there is no middle term that makes it possible to subsume, for instance, all events under the concept of causality. In this case, I take Kant to argue, the condition that allows me nevertheless to attribute causality to all events is not itself a concept, but a schema." [de Boer, 2016, 450-1]. So it might seem like we have lost what is significant to the Schematism: that we relate three distinct representational types, intuitions, schemata, and categories, by treating third things as conditions in inferences. It seems to me there are two options here. The first is to distinguish between representations and what is represented. Whilst it may be that the inference that grounds a judgment must be expressed in concepts, that does not mean that what is represented is conceptual. It would be strange to think that an thought which can be expressed as a syllogism like "all men are mortal, Socrates is a man, Socrates is mortal" told us only about the concept "Socrates" and not the actual philosopher. When we express the schema of substance as "the persistence of the real in time, i.e., the representation of the real as a substratum of empirical time-determination in general, which therefore endures while everything else changes." [A144/B183], we do so conceptually, despite the fact that the real in time is certainly not a concept. This is exactly how Kant puts the point in the letter to Tieftrunk: "It is, however, possible to subsume an empirical concept under a pure concept of the understanding if there

[32] See [Allison, 1981, 64-65], [de Boer, 2016, 450].

[33] See [Anderson, 2015, 52] and [Longuenesse, 1998, 97].

[34] For example, Kant writes that "the syllogism does not deal with intuitions, in order to bring them under rules (as does the understanding with its categories), but rather deals with concepts and judgments" [A306/B363].

is a mediating concept, and that is what the concept of something composed out of the representations of the subject's inner sense is" [*Corr.* 12:224]. Here the mediation is done by a concept, but this concept is a concept *of* a time determination, or schema. The second option is to assert that schemata themselves are an exception, and are representations that have extensions, and thus can fit into syllogisms. To assert this would be to say that when Kant states that a schema is "**universal** and rests on a rule *a priori*" [A138/B178] this exactly means that schemata have extensions. A schema is a "general procedure" [A140/B179-80] which is adequate to the generality of a concept, and one way to understand this is that many things fall under it. In either case, schemata functioning as conditions is rendered unproblematic.

We now have all the pieces of the proposal in place. Prior to the Schematism, Kant defines the faculty of judgment as "the faculty of **subsuming** under rules, i.e., of determining whether something stands under a given rule (*casus datae legis*) or not." [A132/B171]. We are now in a position to understand what he means by this. To determine whether something stands under a rule is to determine that the something is in the extension of the concept that is defined by the rule. The way this takes place is by means of a condition: if some condition is in place, then the instance falls under the rule. This process is only successful when the instance is in fact part of the extension of the concept, which is to say, the representation of the instance is homogenous with concept. This proposal does not fall into the problems that face the similarity view of homogeneity. For on the similarity view, no third thing can change whether two representations are homogenous. But whether or not something is in the extension of a concept can be changed by a third thing. Consider again mathematical cases. The question of whether "icosahedron" falls within the extension of "regular polyhedrons" is changed when we construct a regular icosahedron. With the arrival of the proof, the judgment moves from heterogenous to homogenous. And so it can be the case that prior to the schemata, the categories and appearances are heterogenous, but after their introduction, homogeneity is achieved.

This I think invites a stronger objection. Have I not confused a *semantic* relation with an *epistemic* one? We began with homogeneity simply being the case where one representation is in the extension of another, but now it seems like the question is whether we *know* or *are justified in thinking* that one is in the extension of the other. Whilst it seems like schemata could bring about the latter, it is less clear that they could bring about the former. But surely the former is what is at stake in the key sentence: Kant states that "the concept must contain that which is represented in the object" [A137/B176], not that we must know whether the concept contains what is represented in the object. It is important to be careful here. Kant states that subsuming is "determining whether something stands under a given rule" [A132/B171], which does sound epistemic. So whilst it seems like subsumption should be responsive to reasons, it is unclear that homogeneity is. But this difficulty is only apparent. We subsume what is represented in the subject concept under that of the predicate concept because what is represented in the former is in the extension of the latter. That is, we

subsume because of homogeneity holding. But there is also a reason *why* that which is represented in the subject concept is in the extension of the predicate concept. That is, there is a reason why homogeneity itself holds. That is not a purely epistemic notion: it is an expression of a fact, the fact that some subject is in the extension of a predicate. Kant's point in the mathematical and categorial cases is that there simply is not a fact of the matter until construction or schematisation has taken place.

Conclusion

So far I have argued that when two representations are homogenous, one is contained within the extension of the other, be that logical or non-logical extension. Further, I have argued that conditions are grounds of attributing a representation to the extension of a concept. When that ground attributes an object by means of an intuition to a concept, bringing it into its non-logical extension, it is a schema. This does not exclude that some conditions are concepts; in the case of "every body, as an extended being, is divisible", "extended" is the condition that adds "body" to the logical extension of "divisible". By way of conclusion, I want to discuss two consequences of the account I have developed. First, I want to suggest why on my view the categories pose a particular problem for Kant. Second, I want to suggest that the way homogeneity on my view is brought about is genuinely ecumenical, in the sense that is coheres with the majority of accounts of schematism described in §1.

Kant claims that appearances and categories are heterogeneous. Why? I think to understand this, we need to look at how Kant frames the problem of synthetic judgment. As Kant put it in the A introduction, "in synthetic judgments I must have in addition to the concept of the subject something else *(X)* on which the understanding depends in cognizing a predicate that does not lie in that concept as nevertheless belonging to it" [A8]. In the case of *a posteriori* synthetic judgments, this *X* is experience. But in *a priori* synthetic judgments, we need two different stories. In mathematics, the *X* is "a pure intuition in itself, in which case [the mathematical concept] can be constructed", and in transcendental philosophy we need "the synthesis of possible intuitions, which [the possible intuitions] are not given *a priori*" [A719/B747], which is to say that categories are related to "neither an empirical nor a pure intuition, but only the synthesis of empirical intuitions" [A722/B750]. Presumably, this is what is key to the difference. For Kant's claim is exactly that "no one would say that the category, e.g., causality, could also be intuited" [A137-8/B176-7]. I take this to mean that there is no intuition that, as it were, wears the category it is contained in on its sleeve. Nothing about the intuition as such tells me whether it is a substance or an accident, a cause or effect, etc. Rather, we must ourselves contribute those reasons. Kant as much as says so: "things are quite different with **transcendental** logic, so that it even seems that the latter has as its proper business to correct and secure the power of judgment in the use of the pure understanding through determinate rules [...] the peculiar

thing about transcendental philosophy is this: that in addition to the rule (or rather the general condition for rules), which is given in the pure concept of the understanding, it can at the same time indicate *a priori* the case to which the rules ought to be applied" [A135/B174-5].

If, then, the heterogeneity of categories and appearances is just the problem of synthetic *a priori* judgment, the options for what schemata must be to bring about homogeneity is wide open. I have not here tried to account either for their general definition, as transcendental time-determinations, or the specific schemata for the categories. My account is on this silent: as long as schemata attribute appearances to the extension of categories, then any account is compatible with it. I state this here because it allows for many of the insights of the accounts of homogeneity I initially rejected in §1 to have a second life. For example, it may well be that what it is for an appearance to be added to the extension of the categories is to be transformed from an appearance to an appearance* with some additional structure. Or it may well be that it requires moving from unschematised to schematised categories. Or it could be that it requires intuitions to have the same contents as schemata and categories. My key point is just that these various answers need to be related to the fundamental thing that schemata do, which is to bring appearances into the non-logical extension of categories. The other questions will have to remain for another essay.

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