

Schematic Mediation in the *Critique of Pure Reason*: Synthesis of Imagination and Schematism

Eliakim Ferreira Oliveira

University of São Paulo/Université Paris Cité/HTL

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ENG Abstract: My aim in this article is to propose an interpretation of the schematism of the pure concepts of the understanding, in order to elucidate the relation between schematism and the *a priori* synthesis of imagination. The guiding questions may be formulated as follows: What exactly does Kant mean when he claims that the “schema is a product of the imagination”? What is the relation between this statement and the one in §10, according to which synthesis is an effect of imagination, or the one in the *B Deduction*, according to which imagination performs a transcendental synthesis? I defend the thesis that, insofar as imagination determines time *a priori* according to the unity of the categories, it translates each of them into a temporal language (or a language of transcendental imagination), that is, it gives sense to the category in the determination of the object when it is thought according to temporal patterns.

Key-words: schematism of the pure concepts; schema; transcendental imagination; synthesis *a priori*.

Summary: 0. Introduction: schematism, imagination, and *a priori* synthesis; 1. The legitimacy of a schematism of the pure concepts of the understanding: validity and application; 2. What, after all, is subsumption? 3. Schema and temporal patterns: the “translation” of the language of understanding into the language of imagination; 4. Schemata and schematism; 5. Final Considerations.

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Introduction: schematism, imagination, and *a priori* synthesis

My aim in this article is to propose an interpretation of the schematism of the pure concepts of the understanding, in order to elucidate the relation between schematism and the *a priori* synthesis of imagination. The guiding questions may be formulated as follows: What exactly does Kant mean when he states that the schema is “a product of the imagination”? What is the relation between this statement and that in §10, according to which synthesis is an effect of imagination, or the one in the *B Deduction*, according to which imagination performs a transcendental synthesis? I do not intend to offer an interpretation that resolves all the enigmas surrounding this “hidden art in the depths of the soul,” but rather to show the necessary link between the production of schemata and imaginative synthesis – a link that is, in my view, somewhat obscure though essential. From this, I aim to conclude that imagination, from a cognitive point of view, is a nodal point of the *Critique*, and that it expresses, particularly in the relation between synthesis and the “art of schematism,” its eminently cognitive character.

As an answer to these questions, I will defend the following thesis:

The schema must not be understood merely as a representation produced by the imagination. It is not that Kant does not also consider it in this way, but this representation must be grasped not as something static, but as something that results from *an activity*—that is, from the *spontaneity* of the faculty of imagination. I would like to explore the consequences of the thesis according to which the schema should be understood as the transcendental time-determination arising from an *a priori* synthesis of imagination, which expresses the spontaneity of this faculty. The schema thus results from an *action*, a *procedure*, or a *method* (as argued by commentators such as Winterbourne (1990), Ferrarin (1995), and Makowski (2009)), which refers us back to the figurative synthesis of imagination as presented in the *Deduction*. This synthesis, directed toward inner sense (the condition of all our cognitions, as Kant himself affirms), is carried out according to the unity of the category, which is, in the same process, exhibited in intuition—that is, in inner sense itself, namely, time. This time-determination by a synthesis of imagination according to the unity of the category results in a “translation” (a metaphorical expression that recalls Biemel (1959), Makkreel (1990), and Ferrarin (1995)) of the

unity of the category into *temporal patterns*, that is, into sensible terms, producing the description of the category within a “sensifying vocabulary.” This schematic procedure can thus be understood as a “sensification” of the category.

Indeed, since the schema restricts the application of the categories — that is, delimits the scope of their objective signification — and since it is, above all, the result of a transcendental time-determination through the synthesis of imagination, it is possible to conclude that schematism is the exemplary expression of the cognitive character of the activity of imagination: it shows, in an emphatic way, how this activity is fundamental for granting objective meaning to knowledge.

To develop the proposed thesis, it is necessary to understand to what extent the schema operates the connection between categories and intuitions and how, for this reason, it serves as a medium between universal and singular representations, thereby making possible the *in concreto* use of the categories — that is, their application to appearances. In other words, what must be grasped is how schematism is linked to pure synthesis (which is an effect of imagination) and how it performs the determination of the category over time as the form of intuition, thereby accomplishing the most authentic task of imagination and the culmination of its primacy in the organization of experience: the concordance between the transcendental faculties of understanding and sensibility through the “sensification” of pure concepts. If it is possible to understand the schematism of the *Critique of Pure Reason* in this way, then one can see how this chapter completes the *Transcendental Deduction*, insofar as it justifies *in concreto* the intimate and interdependent bond between the products of pure understanding and those of pure intuition as inner sense.

Insofar as pure imagination mediates the relation between transcendental apperception and time, the product of this *hybrid* transcendental faculty is necessarily a *hybrid* representation that is directly bound to time, thereby allowing pure synthesis to take place. In this sense, I will highlight and explore the consequences of the connection between the schema and the pure synthesis of imagination as a transcendental time-determination through the exposition of the categories according to temporal patterns. Not unlike Heidegger (1965) [1929], Guyer (2003) [1987], and Scaglia (2020), I take schematism to consist, in this respect, in a “temporalization” of the categories — that is, in their “sensification”. It remains necessary, however, to understand in what this temporalization *consists* and *how* it presents itself as a transcendental time-determination operated by the synthesis of imagination. At the end of this article, I shall seek to show to what extent the schema, conceived as the result of the transcendental time-determination, may be regarded as a pure intuition that functions as a mediator, as Allison (1981) has proposed.

1. The legitimacy of a schematism of the pure concepts of the understanding: validity and application

Since Kant’s problem concerns the application of the categories to appearances and, in that sense, the very condition for the signification of the categories, the philosopher is led to address a more general problem, namely, that of the application of rules to cases. Because the application of rules cannot itself be determined by a rule — for this, as Scaglia (2020, p. 75) emphasizes, would lead to an infinite regress — it becomes necessary that the very power of judgment be subjected to constant exercise, from which follows the importance of *talent in concreto* application. In my view, if the philosopher were to inquire too deeply into the nature of this talent, he would risk entering a psychological or anthropological investigation that would intrude upon a properly transcendental inquiry. Let us therefore remain within the attempt to understand the nature of the application of rules, and not the nature of the talent underlying such application.

Indeed, since there is no rule for the use of the power of judgment, and since the ability to operate it may depend upon a natural talent, the repeated exercise of this faculty in applying a rule to cases becomes especially important, as exemplary uses of the very rules — those that, of course, are learned. To the domain of *in concreto* application of rules belong, therefore, the so-called examples, which sharpen the power of judgment itself as rehearsals of application, as tests of its operation: “examples are the leading-strings of the power of judgment, which he who lacks the natural talent for judgment can never do without” (KrV: A 134, B 173)¹.

If we consider that intuition is more concrete — because singular — than other general representations, there is a more sensible dimension in examples than in rules. This proximity allows the problem addressed in the chapter *On the Schematism* to be placed within the perspective of the activity of the power of judgment: from the point of view of transcendental logic, it is the task of the *Critique* to establish the conditions under which the power of judgment may make proper use of the pure concepts of the understanding. From this task arises the following question: under what conditions, finally, can the pure concepts of the understanding be applied to intuitions? If this cannot be shown — however much the *Deduction* may have demonstrated that they have meaning only when applied to intuitions — the pure concepts of the understanding would nonetheless remain mere logical forms, only potentially applicable to experience.

It is possible, as Gibbons (2002) does, to investigate more deeply this underlying operation of judgment and to emphasize schematism as a moment within the inquiry into cognitive judgment. Nevertheless, the

¹ All citations from the *Critique of Pure Reason* are taken from the translation by Paul Guyer and Allen W. Wood (Cambridge University Press, 1998). All citations from the *Lectures of Logic*, compiled by Jäsche, are taken from the translation by J. Michael Young (Cambridge University Press, 1992). References to Kant’s works follow the standard citation system established by the *Akademie Ausgabe* (Berlin Academy Edition), indicating the abbreviation of the work, followed by the volume and page number. The first and second editions of the *Critique of Pure Reason* (1781/1787), referred to as *KrV* and by the conventional *A/B* pagination, are found in volumes 4 and 3, respectively.

solution to the problem we have outlined above is more closely related to the faculty of imagination now when it performs the *a priori* synthesis (the transcendental time-determination according to the unity of the categories) and thereby produces schemata of concepts. In this sense, for establishing the sole sensible condition under which the pure concepts of the understanding can be employed, it is necessary to grasp the relation between the production of schemata by imagination and the *a priori* synthesis of imagination as a transcendental time-determination. This, in my view, is what schematism itself consists in.

With this reference back to the task of the *Deduction*, it becomes possible, in approaching schematism in the *Critique of Pure Reason*, to identify a first point of incidence in the following question, already raised by various commentators: even after a *Deduction* of the pure concepts of the understanding, why is it still necessary to discuss how “schematization” takes place? Let us consider the question as formulated by Kant himself, which implicitly points to this necessity:

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 (KrV, A 137-8, B 176-7).

Kant seems, in this passage, to draw an implicit distinction between the *objective validity* of the categories, expounded in the *Transcendental Deduction*, and the *application* of those categories to appearances. Whereas previously the question concerned a transcendental condition, here it concerns a sensible condition of application. If, in the *Deduction*, the philosopher sought to establish the sole scope with respect to which the categories can have *objective validity*, here he seeks to determine the *procedure for their application*. Kant even speaks of a distinction between the *employment* of a category and its *execution* upon appearances by means of a schema, which he calls a “key to the use” of the category itself (cf. KrV: A 181, B 224).

The basis of this distinction lies, as Allison (1981) has shown, in the fact that objective validity does not necessarily entail use (contrary to what interpreters such as Prichard (1909) and Warnock (1949) maintained). In the preface to the *Analytic of Principles*, Kant is explicit: “now that we will represent [the] use” of the “elementary concepts” (KrV: A 131, B 169). Earlier, there had only been “the exhibition of the pure concepts of the understanding (and with them of all theoretical cognition *a priori*) as principles of the possibility of experience” (KrV: B 168).

Indeed, schematization will be necessary in order to understand how this application of the categories to appearances actually takes place. Fricke (2001) summarizes the reason for the necessity of a schematism in the *Critique of Pure Reason* as follows: considering that, although the categories do in fact make it possible to determine the totality of the sensible and intuitive representations given to us in space and time (“determination of appearances in space and time in general” [KrV: B 168]),

the *Deduction* remains vague and abstract concerning the concrete procedure – the *technique of subsuming* the sensible and intuitive representations given in intuition under the form of time, beneath the concepts of the understanding. Thus, to the *Deduction* there must be added “an explanation of the technique of subsumption [...]” (Fricke 2001, p. 7, my translation).

By *technique of subsumption* we must understand a procedure articulated by the power of judgment and which, being a subsumption, involves – by analogy with the syllogism – a *middle term*, a mediating representation whose origin lies in imagination in its transcendental time-determination.

There is a passage in the second chapter of the *Analytic of Principles*, the chapter on the *System of All Principles of Pure Understanding*, which, in my view, provides support for this hypothesis. It is when Kant takes inner sense as an instance that functions as a *medium*:

If it is thus conceded that one must go beyond a given concept in order to compare it synthetically with another, then a third thing is necessary in which alone the synthesis of two concepts can originate. But now what is this third thing, as the medium of all synthetic judgments? There is only one totality in which all of our representations are contained, namely inner sense and its *a priori* form, time (KrV: A 155, B 194).

If the schema is considered as the product of this synthesis of imagination upon inner sense, it will participate in that *medium* on which the synthesis mentioned in the passage depends. Immediately afterward, the philosopher writes, explicitly highlighting the activity of imagination in this synthesis: “The synthesis of representations rests on the imagination, but their synthetic unity (which is requisite for judgment), on the unity of apperception” (KrV: A 155, B 194). Without this third term, *synthetic a priori* judgments (which are the objects of investigation in the second chapter of the *Analytic of Principles*) are entirely impossible: “But apart from this relation synthetic *a priori* propositions are entirely impossible, since they would then have no third thing, namely a pure object, in which the synthetic unity of their concepts could establish objective reality” (KrV: A 157, B 196).

Thus, it seems to me, indeed, that the object of exposition in the chapter *On the Schematism of the Pure Concepts of the Understanding* consists in the transition from an abstract relation between intuitions and concepts to a concrete relation – a transition that cannot be understood without an elucidation of subsumption, whose execution depends on this *medium* or third term. In this procedure, it is therefore necessary to

understand the operation of the power of judgment, which, as I have said, is responsible for the application of the universal to the singular, or of the rule to the case.

The question that arises, however, is what Kant in fact understands by *concrete*, and how the transition from the abstract to the concrete can be carried out on the basis of the *technique of subsumption*. A clue, as I have mentioned, is found in that passage from the beginning of the *Analytic of Principles*, where the philosopher associates the *universal in concreto* with the notion of an *example*, which is a particular case (or, as some commentators say, an instance of the rule). The physician, the judge, or the political theorist may have rules that they apply to the specific cases of their respective domains. As Kant writes,

And yet [he] can easily stumble in their application, either because he is lacking in natural power of judgment (though not in understanding), and to be sure understands the universal *in abstracto* but cannot distinguish whether a case *in concreto* belongs under it, or also because he has not received adequate training for this judgment through examples and actual business. This is also the sole and great utility of examples: that they sharpen the power of judgment (KrV: A 134, B 173).

Not by chance, in the exposition of the chapter *On the Schematism of the Pure Concepts of the Understanding*, Kant strives to provide examples, to present the “image” (here, as I shall emphasize, the quotation marks are necessary) that corresponds to the rule – a task that is not possible unless there exists a universal procedure of imagination, that is, a schema of concreteness (which is inner sense itself determined) through which it is possible to establish a homogeneous element that allows subsumption between heterogeneous representations.

When an object is subsumed under a concept, the representation of the object must be homogeneous with the concept. In other words, the concept must contain that which is represented in the object subsumed under it; it must therefore share with this object – this is my initial reading – certain *marks* that are common. A *mark* is precisely what is cognitive in representations, among which are the concepts themselves. Only by observing this requirement can it be said that an object is contained under a concept: namely, by sharing common *marks* in a certain respect.

Homogeneity, indeed, taken as the condition of subsumption, is one of the central problems of the chapter on schematism. Many interpreters reject the Kantian thesis. Kemp Smith (1918), for instance, rejects the need to establish homogeneity because he rejects the very supposed heterogeneity between categories and intuitions. This heterogeneity, for the commentator, is artificial (cf. Smith 1918, p. 334).

The problem, in my view, is that the assignment of the function of each transcendental faculty (understanding and sensibility) stems from distinct natures, and Kant insists on conceiving the nature of one faculty in opposition to that of the other. From this follows the idea that the nature of a category – the representation that best inherits the functional nature of understanding – differs from that of intuition, which inherits the receptive or “affective” nature of sensibility. Lohmar (1991, p. 81) calls this criterion *topological*, insofar as it is oriented according to the place (the *topos*) of origin (*Ursprungsort*) of the representation – an interpretation with which I am inclined to agree.

An interesting path for thinking about this homogeneity is found in Paton (1936, II, pp. 25–27), where the commentator proposes that homogeneity between a concept and an object can exist if the latter is treated as a case or instance of a universal. Commenting on Paton’s solution, the Brazilian interpreter Olavo Calábria Pimenta (2012, p. 38, my translation) notes that, for him, “the homogeneity between object and concept is sufficiently obvious for empirical concepts (formed by abstracting common *marks* from objects given in intuition), as well as for mathematical concepts (whose examples can be constructed in pure intuition),” and that “although intuitions as given are not homogeneous with the categories, insofar as they are combined to form objects in time they would already become homogeneous.” This is an interesting interpretative key, for when referred to time it already invites us to consider the role of imagination in that combination.

There are theses such as those of Chipman (1972) and Nolan (1979) that emphasize, in order to understand homogeneity, the *a priori origin of both the category and the schema*, and others, such as those of Pippin (1976) and Dahlstrom (1984), which note – by comparing categories with empirical concepts – that there is, in fact, a *gradation of this heterogeneity* depending on the concept involved, as we shall see in the examples given by Kant.

The first example given by Kant in the chapter *On the Schematism* is that of the relation between an object such as a plate and the empirical concept corresponding to it: both are homogeneous with the concept of a pure geometrical circle (the schema), insofar as the circularity of the empirical concept of the plate can be intuited in the plate as an object. From this, however, arises the problem of the relation between the pure concepts of the understanding and empirical or sensible intuitions in general. If they are heterogeneous representations – if the concepts are universal and the intuitions singular – how is subsumption between them possible? It is in the face of this problem that the relation of time and the schema of imagination becomes crucial for the subsumption, by the power of judgment, of these representations.

Since subsumption results in judgments, it is the power of judgment that is responsible for the application of pure concepts of the understanding to appearances in general. For this reason, in order to answer that question, what becomes necessary is a “transcendental doctrine of the power of judgment” (KrV: A 138, B 177). According to this doctrine, the mediating representation between the representations of understanding and those of sensibility is a third representation that is, on the one hand, pure (without any empirical element), and on the other, mixed, with an intellectual and a sensible side. This representation is the transcendental schema, which, as a rule, is capable of transforming the abstract rule of a concept into a concrete rule for its

application to appearances. To understand the role of this representation in the reference of a concept to an intuition, it is necessary to grasp the relation of this reference to time.

Time contains a manifold *a priori* of pure intuition and is the formal condition of the manifold of inner sense. In the application of a category to time – that is, in a transcendental time-determination – there will be homogeneity between the category and time insofar as the determination is universal and grounded in an *a priori* rule. On the other hand, in this transcendental determination there will be homogeneity with an appearance insofar as time is contained in every empirical representation of the manifold. In this sense, any application of the category to appearances will be possible only through the transcendental time-determination, which, as the schema of the pure concept of the understanding, mediates the subsumption of appearances under the categories.

This exposition, however, does not explain whether subsumption is (1) a merely *sylogistic operation*, as some commentators maintain – such as Curtius (1914, p. 346) and, in a certain sense, Scaglia (2020, p. 100, note 131), who points to the fluctuation in Kant's work between the concepts of subsumption and syllogism, since he employs the terms both in the context of schematism and in that of syllogistic reasoning (cf. AA 9: 120–23, 615, 617; KrV: A 322, B 378) – or whether (2) subsumption should rather be understood in light of the *technique of application itself*, as in Allison's (1981) thesis, which, taking subsumption as synonymous with application, rejects any unrestricted identification of subsumption in schematism with the theory of judgment. I shall dwell briefly on these two lines of interpretation, beginning with a reading of Kant's own text.

2. What, after all, is subsumption?

The chapter *On the Schematism*, within the transcendental doctrine of the power of judgment, begins by establishing the conditions for the subsumption of an object under a concept and, in that sense, of a singular under a universal. The emphasis on the first pair of expressions (concept/object) or on the second (singular/universal or particular/general) can serve as a measure for interpreting subsumption itself – sometimes highlighting the very notion of application, sometimes that of the subordination of a singular under a universal.

Longuenesse comments on the notion of subordination (which has a broader meaning than subsumption or syllogism) in the following way:

In a judgment – that is, in concept subordination – the more general concept “represents” the concepts contained “under it,” just as it “represents” all the objects *x*, *y*, *z* contained in its sphere. [...] When we subordinate a concept to one that is more general, we attribute the *marks* pertaining to the concept. But thereby every judgment, as concept subordination, is the potential major premise of a syllogism attributing the genus to the species and thereby the genus to all individuals in the sphere of the species (Longuenesse 1998, p. 90).

It should be noted that this conception of attributing characteristic *marks* from the less general concept to the more general one may serve, with some interpretive effort, as a key to understanding the necessity of homogeneity in the subsumption of an object under a concept. If an object is to be subsumed under a concept, there must therefore be a certain level of equivalence between the concept and the object: “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’” (KrV: A 137, B 176).

What does this containment mean? What does it mean that what is represented is shared both by the concept and by the object? Indeed, the syllogistic notion of subsumption allows us to think of containment in terms of the sharing of *marks* between general and singular representations – subsumption as the subordination of a singular under a universal, such that the characteristic *mark* of the singular object's representation is contained in the universal. Consider the following passage from Kant's text, which could support this thesis:

In every judgment there is a concept that holds of many, and that among this many also comprehends a given representation, which is then related immediately to the object. So in the judgment, e. g., “All bodies are divisible,” the concept of the divisible is related to various other concepts; among these, however, it is here particularly related to the concept of body, and this in turn is related to certain appearances that come before us (KrV: A 68, B 93).

In this passage the subordination is expressed precisely in a concept that stands for many and that, mediately, refers to the more particular, since divisibility belongs to the concept of body (to all bodies) and to the particular body that presents itself to us in experience, as a *mark* shared both by the general concept and by the object of experience. Commenting on this passage, Curtius writes:

The judgment – “bodies are divisible” – can be interpreted as subsumption only if you reformulate it thus: “bodies are divisible things.” It is, in fact, impossible (even if forced) to construct an order in which bodies and divisible things occur at different levels (Curtius 1914, p. 346, my translation).

Hence, they necessarily share, as concepts, the same *mark*. Here we are dealing with the sharing of common *marks*, that is, with representations that belong to the same domain of notions by which they are known – in this case, *divisibility*. As stated in the *Lecture on Logic compiled by Jäsche*, knowledge proceeds by *marks* and:

a mark is that in a thing which constitutes a part of the cognition of it, or – what is the same – a partial representation, insofar as it is considered as ground of cognition of the whole representation (AA 9: 58).

The *mark* is, on the one hand, a representation in itself; on the other hand, “a partial concept, belonging to the whole representation of a thing, and thereby as ground of cognition of that thing itself” (AA 9: 58). Indeed, if circularity is taken as a common *mark* of the representations circle and plate (one more general than the other), one can propose an interpretive key for Kant’s example: “the empirical concept of a plate has homogeneity with the pure geometrical concept of a circle, for the roundness that is thought in the former can be intuited in the latter” (KrV: A 137, B 176), just as the divisibility of bodies in general can be intuited in this particular body, in Curtius’s reasoning.

Allison will reject this idea, thereby distancing subsumption in schematism from that syllogistic model and, consequently, rejecting the notion that the subsumption involves a class–member relation as Curtius seems to suggest. For Allison, subsumption is, in fact, synonymous with application – which brings his thesis closer to the one based on the notion of a technique of subsumption, as proposed by Fricke (2001). The idea of schematism as a procedure or a method would be expressed in subsumption itself, which is not the subordination of a subclass to a class. The middle term would not be the median element of a syllogism, but the very condition of a rule. Let us see how Allison develops this thesis:

We can then read Kant to be maintaining that it is the possibility of exhibiting the geometrical concept in pure intuition (constructing a circle) that explains the homogeneity between it and objects, such as plates, which are given in empirical intuition, as well as the empirical concepts which are formed by abstraction from the content of such intuition (“thought in the latter”) (Allison 1981, p. 63).

In this sense, homogeneity is not given by a characteristic *mark* shared by a class and by a subclass or member of that class, but by a relation between a pure intuition and an empirical one, the latter being abstracted in the empirical concept. What can be established, however, is only an *analogy*, and not an identification, with traditional theory of judgment. In that case, for example, one could think that the “third thing” or the “third term” to which Kant refers – the item that connects the universal rule to the particulars – would play, analogously, the role of the middle term. But – Allison insists – this approach would be merely analogical. The analogy serves, in truth, “to underscore the particular problem which arises in the attempt to understand how such application is possible” (Allison 1981, pp. 64–5), from which Allison concludes that

[...] the whole purpose of the analogy is to suggest that, just as in the case of syllogistic reasoning, the connection between the rule expressed in the major premise and the instance to which it is applied in the conclusion is only established by means of the subsumption of the instance under the condition of the rule (Allison 1981, p. 65).

In this vein, one must think the specific problem posed by the pure *a priori* concept in relation to appearance. A concept of a plate is an empirical concept – it is therefore not a category – and so it already shares an empirical element with empirical intuitions, which facilitates that subsumption based on a homogeneous element. In Kant’s initial example it is easier to establish the conditions of subsumption, i.e., of homogeneity. It is in this respect that the subsumption between pure concepts of the understanding and sensible or empirical intuitions becomes problematic, since in that case they appear entirely heterogeneous. From the reading proposed above, Allison interprets the problem as follows:

In the present case, where the pure concepts of the understanding are the universal rules, there is a need for some analogue of the condition of the rule, or the middle term of the syllogism, under which appearances can be “subsumed”. This analogue will, of course, turn out to be the transcendental schema, the infamous “third thing”, which makes possible the mediation between category and appearance (Allison 1981, p. 65).

The great question is why the schema can have this status as analogue to the middle term and how, in that case, it can either share a characteristic *mark* with categories and concepts (a thesis closer to Curtius) or serve as the condition of the rule for the exhibition of a category in intuition, that is, for its very application (as in Allison’s thesis). On the first view, one must verify how the definitions of schema (which tie it to time) can point to common *marks*; on the second view, one must show how the schema itself has a nature that allows it to serve as the middle term, as the condition of the rule. Allison defends that the schema is a pure intuition, and one sense of “pure intuition” can be made compatible with the definition of schema as a “transcendental time-determination.” I will investigate more closely how Kant himself speaks of the schema and examine how imagination, as a synthetic faculty, can help us understand the schema as endowed with common *marks* shared with both the categories and appearances, or, alternatively, as itself being a pure intuition.

3. Schema and temporal patterns: the “translation” of the language of understanding into the language of imagination

To give some sense to this necessary homogeneity, Kant returns to the conclusions of the *Deduction*: it is the transcendental *time-determination* that will establish the conditions for that homogeneity:

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 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* (KrV: A 138–9, B 177–8).

We must now ask how the transcendental *time-determination* can be taken as the key to understanding the application of categories to appearances, and hence the homogeneity that such a determination may establish between itself and each of those representations, mediating the application of one to the other.

Let us recall some of Kant's considerations about time, from the *Transcendental Aesthetic* through the *Deduction* (A and B), and how those considerations can help us to understand the status of time in the chapter *On the Schematism*. One of the remarks about time in the chapter of the *Transcendental Aesthetic* concerns the way in which time subordinates cognition in general:

Here I add further that the concept of alteration and, with it, the concept of motion (as alteration of place), is only possible through and in the representation of time [...]. Our concept of time therefore explains the possibility of as much synthetic *a priori* cognition as is presented by general theory of motion, which is no less fruitful (KrV: A 32, B 48–9).

Here Kant subordinates time to all the *a priori* representations that relate to sensibility: those tied to alteration (which points to inner sense, because of the attribute of succession) and those tied to outer sense, that is, alteration conceived as motion (because of the attribute of simultaneity in space). In the *A Deduction*, however, when Kant turns to the synthesis of apprehension in intuition, he seems to extend still further the cognitions that are subordinated to time: “our cognitions are in the end subjected to the formal condition of inner sense, namely time, as that in which they must all be ordered, connected, and brought into relations” (KrV: A 99). Later the philosopher writes –anticipating, in my view, the fact that the unity of the category must be sensified when it serves as the rule for the unification of the manifold of inner sense – that “as contained in one moment no representation can ever be anything other than absolute unity” (KrV: A 99). In this respect Kant appears to connect the very synthesis of apprehension in intuition to a formal determination given by inner sense, to which all cognitions, in their succession, are subordinated. This synthesis is followed by the synthesis of reproduction in imagination, to which “belongs among the transcendental actions of the mind,” for it is the “transcendental ground” of “the possibility of all cognition in general” (KrV: A 102), including pure *a priori* cognition; hence Kant calls it the transcendental faculty of imagination.

When the philosopher considers causality in the *A Deduction* he writes:

Thus the concept of a cause is nothing other than a synthesis (of that which follows in the temporal series with other appearances) in accordance with concepts; and without that sort of unity, which has its rule *a priori*, and which subjects the appearances to itself, thoroughgoing and universal, hence necessary unity of consciousness would not be encountered in the manifold perceptions (KrV: A 112).

Indeed, the category of causality has objective significance only insofar as it presupposes alteration, which can be presented in experience only by the succession of inner sense – time – which mediates the universality of the category and the singularity of the object that is altered. At the moment in which the unity of alteration (given by the category of causality) and the alteration in time (in the appearance) coincide, the concept of causality and the object itself, when determined according to the conceptual unity of that alteration, share the same *mark*. One may think the same relation with respect to the other categories (as I shall do below).

Imagination is the faculty that is immediately connected to time, so as to determine it by means of a synthesis that unifies each of its moments, that is, it gives unity, via the category, to succession itself. If we think in terms of the vocabulary of the *A Deduction*, the schema of causality, as alteration through the succession of the pure intuition of time, is a product of association through the pure synthesis of imagination (KrV: A 116). Kant takes imagination in this context as an active faculty of the synthesis of the manifold:

There is thus an *active faculty* of the synthesis of this manifold in us, which we call imagination, and whose *action* exercised immediately upon perceptions I call apprehension. For the imagination is to bring the manifold of intuition into an image; it must therefore antecedently take up the impressions into its activity, i. e., apprehend them (KrV: A 120, emphasis mine).

But, as we see in the chapter on schematism, schematization does not necessarily imply placing the manifold under an image, since the schema, in its transcendental character, does not identify with an image but – as we will shortly see – with an *a priori* procedure.

In the *B Deduction*, the determination of inner sense is the subjective unity –which is distinct from the objective unity of apperception – and it is by means of this subjective unity that the manifold of intuition is given empirically in view of a connection whose unity depends on the functions of judging – the categories. As some interpreters show, such as Heidegger (1965) [1929] and Longuenesse (1998), Kant shifts the center of gravity of the model of synthesis and imaginative activity from the *A Deduction* to the intellectual synthesis of the understanding and to judgment in the *B Deduction*. But that does not mean that the *B Deduction* lacks elements that not only allow a deeper understanding of the chapter *On the Schematism* – in which imaginative activity is prominent – but also underpin imagination itself, in its figurative synthesis, as grounded in the *B Deduction*.

Considerations about judgment in the *B Deduction* are important for understanding the “sensification” of that which gives unity to judgment. In the *B Deduction* Kant writes that “a judgment is nothing other than the

way to bring given cognitions to the objective unity of apperception” (KrV: B 141) and that “the categories are nothing other than the very functions for judging, insofar as the manifold of a given intuition is determined with regard to them” (KrV: B 143). The unity of intuition, sensible or empirical, is given by the category itself (§21), which, in the synthesis presupposed by this relation, is exhibited in intuition. There is an apparent circularity in this passage, but it is not vicious: the category’s giving unity to the synthesis of the manifold in intuition results in the category’s being itself exhibited in intuition when it finally acquires objective significance, as the chapter *On the Schematism* will show from the point of view of the application of categories to appearances. As I have already emphasized, without this reference the categories “are on this account *mere forms of thought*, through which no determinate object is yet cognized” (KrV: B 150); through that exhibition in intuition “the categories, as mere forms of thought, acquire objective reality, i. e., *application to objects that can be given to us in intuition, but only as appearance*” (KrV: B 150–1, emphasis mine). At this moment the categories are sensified, and the chapter *On the Schematism* will show that this *sensification* is a “temporalization”: the cognitive interpretation of the categories according to temporal patterns corresponding to the kind of unity given by each. Indeed, this reading seems to favor the analogical (rather than syllogistic) interpretation of subsumption, insofar as the schema, as a third term or a third thing, establishes the conditions for sensification and thus for the temporalization of the categories. Let us see how we can support this reading.

The synthesis that occurs in the manifold of sensible intuition – and which therefore is not identical with some higher-stage linking through the understanding – is the synthesis of imagination. Let us recall that (i) all cognitions are subordinated to time as inner sense, (ii) the categories have objective reality only when applied to intuition, and (iii) the synthesis that is immediately performed in the manifold of sensible intuition is the figurative synthesis of imagination. Indeed, this procedure is what Kant will call, in the chapter *On Schematism*, the *transcendental time-determination*:

The imagination is to this extent a faculty for determining the sensibility *a priori*, and its synthesis of intuition, in accordance with the categories, *must be the transcendental synthesis of the imagination, which is an effect of the understanding on sensibility and its first application* (and at the same time the ground of all others) to objects of the intuition that is possible for us (KrV: B 152, emphasis mine).

Recalling these considerations, we have the conceptual framework by which we can understand schematism. Here is the transcendental *time-determination* operated by imagination, according to §24:

Inner sense [...] contains the mere form of intuition, but without combination of the manifold in it, and thus it does not yet contain any determinate intuition at all, which is possible only through the consciousness of the determination of the manifold through the transcendental action of the imagination (synthetic influence of the understanding on the inner sense), which I have named the figurative synthesis (KrV: B 154).

When Kant speaks of the “synthetic influence of the understanding on the inner sense” or “on sensibility,” he presupposes that the figurative synthesis, as mediation between understanding and sensibility, is guided by the unity of the category – coming from the understanding as *faculty of judgment* (*als Vermögen zu urteilen*) – so as to sensify it by exhibiting it through time itself, which, when determined by imagination, schematizes the category – that is, temporalizes it, carrying out a “translation” from the *language of understanding* into the *language of imagination*: from the language of categorial rules to the language of the determination of the form of time through those rules or, in short, from the language of intellectual synthesis to that of specious synthesis.

The following table displays how this correspondence is effected:

Language of understanding	Causality	Community	Substance	Possibility, reality, necessity
Language of imagination	Alteration in time	Simultaneity in time-determinations	Permanence in time	Existence at a given time, existence of an object at any time

Something that the *Deductions*, by themselves, could not demonstrate.

The figurative synthesis thus *figures* objects in thought according to the unity of the categories: “in the original apperception all of this manifold, so far as its temporal relations are concerned, is to be unified” (KrV: A 177, B 220), and the synthesis is “thought only in the schema of the pure concept of the understanding, and the category contains the function, unrestricted by any sensible condition, of their unity, as of a synthesis in general” (KrV: A 181, B 224).

In other words, schematism allows for an interpretation of the categories – according to the unity of each of them – as *determinations of temporal patterns by means of the a priori synthesis of imagination*.

The last passage quoted from the *B Deduction* (§24) refers directly to the following passage of the chapter on schematism: “The concept of the understanding contains pure synthetic unity of the manifold in general” (KrV: A 138, B 177). This unity must be *sensified* so that it is not a mere form of thought, but has, as stated, objective reality. To this end, imagination determines time, to which all cognitions are subordinated. From this determination arises the mediation between the category and the sensible. In this procedure, the category

will give unity to succession while at the same time being *sensified*, “translating” – according to its *marks* – the succession of time into specific temporal patterns.

Given this, it is appropriate to recall the following quotation: “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*” (KrV: A 139, B 178). It should be emphasized that the universality, which is homogeneous with the category, belongs to the transcendental *time-determination*, which we understand as the very figurative synthesis of imagination that sensifies the unity of the category itself. More than of time itself, the homogeneity here – which implies the sharing of a *mark* – is of the *transcendental time-determination*.

At this point, I move somewhat away from Allison, who understands the schema as a pure intuition. In fact, for this pure intuition – which is time – to be homogeneous with the category, *it must already have been determined by imagination* according to the unity of the category itself.

But we also know that it is not sufficient for the transcendental *time-determination* to be homogeneous only with respect to the category. As a mediation, the transcendental *time-determination* must also be homogeneous with respect to appearance: “But it is on the other hand homogeneous with the appearance insofar as time is contained in every empirical representation of the manifold” (KrV: A 138–9, B 177–8). Indeed, by establishing homogeneity on both poles of the relation – through the transcendental *time-determination* effected by the imaginative synthesis of inner sense – the sensible condition of the category is thereby established, namely its application to appearances: “An application of the category to appearance 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” (KrV: A 139, B 178), in analogy with the middle term of the syllogism (as Allison argued).

The general procedure of imagination, in providing a schema through this determination of the formal condition of sensibility, restricts the use of the categories. But it is necessary to stress the adjective *general* that accompanies the procedure. Ferrarin (1995) shows that the schematism of a mathematical concept, that of an empirical concept, and that of a category are different procedures – and the most problematic one (if degrees of heterogeneity are assumed, as in the interpretations of Pippin and Dahlstrom) is the schema of the category. In that case, the schema of a pure concept of the understanding is a transcendental *time-determination* through the pure synthesis of imagination and, in this sense, not through the construction of a concept in intuition (as in mathematical schematism), nor through the synthesis of an empirical intuition (as in the schematism of an empirical concept).

In this same distinction, it is important to emphasize that the schema is not an image – that is, it is not the image that imagination manipulates empirically in order to correspond to a concept. It must be acknowledged that Kant is somewhat ambiguous here, since he says at one point that the schema is the representation “of a general procedure of the imagination for providing a concept with its image” (KrV: A 140–1, B 179–80), and because he immediately adds that “it is not images of objects but schemata that ground our pure sensible concepts” (KrV: A 140, B 180), and that “the schema of a pure concept of the understanding, on the contrary, is something that can never be brought to an image at all” (KrV: A 142, B 181). How are we to understand this ambiguity?

4. Schemata and schematisms

An interpreter such as Heidegger seeks to read the fluctuation of the term “*image*” as actually indicating a “very broad meaning” (Heidegger 1965 [1929], p. 97) of the term itself. The schema, however, should not be taken either in the sense of an “aspect in general” of a being, nor in the sense of an “image” as “a photograph” of a being. Heidegger attributes to the schema a sense of image that belongs properly to it, one that refers precisely to the procedure of imagination itself:

The formation of a schema insofar as it is accomplished as a mode of sensibilization is called schematism. To be sure, the schema is to be distinguished from the image, but it is also related to the latter, i.e., the schema necessarily possesses the character of an image. This character has its own nature. It is neither only a simple aspect (an “image” in the first sense) nor a reproduction (an “image” in the second sense). It will be called, therefore, the schema-image (Heidegger 1965 [1929], p. 101–2).

Indeed, Heidegger’s designation “schema-image” aims to express that one should not take the schema as an *image* in the ordinary sense of that term, which is usually empirical (the aspect or representation of a being). If it is possible to speak of an image that approximates the schema, it is because this image, in a “schematic sense”, results from a universal procedure of imagination – which is, properly speaking, *a priori*. Since we usually employ *image* in an empirical sense, it is necessary to emphasize what Kant later states: that the foundation of our sensible concepts is not images but schemata, and that the schema of a pure concept of the understanding can be brought to no image whatsoever. Given the confusion that this fluctuation in the sense of the term *image* can generate, it is more operative – and prophylactic – to say that the schema is not an image; and that, if one insists on using the term “image” in the context of schematism, it should be employed in Heidegger’s sense, that of a “schema-image.”

The schema is, in fact, an *a priori* procedure of determination. It is indeed possible, once the procedure is performed, to supply an image to the concept – except, as I will discuss, in the case of a pure concept of the understanding, to which, by its very nature, no image can correspond. But the schematic procedure itself is not imagistic, for it is, as must be insisted, a transcendental determination of inner sense:

Thus, if I place five points in a row,, this is an image of the number five. On the contrary, if I only think a number in general, which could be five or a hundred, this thinking is more the representation of a method for representing a multitude (e.g., a thousand) in accordance with a certain concept than the image itself, which in this case I could survey and compare with the concept only with difficulty (KrV: A 140, B 179).

Having fixed these distinctions, we can now distinguish and examine the schema of (1) a mathematical concept (which corresponds to the *monogram*, as a rule for forming a spatial image, such as that of a triangle); the schema of (2) an empirical concept (a rule through which imagination can trace a figure, such as that of a dog); and the schema of (3) a category (to which no image can correspond, since it is restricted to the pure synthesis of imagination).

For a mathematical concept, such as the concept of a triangle in general, no image is adequate if we wish to exhibit the universality required by the concept. If we were to draw a triangle, our drawing would not yield the exposition of that universality. We would obtain, rather, either a scalene triangle, or an equilateral one, or a right-angled one. Yet the schema of a concept must exhibit this universality – which reinforces the thesis that the schema is not an image. The schema of a triangle is, as I have argued above, a rule of synthesis of imagination in relation to figures in space, an *a priori* procedure of transcendental determination of space according to the rule that is the concept of a triangle in general. This procedure is, indeed, a universal rule.

Greater than the distance between the image of a triangle and the concept of a triangle in general is the distance between an object of experience, which appears to empirical intuition, and the empirical concept corresponding to that object. The empirical concept also refers immediately to imagination insofar as it operates as a procedure of determination of intuition according to a certain universal concept. The concept of a dog, which is the abstraction from a series of intuitions, is not limited to a particular dog or even to the image of a dog not present to intuition. The concept of a dog is a rule (a universal concept) that allows us to trace the figure of a four-legged, canine, domestic animal in general.

The schema of a pure concept of the understanding, however, *is only the pure synthesis of imagination* according to the universality of that concept, *sensified* through the determination of inner sense, which allows each category to be “translated” into a “sensifying vocabulary” referring to its application to time, thereby determining specific temporal patterns. As I have said above, this is the interpretation of the categories according to temporal patterns that correspond to the determinations of each of them.

To understand this procedure of applying the category to appearance through the transcendental *time-determination* performed by imagination and according to the unity of the category – to understand, in short, the necessary link between category and schema – one must return to the table of categories (cf. KrV: A 80, B 106) and examine the meaning of each of them when schematized.

When schematizing each of the categories, one must interpret them according to the transcendental *time-determination* (the pure synthesis of imagination according to a unity modulated by each of the forms of judging) and thus give them the objective meaning that is required of a pure concept of the understanding. Hence, the following result is obtained:

i) Quantity

The schema of the category of quantity is number, a representation that gathers the successive addition of one by one (homogeneous units). In this case, number is “the unity of the synthesis of the manifold of a homogeneous intuition in general, because I generate time itself in the apprehension of the intuition” (KrV: A 143, B 182).

This synthesis of the manifold through the unity of number manifests itself in the three categories of quantity: unity, plurality, and totality.

ii) Quality

The three categories of quality – reality, negation, and limitation – correspond, respectively, to the following schemata:

Reality is a category corresponding to a sensation in general, whose concept expresses a being in time. Negation, as its opposite, represents a non-being in time. Both schemata are opposed within the difference of the same time, as full or empty time.

Time, as we have seen, is the form of intuition, that is, the form of objects as appearances. What corresponds to those objects as matter is sensation. Since sensation, according to Kant, admits of gradation, it can be represented through intensive magnitudes. Quantity corresponds to the extent to which sensation can fill time more or less, until it reaches the minimum, which is nothing (negation). In this sense, since there is a relation and interconnection that constitute the transition from reality to negation, every reality is represented as a *quantum*. The schema of reality is therefore the quantity of something insofar as it fills a temporal sequence.

iii) Relation

The categories of relation are substance, causality, and community:

- a) The schema of substance is permanence in a temporal sequence – what is represented as a substratum of the empirical representation of time, remaining while everything else changes.

- b) The schema of causality is the real to which, once posited, something else always follows (in a temporal sequence).
- c) The schema of community, or the reciprocal causality of substances in relation to their accidents, is the simultaneity of the determinations of one with those of another (according to a universal rule) within the same time.

iv) Modality

The categories of modality are possibility, existence, and necessity:

- a) The schema of possibility is the agreement of the synthesis of different representations with the conditions of time in general. Kant's own example is that "opposites cannot exist in one thing at the same time; they can only exist one after another" (KrV: A 144, B 184), which expresses the condition of possibility of the existence of opposites in a thing.
- b) The schema of reality is connected with that of existence, as existence within a determinate temporal sequence.
- c) The schema of necessity is the existence of an object in every temporal sequence.

5. Final Considerations

From the examination of the schema corresponding to each category, one can see that, insofar as imagination determines time *a priori* according to the unity of the categories, it translates each of them into a temporal language (or a language of transcendental imagination) – that is, it gives sense to the category in the determination of the object when thought according to temporal patterns. Each of these *a priori* time-determinations are schemata that follow the order of the table itself, determining: the *sequence* of time (categories of quantity), the *content* of time (categories of quality), the *order* of time (categories of relation), and the *complete set* of time (categories of modality).

Kant ends the chapter *On the Schematism* by restating the role of the schemata as the restrictive condition of the use of the categories, such that, without them, these remain "only functions of the understanding for concepts, but do not represent any object. This significance comes to them from sensibility, which realizes the understanding at the same time as it restricts it" (KrV: A 147, B 187).

Indeed, it is at this point that the reason becomes clear why the schema is the sensible condition of the categories and, in this sense, the mediation between category and appearance. Thus, it is in this restriction that the cognitive role of transcendental imagination is emphasized: since the schemata are products of this faculty in its transcendental determination of time, without the *spontaneous activity* of imagination no objective meaning can be attributed to the concepts of the understanding.

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