

Synthesis Speciosa and Forms of Sensibility

THE EXPRESSION “figurative synthesis,” *synthesis speciosa*, appears only briefly in the Transcendental Deduction of the Categories. After section 24, Kant does not use it again. In section 26 he does consider the role of imagination (and its dependence on intellectual synthesis), but he does not make use of the expression “figurative synthesis.”¹ Yet the absence of the expression should not obscure the essential role played by the notion in Kant’s argument. With the explanation of *synthesis speciosa*, Kant completes the Transcendental Deduction of the Categories by returning to what it presupposed, the forms of sensibility expounded in the Transcendental Aesthetic. Thus the notion of *synthesis speciosa* not only is Kant’s major tool for bringing the Transcendental Deduction to completion, but also completes the theory of space and time whose first lineaments were expounded in the 1770 *Inaugural Dissertation*. This striking continuity from the *Dissertation* to the *Critique* is one reason I prefer to use the beautiful Latin expression *synthesis speciosa* together with its English equivalent, “figurative synthesis” (in German, *figürliche Synthesis*). In the *Inaugural Dissertation*, Kant argued that space and time are not properties or relations of things considered in themselves, but “*formae seu species*,” forms or configurations which have their source in the particular constitution of our minds.² The *synthesis speciosa* harks back to these *species*: in the *Dissertation*, Kant attributed them to sensibility; now he argues that they are products of a synthesis of imagination, thus *synthesis speciosa*.

In the first section of the present chapter, I shall defend the thesis just stated and analyze the relation between *synthesis speciosa* in the Transcendental Deduction and space and time in the Transcendental Aesthetic. In the second section of the chapter, I will show that the explanation of *synthesis speciosa* in the B Deduction goes together with a new development of Kant’s theory of *inner sense*, a theory essentially absent from the *Dissertation* and only briefly sketched out in the first edition of the *Critique*. We saw that Kant’s explicit and systematic appeal to the logical forms of judgment to elucidate the relation of categories to an object is the major advance of the B Deduction over the A. It should now be added that the doctrine of *synthesis speciosa*, and the doctrine of *inner sense* that is its correlate, are decisive contributions to this advance. Logical forms of judgment on the side of the understanding, *synthesis speciosa*, and doctrine of *inner sense*

¹ See B164: “Now it is imagination that connects the manifold of sensible intuition; and imagination is dependent for the unity of its intellectual synthesis upon the understanding, and for the manifoldness of its apprehension upon sensibility.”

² Cf. *Diss.*, §4, Ak. II, 392–93; 384–85.

on the side of sensibility are thus the twin pillars of the B Deduction. Together they support the demonstration of the objectivity of the categories and the elucidation of the way in which the categories relate to a sensible given.

*SYNTHESIS SPECIOSA AND KANT'S COMPLETION OF
THE TRANSCENDENTAL DEDUCTION OF
THE CATEGORIES*

I have mentioned earlier the perplexities occasioned by the second part of the B Deduction. It seems redundant. What more is there to prove? If we accept Kant's argument in sections 15 to 18 (every intuition I call mine is related to the original synthetic unity of apperception) and in sections 19 to 21 (this unity, whose logical form is that of judgment, relates our intuitions to objects that thereby stand under the categories), it seems that the relation of categories to objects in general has been fully established. Yet Kant insists that we still need to inquire into the "manner in which the empirical intuition is given in sensibility" (B144), or into "the possibility of knowing *a priori*, by means of *categories*, whatever objects may *present themselves to our senses*" (B159). This second step is announced as early as section 21:

Since the categories have their source in the understanding alone, *independently of sensibility*, I must [in this deduction] abstract from the mode in which the manifold for an empirical intuition is given, and must direct attention solely to the unity which, in terms of the category and by means of the understanding, enters into the intuition. In what follows (cf. §26) it will be shown, from the mode in which the empirical intuition is given in sensibility, that its unity is no other than that which the category (according to §20) prescribes to the manifold of a given intuition in general. Only thus, by demonstration of the *a priori* validity of the categories in respect of all objects of our senses, will the purpose of the deduction be fully attained. (B144–45)

And again, at the beginning of section 26:

In the *metaphysical deduction* the *a priori* origin of the categories has been proved through their complete agreement with the general logical functions of thought; in the *transcendental deduction* we have shown their possibility as *a priori* cognitions of objects of an intuition in general (cf. sections 20, 21). We have now to explain the possibility of cognizing *a priori*, by means of *categories*, whatever objects may *present themselves to our senses*, not indeed in respect of the form of their intuition, but in respect of the laws of their combination, and so, as it were, of prescribing laws to nature, and even of making nature possible. For unless the categories discharged this function, there could be no explaining why everything that can be presented to our senses must be subject to laws which have their origin *a priori* in the understanding alone. (B159–60)

It would be a mistake to interpret Kant as saying that in the first part of the deduction he considered the categories independently of their relation to sensibility, and that the goal of the deduction is "fully attained" only when this relation is

taken into consideration. On the contrary, we saw that relation to a *sensible* intuition was at the heart of Kant's explanation of the logical forms of judgment and the functions they exhibit, and thus also at the heart of the a priori genesis of the categories.³ It might seem, then, that the new contribution of the second part of the Deduction is the consideration now given, not to a sensible intuition in general, but to *our* sensible intuition. But why should this be necessary? If our intuition provides merely a particular case for a rule that has been proved universally (*all* sensible intuition is subordinate to the categories), it would seem superfluous to provide a specific proof for this case, and so too a mistake to regard such a proof as that by which the purpose of the deduction should be "fully attained."⁴

On closer scrutiny, however, the argument of section 26 turns out to be far more radical than the mere application, to the particular case of *our* intuition, of a proof first produced for all cases of sensible intuition. Kant's aim is not simply to winnow down the scope of his demonstration. His aim is rather to radicalize his deductive procedure by reinterpreting, in light of the demonstration he has just provided, *the manner in which things are given to us*, that is, the forms of intuition expounded in the Transcendental Aesthetic. He wants to reveal in these forms the manifestation of an activity that only the Transcendental Deduction of the Categories can make explicit. This is why the object of section 26 is neither the relation of the categories to sensible intuition in general, nor even their relation to *our* (spatiotemporal) sensible intuition, but *space and time themselves*, the forms in which things are given to us. The goal of the Transcendental Deduction of the Categories is "fully attained" only when it leads to a rereading of the Transcendental Aesthetic.

This rereading of the Transcendental Aesthetic is in part obscured or blurred by the two examples that conclude Kant's demonstration in section 26: the perception of a house, the perception of the freezing of water.⁵ For these examples divert our attention from the intuitions of space and time *as such*, as singular and unlimited representations which precede and condition every particular intuition. Instead, the examples direct our attention to the manner in which particular acts of apprehension are governed by particular categories—the category of quantity

³ Were our intuition not sensible (limited to what we receive from the senses), our understanding would not be discursive (limited to "universal or reflected representations"). Then we would not need the logical forms of judgment, and would have no occasion for a priori generation of our categories. True, the passage I just quoted from §26 is ambiguous on this point, since it mentions only the relation of the categories to "objects of an intuition in general," while in order to be consistent with what precedes it should have said "objects of a *sensible* intuition in general." The emphasis on the relation of the categories to the *sensible* given is present in the very title of §20: "*All Sensible Intuitions Are Subject to the Categories. As Conditions under Which Alone Their Manifold Can Come Together in One Consciousness.*" This relation is even more strongly emphasized in §23: the categories could be related to an intuition unlike ours "if only it be sensible and not intellectual" (B148). This restriction is often understood as merely reiterating the *caveat* that we cognize only what is *given* to us in the forms of our sensibility. But we also need to recognize the important thesis that the forms of our thought, as forms of *discursive* thinking, have engrained in them, as it were, their necessary relation to a *sensible* given. Without this relation there would be no *raison d'être* for such forms (forms of a *discursive* understanding, an understanding whose concepts are "general and reflected representations").

⁴ For references to discussions of the structure of the B Deduction, see chapter 3, note 17.

⁵ B162–63.

for the perception of the house, of causality for the perception of freezing. But notice that Kant gives these examples only after he has finished his main proof.⁶ The examples thus have no particular role to play in the proof itself. They simply serve to illustrate the result of the main argument, which is the following: (1) Every synthesis of apprehension presupposes the forms of space and time; (2) now, *these forms, being themselves unified intuitions, are under the transcendental unity of apperception, which is the source of the categories*; (3) therefore, every synthesis of apprehension, by the mere fact that it presupposes the forms of space and time, is capable of being thought under the categories. The burden of the proof in this reasoning is borne above all by the minor premise (2), that is, by the affirmation that space and time are under the original unity of apperception. Thus it matters little that the two examples given at the end, by invoking the schemata of quantity and causality, should anticipate explanations given only later, in the Schematism of the Pure Concepts of Understanding and the Principles of Pure Understanding. It matters even less that these examples should consider only two categories among the twelve laid out in section 10. Again, the real weight of the argument in section 26 lies in the reexamination of the two questions: what is space, and what is time?

Rereading the Transcendental Aesthetic

In point 3 of the Metaphysical Exposition of the Concept of Space in the Transcendental Aesthetic, Kant maintains that space is not a discursive concept but an intuition, that is, a representation that is both *singular* and *immediate*. The relation of *spaces*—shapes, volumes, and their relations—to the *one, undivided space* is not that of particular representations to the universal concept for which they might be supposed to provide the extension. Spatial representations are not thought *under* space as, for instance, the concept of force is thought *under* the concept of cause, or the concept of red *under* the concept of color, or as a given red object is subsumed *under* the concept of red thing. Nor is the relation of *spaces* to *space* that of elements to the sum or aggregate of these elements. Space, being *one*, precedes the determination of its parts, which are only its limitations.⁷ Points 4 and 5 of the Metaphysical Exposition of the concept of time make a sim-

⁶ This is indicated by the division of the section, at B161.

⁷ A25/B39. Points 1 and 2 in the Metaphysical Exposition argue that space is (1) not empirical but (2) a priori. Point 3 (= point 4 in A) argues that it is not a discursive representation, but an intuition. Point 4 (5 in A) argues that this pure intuition is represented as an “infinite given magnitude.” Point 3 in A treats issues that in B are reserved for the Transcendental Exposition of space. The same general structure is applied in the case of time. My concern in the present chapter is not to give a full account, even less an evaluation, of Kant’s exposition of space and time in the Aesthetic, but only to show how his explanation of both as a priori intuitions is to be reread in light of the *synthesis speciosa* (“effect of understanding on sensibility”) in the B Deduction. According to the latter, space and time, as pure intuitions, provide the forms of homogeneous multiplicities to be reflected under concepts in judgments. What was initially presented as mere forms of receptivity thus turn out to be the result of the affection of receptivity by the very same effort of the capacity to judge (*Vermögen zu urteilen*), which ultimately results in actual *judgments*. A full evaluation of Kant’s view cannot be attempted until we

ilar point. Time is an undivided intuition, its parts are only limitations of it. Time is not a concept abstracted from temporal relations, but, on the contrary, the various temporal relations can be thought only as different ways in which the intuition of time (itself one and unlimited) is limited.⁸

Now, these same properties that, in the Transcendental Aesthetic, are arguments in favor of the *intuitive* rather than *discursive* nature of our representations of space and time, become, in section 26, reasons to assert that these intuitions are made possible by acts of a priori synthesis. And the a priori synthesis that generates space and time as a priori intuitions, also generates the conformity of the manifold of empirical intuitions to the *categories*. Kant explicitly invites his readers to return to the Transcendental Aesthetic and confirm for themselves that space and time, as presented there, indeed require such a synthesis:

But space and time are represented *a priori* not merely as *forms* of sensible intuition, but as themselves *intuitions* which contain a manifold [of their own], and therefore are represented with the determination of the *unity* of this manifold (*vide* the Transcendental Aesthetic). Thus *unity of the synthesis* of the manifold, without or within us, and consequently also a *combination* to which everything that is to be represented as determined in space or time must conform, is given *a priori* as the condition of the synthesis of all *apprehension*—not indeed in, but with these intuitions. This synthetic unity can be no other than the unity of the combination of the manifold of a given *intuition in general* in an original consciousness, in accordance with the categories, insofar as the combination is applied to our *sensible intuition*. (B160–61)

Finally, in case the reader cannot or will not see that the space described here is the same as that discussed in the Transcendental Aesthetic, Kant adds a footnote:

Space, represented as *object* (as we are required to do in geometry), contains more than mere form of intuition; it also contains the *gathering-together* [*Zusammenfassung*] of the manifold, given according to the form of sensibility, in an *intuitive* representation, so that the *form of intuition* gives only a manifold, the *formal intuition* gives unity of representation. In the Aesthetic I have treated this unity as belonging merely to sensibility, simply in order to emphasize that it precedes any concept, although as a matter of fact it presupposes a synthesis which does not belong to the senses but through which all concepts of space and time first become possible. For since by its means (in that the understanding determines the sensibility) space and time are first *given* as intuitions, the unity of this *a priori* intuition belongs to space and time, and not to the concept of the understanding (cf. §24). (B160–61n)

examine the use he makes of his theory of *synthesis speciosa* in the Principles of Pure Understanding. For this, see chapter 9, "The Primacy of Quantitative Syntheses," where I analyze Kant's conception of space and time in the context of his philosophy of mathematics; and chapter 11, "The Constitution of Experience." For a careful and illuminating evaluation of Kant's theory of intuition, space, and time in the Transcendental Aesthetic, and for references to major recent literature on the topic, see Parsons, "Transcendental Aesthetic."

⁸ A31–32/B47–48.

The space “represented as object, as required in geometry” mentioned at the beginning of this note was also explicitly mentioned in the text of the Transcendental Aesthetic I referred to earlier. Only if space is a pure intuition, said Kant, can we account for the possibility of deducing a priori the properties of the triangle.⁹ Now he declares that such an intuition is the effect of a synthesis by which “the understanding determines sensibility.” This is clearly the *synthesis speciosa* expounded in section 24. Indeed, Kant refers to this section at the end of the text just quoted.

However discrete, this reference is the key to the rereading we are asked to perform. For the explanations given in section 24 help us understand the paradoxical or apparently contradictory aspects of the unity of sensible intuition in the text cited earlier. Kant reminds us that in the Transcendental Aesthetic this unity was described as “belonging merely to sensibility.” This is because, he says, it “precedes any concept” and “belongs *a priori* to space and time.” Yet it presupposes “a synthesis which does not belong to the senses,” in which “the understanding determines sensibility.” These features correspond to the description of the *synthesis speciosa* expounded in section 24: the latter is an “action of understanding on sensibility,”¹⁰ that is, an action of the *Vermögen zu urteilen*, the capacity to form judgments. Nonetheless, it is prior to the actual production of any discursive judgment, hence prior to the reflection of any concept and a fortiori to the subsumption of intuitions under the categories. Kant can thus say that space and time are given only if understanding determines sensibility, and yet also that space and time are *intuitive* (immediate and singular representations) and *not discursive* (universal or reflected representations). They are *sensible*, the “manner in which things are *given to us*,” and *not intellectual*, the manner in which we *think* things. Of course, they are *also* intellectual representations, but only meditately through the pure intuition of space and the pure intuition of time, “all concepts of space and time become possible.”

If this analysis is correct, we should conclude that the space and time described in the Transcendental Aesthetic are products of the figurative synthesis of imagination, and as such are what Kant calls, in section 26, *formal intuitions*. Yet it might be objected that in the texts quoted here, Kant insists on the distinction between *forms of intuition* and *formal intuitions*. Only the second are “represented with the determination of the *unity* of [the] manifold,” only they are expressly related to figurative synthesis. Perhaps, then, we should rather conclude that the *forms of intuition*, which are the proper object of the Transcendental Aesthetic, are *not* related to *synthesis speciosa*. Only *formal intuitions* are, and this is precisely why they are introduced only at the end of the Transcendental Deduction, and *not* in the Transcendental Aesthetic. Unlike the *forms of intuition*, they do not depend on receptivity alone, but also on a transcendental synthesis of imagination in accordance with the categories. If this is so, the argument of section 26 is less radical than I initially claimed. It does not bring into new light the “manner in

⁹ A25/B39 (This belongs to point 3 of the Metaphysical Exposition of the Concept of Space, mentioned earlier. See also note 7).

¹⁰ B152: “*eine Wirkung des Verstandes auf die Sinnlichkeit*.”

which things are given to us,” but merely introduces a distinction Kant could not introduce in the Aesthetic, the distinction between what depends on sensibility or receptivity alone (space and time as forms of sensible intuition) and what depends on the transcendental synthesis of imagination or figurative synthesis (space and time as formal intuitions).

But in fact, if we follow Kant’s suggestion and return to the Transcendental Aesthetic, we see that the objection does not hold. True, in the Transcendental Aesthetic Kant does not use the expression “formal intuition.” He talks only of *form of intuition*, and of *pure intuition*. However, *both* notions are retrospectively clarified by the figurative synthesis of sections 24 and 26. Indeed, we are even faced with a new paradox. Section 26 distinguishes between form of intuition, which “only” gives the manifold, and formal intuition, in which figurative synthesis contributes unity to the manifold. By contrast, in the Transcendental Aesthetic both *form of intuition* and *pure intuition* are clearly *unified*; thus both seem to depend on *synthesis speciosa* just as much as the formal intuition of section 26. But if this is so, what is the form of intuition which, according to section 26, merely “gives the manifold”? I shall first consider form of intuition and pure intuition in the Aesthetic, and then propose a solution to this new difficulty.

In the Transcendental Aesthetic, the expression “form of intuition” is first introduced in relation to the constitution of *appearances*. *Form* is then paired with *matter*. But when form is considered for itself, it is referred to as *intuition*, or *pure intuition*:

That in the appearance which corresponds to sensation I term its *matter*; but that which so determines the manifold of appearance that it allows of being ordered in certain relations, I term the *form* of appearance. That in which alone the sensations can be posited and ordered in a certain form cannot itself be sensation; and therefore, while the matter of all appearance is given to us *a posteriori* only, its form must lie ready for the sensations *a priori* in the mind [zu ihnen insgesamt im Gemüte *a priori* bereitliegen], and so must allow of being considered apart from all sensation.

I term all representations *pure* (in the transcendental sense) in which there is nothing that belongs to sensation. *The pure form of sensible intuitions in general, in which all the manifold of intuition is intuited in certain relations, must be found in the mind a priori. This pure form of sensibility may also itself be called pure intuition.* (A20/B34, my emphasis on the last two sentences)

The constant [*beständige*] form of receptivity which we call sensibility is a necessary condition of all the relations in which objects are intuited as outside us; and if we abstract from these objects, it is a pure intuition, which bears the name of space. (A27/B43)

Note, in the first of the texts just quoted, the shift from “form of appearance” to “form of sensible intuitions” and finally “form of sensibility.” The notion of *form* is properly a metaphysical rather than a psychological notion, which takes its meaning from its relation to the *matter* it determines, whose ordering and combining it provides. This is how it appeared in the *Inaugural Dissertation*, where

Kant distinguished between the form of the sensible and the form of the intelligible world. Similarly, here form is first introduced as the form of *the appearance*, that is, of the sensible object. But Kant's "Copernican revolution" makes this notion of *form* a mere concept of reflection referring to the *determination by the cognitive power*.¹¹ This is why Kant regresses so easily from object to subject, from the form of *appearances* to the form of *sensible intuitions* (representations) and finally to the form of *sensibility*: the spatiotemporal ordering of qualities in the object (form of appearance) characterizes it insofar as it is a *represented object* (form of sensible intuition), and thus depends on our sensible capacity to order what we receive in space and time (form of sensibility).¹²

This form of appearances, or form of sensible intuition, or form of sensibility, is defined as "that which makes the manifold of appearance capable of being ordered," or again as "that in which . . . the sensations can be . . . ordered." But that in which the manifold of appearance can be ordered is the undivided and unlimited intuition of space and of time. This means, then, that although the *pure intuition* of space and time may be distinguished from the *form of intuition* or form of appearances insofar as it is considered independently of the phenomenal *matter* (see the second text quoted earlier), considered in relation to the matter of appearances pure intuition is *itself* the form of appearances. Indeed Kant, at the end of the first text quoted earlier, fully identifies 'pure intuition' and 'form of sensibility':

The pure form of sensible intuitions in general, in which all the manifold of intuition is intuited in certain relations, must be found in the mind *a priori*. This pure form of sensibility may also itself be called pure intuition. Thus, if I take away from the representation of a body that which the understanding thinks in regard to it, substance, force, divisibility, etc., and likewise what belongs to sensation, impenetrability, hardness, color, etc., something still remains over from this empirical intuition, namely

¹¹ Cf. chapter 6, pp. 149–50. On form and matter in the *Dissertation*, see Ak. II, 389–92 (*Diss.* I, §2).

¹² Allison suggests that what Kant calls 'form of intuition' should be understood in two ways: on the one hand, as form of intuiting, and on the other hand, as form of the intuited. The first is the form of sensibility as a "mere capacity to intuit," the other is the "given, infinite, all-inclusive space which contains within it the manifold of spaces" (*Idealism*, 97). Allison argues that "form of intuition" in the *Aesthetic* is used mainly in the second sense, whereas the "form of intuition" of the footnote to §26 I quoted earlier has the first sense: form of intuiting, mere capacity to intuit (*Ibid.*). I think Allison is correct to say that the form of intuition in the footnote to §26 is a mere "form of intuiting." But the point I am making here, concerning the regression from object to subject in the three uses of "form" I quoted from the *Aesthetic* (form of appearance, form of sensible intuition, form of sensibility) is different from his. Here, one and the same form is form of the intuited and form of intuiting (although not the same as the "form of intuiting" of the footnote to §26). This form is the form of the object as represented object (form of the appearance as "indeterminate object of empirical intuition") and the form of a sensibility affected "from outside," by the thing in itself, as well as "from within," by the "effect of understanding on sensibility." This is how *one and the same form is form of the intuited and form of intuiting*. A relevant analogy might be: when I follow with a stick the outline of a drawing on the ground, the figure I draw (the form of my *drawing*) and the figure out there (the form of the *drawn*) are one and the same. The line out there is literally the meeting point between my own action and the resistance of the ground. Similarly, forms of intuiting and forms of intuited are, in the *Aesthetic*, one and the same. This is because, as "forms of sensibility" (forms of intuiting), they are more than the mere "capacity to intuit." They are the forms of a sensibility *affected both by the thing in itself and by spontaneity*. I say more on this point in the following pages.

extension and figure. These belong to *pure intuition*, which, even without any actual object of the senses or of sensation, exists in the mind *a priori* as a mere *form of sensibility*. (A21/B35)¹³

Extension and figure belong to the “pure intuition” of space, which is “that in which the manifold of appearances can be ordered,” that is, that by *limitation of which* the extension and figure of a given object are delineated. Therefore, space and time provide the form of appearances only insofar as they are themselves an intuition: a *pure* intuition, that is, an intuition preceding and conditioning all empirical intuition; and an *undivided* intuition, that is, an intuition that is presupposed by particular intuitions rather than resulting from their combinations. But this can be no other than the intuition that, according to the footnote to section 26 quoted earlier, “precedes any concept” and has a unity that “belongs to space and time, and not to the concept of the understanding.” We must then conclude, in light of sections 24 and 26 of the Transcendental Deduction, that the figurative synthesis or “effect of understanding on sensibility” generates the *pure intuition* of space and time and thereby the *form of appearances*, or form of intuition, or form of sensibility, all of which were expounded in the Transcendental Aesthetic.

From this we can draw some interesting conclusions regarding the terms “sensibility” and “form of sensibility” in the Transcendental Aesthetic. Kant defines sensibility as “the capacity (receptivity) for receiving [*bekommen*] representations through the manner in which we are affected by objects.” He goes on: “Objects are *given* to us by means of sensibility, and it alone yields us *intuitions*” (A19/B33). Now, intuition is not just any representation “received through the manner in which we are affected by objects.” According to the “stepladder” (*Stufenleiter*) of representations given at the beginning of the Transcendental Dialectic, intuition is a species of *cognition* (*Erkenntnis*), that is, a conscious representation *related to an object*. As such, it is distinguished from mere *sensation*, which is a mere state of the subject, by itself unrelated to any object. Let us quickly recall the first steps in Kant’s ladder. The generic concept is *representation*. A representation, says Kant, is either *without* or *with* consciousness (he calls the latter *perception*). A *perception* is in turn divided into *sensation* (*Empfindung*, *sensatio*), which “relates only to the subject as the modification of his state,” and *cognition* (a *perception* related to an object). Finally, cognition is divided into *intuition* and *concept*, which are distinguished from one another by the fact that “the former relates immediately to the object and is singular, the latter refers to it mediately by means of a mark which several things may have in common” (A320/B377).¹⁴ In contrast with sensation, then, intuition is a conscious representation *related to an object*, even if this relation is “immediate” and if the

¹³ My emphasis. Cf. also A22/B36: in the Transcendental Aesthetic, we will abstract from everything the understanding thinks through its concepts, and from all sensation, “so that nothing may remain save *pure intuition* and the *mere form of appearances*.”

¹⁴ Kant gives the Latin term *perception* in parentheses, as an equivalent for the German term *Perzeption*, which is rarely used elsewhere. This probably indicates he uses the term in the sense of “perception” accepted in seventeenth- and eighteenth-century theory of ideas, where “perception” is conscious representation in general, even if only obscurely (cf. Leibniz’s “petites perceptions”), whether related to an object or a merely subjective state. Kant sometimes uses the German *Wahrnehmung* in

representation is “singular,” thus prior to any concept.¹⁵ One might say that, in intuition, the object is *represented* even if it is not *recognized* (under a concept). Now, in the Transcendental Aesthetic Kant characterizes sensibility as the capacity that “yields us intuitions.” This means that sensibility is not merely a capacity to be consciously affected, but a capacity for conscious representations *related to an object*. But we now know, after sections 24 and 26 of the Deduction, that if sensibility is such a capacity, then it must be receptive not merely to affections received from *outside*, but also to affection from *inside*, from the *spontaneity* of the mind, or the act of *figurative synthesis*, which alone can transform the outer affection into an intuition of object. Space and time are the forms of a sensibility (receptivity) capable of being affected not merely from “outside” but from “within.”¹⁶

Thus the *form of intuition* expounded in the Transcendental Aesthetic does indeed appear, just as much as the *pure intuition*, to be the product of the *synthesis speciosa* analyzed in section 24 of the Transcendental Deduction. And we can understand why Kant should say that, in the second part of the Deduction, he revisits “the manner in which things are given to us.” But we are then faced with the paradox I mentioned earlier: the *form of intuition* presented in section 26 does not seem to have the unified synthetic character it has in the Transcendental Aesthetic. Only *formal intuition* seems to have this character. This opposition is clearest at the beginning of the footnote I cited earlier:

Space, represented as *object* (as we are required to do in geometry), contains more than a mere form of intuition; it also contains the *gathering-together* of the manifold, given according to the form of sensibility, in an *intuitive* representation, so that the *form of intuition gives only a manifold, the formal intuition gives unity of representation.* (B160–61n, my emphasis on last sentence)

this broad sense, but most often he uses *Wahrnehmung* in the more specific sense of an empirical *intuition*, a sensation *related to an object*. One may be surprised to see Kant refer to intuition as *cognition* (*Erkenntnis*), given his insistence elsewhere that cognition is the *determination* of an intuition by a *concept* (cf. A50/B74). Kant is in fact using the term *cognition* loosely here. He calls cognition any representation *relating to an object*, and this characterizes intuition as opposed to “mere” sensation. I noted in chapter 7 that the status of *sensation* is ambiguous. By itself sensation is only a conscious state of the subject, but in most cases it also relates to the object insofar as it is the “matter” of an empirical intuition.

¹⁵ Kant’s characterization of intuition as “immediate” representation essentially means, I think, that intuition does not require the mediation of another representation to relate to an object. A concept, on the other hand, relates to an object, at least cognitively, only by the mediation of intuition. Hintikka has claimed that Kant’s “immediacy criterion” for intuition was in fact redundant, and that intuition was sufficiently distinguished from concept by its being characterized as a singular representation, namely the referent of a singular term (see Hintikka, “Intuition”). But I think that for Kant the two defining characters of intuition are inseparable. This seems clear if we remember what was said in chapter 5: a concept is the representation of a “rule of our apprehension.” This means that there has to be apprehension (in intuition, thus “immediate” representation as well as referent for singular terms) for there to be rules and thus “general and reflected (mediated)” representations: concepts. I agree with Parsons, that the phenomenological component of the notion of intuition, as involving some “direct presence to the mind,” is important to Kant. See Parsons’s postscript to “Philosophy of Arithmetic”; and “Transcendental Aesthetic.”

¹⁶ Where “outside” and “within” should be understood in the sense of the concepts of reflection “inner” and “outer” elucidated in chapter 6.

What Kant here calls *form of intuition* seems to be the form of a mere capacity to take in a manifold, devoid of any power to unify the manifold. This agrees with the definition of sensibility Kant gives at the beginning of the Transcendental Aesthetic, a “capacity . . . for receiving representations through the mode in which we are affected by objects.” But not with its further characterization as that which “yields intuitions,” representations *related to an object*. But how can the mere capacity to receive representations be described as having a *form*? In the Transcendental Aesthetic, the form of appearances or of empirical intuition is described as “that which so determines the manifold of appearance that it *allows of being ordered*.” On section 26, the form of intuition is only described as *giving* the manifold, whereas formal intuition provides the “combination” of this manifold. What is a form that “gives the manifold” without “so [determining the latter] that it allows of being ordered?” How can this description of the “form of sensibility” be reconciled with that given in the Transcendental Aesthetic?

The solution to this difficulty lies in Kant’s evolutionary, “epigenetic” conception of the conditions of representation. Space and time as presented in the Transcendental Aesthetic are products of a figurative synthesis. But for such a production to be possible, its potentiality must be contained in receptivity itself. The latter, which “gives the manifold,” must be constituted in such a way that this manifold (of sensations, *perceptiones* but not intuitions, according to the *Stufenleiter* mentioned earlier) potentially “allows of being ordered” in space and time. Representational receptivity, the capacity to process affections into sensations (conscious representations), must also be able to present these sensations in an intuition of space and an intuition of time. This occurs when the affection *from outside* is the occasion for the affection *from inside*—the *figurative synthesis*. The form of the receptive capacity is thus a *merely potential form*, a form that is actualized only by means of the figurative synthesis. When Kant speaks of the “form of intuition” in section 26, I think he has in mind this potential form. He rarely uses the term “form” in such an elementary sense. Generally, the context or even his explicit statement indicates, as is the case in the Transcendental Aesthetic, that the form of sensibility is not this merely potential form, but an actualized form, a form synthesized by the intervention of spontaneity: a *formal intuition*.¹⁷

¹⁷ See for example Transcendental Dialectic, B457n: “Space is merely the form of outer intuition (formal intuition).” I have referred to the development of a mere “potentiality of form” into a formal intuition or form of intuition as “epigenetic.” Kant uses the expression “epigenesis of pure reason” as a metaphor to describe the origin of the categories in §27 of the Transcendental Deduction (B167). The “epigenetic” explanation in biology is the theory according to which the characteristics and structure of the mature organism are predetermined but not “preimprinted” in the embryo. They are acquired through gradual development in the course of which the embryo is transformed under the influence of the environment. The theory of *epigenesis* is thus opposed to the theory of *preformation*, according to which all the characteristics of the developed organism are “imprinted” in the embryo. In the *Critique of Judgment*, Kant explicitly favors the epigenetic theory in biology (§81, Ak. V, 422–23; 308–9). He uses this model early on in his work, to describe his conception of the origin of cognitions, as opposed to both empiricist and innatist theories (see Refl. 4275, Ak. XVII, 492; Refl. 4851 and 4859, Ak. XVIII, 8 and 12. Adickes locates all of these *Reflexionen* in 1771). Where the categories are concerned, I understand this model in the following manner: the categories are the “germ” which is present from the outset in experience, but which only discursive reflection can transform into a “developed or-

This explanation is confirmed by a famous text from Kant's response to Eberhard, where he considers the question whether the forms of intuition are *innate*. His answer is close to the one he gave already in the *Inaugural Dissertation*. The representations of space and time, he says, are not innate, but acquired. Yet they are acquired not *empirically*, but *originally*.¹⁸ However, this answer now receives a more precise treatment than in the *Dissertation*. Kant distinguishes between the *first formal ground of intuition* (the constitution of receptivity, which alone, he says, is “innate”) and *formal intuition*, which he also terms *form of outer objects* (intuitions of space and time). We recognize here the *pure intuition* of the Transcendental Aesthetic (or *formal intuition* of section 26). In contrast, the “first formal ground of intuition” is closer to the *form of intuition* Kant described in section 26:

The ground of the possibility of sensible intuition is . . . the merely particular *receptivity* of the mind, whereby it receives representations in accordance with its subjective constitution, when affected by something (in sensation). Only this first formal ground, e.g., the possibility of a representation of space, is *innate*, not the spatial representation itself. For impressions are always required in order first to enable the cognitive power to represent an object (which is always its own act). Thus, the formal *intuition* which is called space emerges as an originally acquired representation (the form of outer objects in general), the ground of which (as mere receptivity) is nevertheless innate and the acquisition of which long precedes determinate concepts of things that are in accordance with this form.¹⁹

Kant clearly distinguishes here between what I have called the mere potentiality of form and the formal intuitions of space and time as forms of outer objects. Equally noteworthy is the assertion which concludes the text: “The acquisition of [the formal intuition] long precedes determinate concepts of things that are in accordance with this form.” This assertion agrees with the note to section 26 quoted earlier: the formal intuition “precedes any concept,” its unity “belongs to space and time, and not to the concept of the understanding.”²⁰ But if this is the case, the *synthesis speciosa* that produced this intuition is also prior to any concept, and even to the categories, even though it is a “determination of sensibility by the un-

ganism”—namely, universal concepts governing a system of cognitions according to principles. I have extended the model of epigenesis to the forms of intuition, although Kant does not explicitly use the term in this case. Here, the “germ” is what I have called the “potentiality of form” contained in receptivity and thus in the manifold that it “gives.” The developed organism is the form of sensible intuition or of appearances, “developed” under the influence of both outer affection (impressions) and the affection of spontaneity (the figurative synthesis). For a detailed analysis of the theme of epigenesis in Kant, see Waxman, *Model*, 249–67.

¹⁸ *Entdeckung*, Ak.VII, 223; 137. Cf. *Diss.*, §15, Ak. II, 406; 400. Kant develops a similar thesis concerning the categories. I should note that Allison (correctly, I think) identifies what he calls “form of intuiting” and what Kant calls “first formal ground of intuition” in the Response to Eberhard. See *Idealism*, 345, n. 32. I disagree with Allison in his interpreting formal intuition as intuition *determined by concepts*. See pp. 223–25, and note 21.

¹⁹ *Entdeckung*, Ak. VII, 222; 136.

²⁰ B161n.

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

Kant's distinction between *forms of intuition* and *formal intuitions* has understandably given rise to much commentary. Whatever their differences, most commentators have this in common: they interpret section 26 as distinguishing *indeterminate* representations of space and time (the "mere forms of intuition," supposed to be the object of the Transcendental Aesthetic) from representation of space and time *determined* by concepts (formal intuitions).²¹ My analysis is obviously at odds with such a reading: I have argued that both the "form of intuition" and the "pure intuition" of the Transcendental Aesthetic are revealed, in the second step of the Transcendental Deduction, to be the product of a unifying *synthesis speciosa*; that the "formal intuition" of section 26 can thus be identified with both "form of intuition" and "pure intuition" of the Transcendental Aesthetic; and that when "form of intuition" is distinguished from "pure intuition" in the Aesthetic, the reason for such distinction is mostly that *form* is paired with *matter* (sensations, appearances), whereas "pure intuition" can be considered in abstraction from all matter. I shall not repeat the reasons I have already given, but I would like to make two additional remarks on behalf of the view I am defending. The first concerns *form of intuition*. The second, *formal intuition* and the meaning of *synthesis speciosa* as an "effect of understanding on sensibility."

1. As we saw, the term "form" has meaning only in relation to the term "matter." Matter is the determinable, form the determination. Attempting to explain the difference between "form of intuition" and "formal intuition" as a difference intrinsic to the representations of space and time, instead of considering the forms in relation to the matter they determine, is misunderstanding the very notion of form (which is then characterized by the fact that it is . . . *indeterminate*, quite a paradoxical reversal of Kantian terminology!). This is, if I may borrow Kant's formulation against Eberhard, wandering through the *Critique* "with the help of a dictionary,"²² in search of a fixed equivalent for the expression "form of intu-

²¹ Cf. particularly Buchdahl, *Metaphysics*, 573, n. 2; 579–94; Allison, *Idealism*, 94–98. Heidegger's interpretation deserves special mention; I discuss it later. Waxman defends a view that is close to the one defended here, in that he identifies the formal intuition of §26 with the form of intuition and pure intuition of the Transcendental Aesthetic. He also gives an interesting account of recent literature on the topic. See Waxman, *Model*, 79–117. He might disagree, however, with my characterization of formal intuition as resulting from the affection of sensibility by the *Vermögen zu urteilen* or capacity to form judgments.

²² Cf. *Entdeckung*, Ak. VIII, 223; 136.

ition,” whereas one should interpret it only in relation to its correlative *matter*. The latter can be (i) sensation, or (ii) “that which corresponds to sensation,” or (iii) appearance. The corresponding *form of intuition* is then (i) the “first formal ground of sensibility” mentioned in Kant’s response to Eberhard, or (ii) the form that results from the “effect of understanding on sensibility” or *synthesis speciosa* (form of appearance, whose matter is “that which corresponds to sensation”), or finally (iii) the form of the sensible world, whose matter is the appearances thought under the categories. For its part, “pure” or “formal” intuition is sometimes to be identified with “form of appearances” or even “form of the sensible world,” sometimes to be understood as space and time considered *independently of any (phenomenal) matter*. This is why it provides the space “required in geometry.”²³

2. If, as I have argued, it is a mistake to suppose that “form of intuition” is opposed to “formal intuition” as being less determinate, it is also a mistake to suppose that “formal intuition” is determined by *concepts*. That this view should be so often defended is surprising, since Kant explicitly says, in section 26, that formal intuition is *prior to any concept*. The common view is based, I suggest, on a misunderstanding of Kant’s assertion that in formal intuition, “the understanding determines sensibility.” If one reads “the understanding” as “the pure concepts of the understanding,” that is, the categories as universal and reflected representations (of pure synthesis), then indeed we have to conclude that formal intuition is generated by the application of the categories, or even by construction according to pure mathematical concepts. But then Kant’s assertion, in the footnote to section 26, that formal intuition “precedes any concept” remains very mysterious indeed. However, if one reads “the understanding” as *das Vermögen zu urteilen*, the capacity to judge, then one can understand, as I suggested earlier, that the capacity to form judgments, “affecting sensibility,” generates the pure intuitions of space and time as the necessary *intuitive* counterpart to our discursive capacity to reflect *universal* concepts, concepts whose extension (the multiplicities of singular objects thought under them) is potentially unlimited. When this original intuition is produced, no concept is thereby *yet* generated. Everything, as it were, remains to be done. But part of the minimal equipment that a human being, capable of discursive thought, has at his disposal, is the capacity to generate the “pure” intuitions of space and time as that in which empirical objects are instances of *concepts* (i.e., universal representations, representations whose logical extension is unlimited). This is how the *synthesis speciosa* can be said to be an “effect of the understanding on sensibility,” *prior to any concept*, although by it all conceptual representation of empirical objects is made possible.

Here again it is worthwhile to compare my interpretation with Heidegger’s.²⁴ Heidegger fully recognizes the *unity* Kant confers to forms of intuition in the

²³ For further development of this point, see chapter 9.

²⁴ See in particular Heidegger, *Phän. Int.*, §9.

Transcendental Aesthetic. He also recognizes the identity between space and time as *pure intuitions* and space and time as *forms of intuition*, and that the form of intuition has its own brand of (preconceptual) unity. But for him, this purely intuitive unity is distinct from the unity of formal intuition, which is determined by *concepts*. In other words, Heidegger grants unity to the form of intuition (identified with pure intuition) only at the cost of distinguishing *pure* intuition and *formal* intuition. Consequently, he pries apart the space and time of the Transcendental Aesthetic and the formal intuition of section 26. He thinks that the latter concerns only *conceptualized* spatiotemporal representations, most notably mathematical constructions. But as I pointed out, in section 26 Kant explicitly indicates that formal intuition is *prior to any concept*. And if *pure intuition* and *formal intuition* were different, Kant would have no reason to refer to the Transcendental Aesthetic when mentioning the unity of the formal intuition. My disagreement with Heidegger's reading is the same, I think, as the one I expressed earlier concerning the identity of intuitive and discursive synthesis as the ground of the metaphysical deduction of the categories. According to Heidegger, the unity of intuition is the result of a transcendental synthesis of imagination that, far from being the "effect of the understanding on sensibility," is the "common root" of intuition and pure thought. It is thus no surprise that he should distinguish pure intuition (the intuitive unity resulting from transcendental imagination alone) from formal intuition (which he interprets as conceptual production, and thus the result of the collaboration of intuitive unity and intellectual unity). But if we do not share his opposition to the idea of an "effect of understanding on sensibility," nothing stops us from accepting that pure intuition and formal intuition are one and the same intuition, produced by the *synthesis speciosa* or the effect of the understanding on sensibility.

I have argued that the second step of the B Deduction is a reexamination of the *manner in which things are given to us*. Here again, the B edition gives clearer expression to the radicality of Kant's view than the A. In the A Deduction, with its two recapitulations "from below" and "from above," Kant showed that all synthesis is ultimately subject to the transcendental unity of apperception. Now he says that *space and time themselves*, which might have been assumed prior to any synthesis, are on the contrary the result of a transcendental synthesis of imagination that is an "effect of understanding on sensibility."²⁵ How important this argument is, we can see if we recall how at the beginning of the Transcen-

²⁵ Although this thesis is not made as clear in the A Deduction, it fully agrees with Kant's intentions already there. See for instance the Preliminary Explanation of the Possibility of the Categories, as a priori Cognition: "There is *one single* experience in which all perceptions are represented as in thoroughgoing and orderly connection, just as there is *only one space and one time* in which all forms of appearance and all relation of being or not-being occur" (my emphasis). This sentence and the following paragraph introduce the idea of a transcendental ground of the unity of the synthesis of appearances (A110–11). The unity of space and time, just like that of experience, stems from their relation to this originary ground. See also A99–100, A107.

dental Deduction Kant contrasted the relative ease of his argument concerning space and time and the much greater difficulty of the argument concerning the categories:

That objects of sensible intuition must conform to the formal conditions of sensibility which lie *a priori* in the mind is evident, because otherwise they would not be objects for us. But that they must likewise conform to the conditions which the understanding requires for the synthetic unity of thought is a conclusion the grounds of which are by no means so obvious. Appearances might very well be so constituted that the understanding should not find them to be in accordance with the conditions of its unity. Everything might be in such confusion that, for instance, in the series of appearances nothing presented itself which might yield a rule of synthesis and so answer to the concept of cause and effect. This concept would then be altogether empty, null, and meaningless. (A90/B123)

Cause and effect are concepts by means of which appearances are *thought* (reflected discursively in judgments of experience). They are not, like space and time, intuitive representations in which appearances are *given*. Thus it is conceivable, said Kant at the beginning of the Deduction, that appearances be such that they cannot be reflected under any concept of causal relation, whereas it is impossible that an appearance be given that did not conform to the conditions of space and time. But now, if we accept the argument of section 26, the very fact that appearances are given in space and time is a sufficient ground for their being in conformity with the categories, even though it remains true that they are not given *in* a category (as "in" an intuition) or even cognized *under* a category until the relevant operations of comparison/reflection/abstraction, together with a *priori* construction, have generated such cognition. Nevertheless, since the space and time of the Transcendental Aesthetic are, as intuitions, products of *synthesis speciosa* or "effects of understanding on sensibility," the fact that appearances are given in them is a sufficient warrant that they *can* be cognized as "determined [in themselves] with respect to one or the other of our forms of judgment," and thus subsumed under the categories.²⁶

Kant gives two examples to illustrate the conformity to the categories of appearances apprehended in space and time: the perception of a house, the perception of the freezing of water. The former illustrates perception *in space*, the latter perception *in time*:

When, for instance, by apprehension of the manifold of a house I make the empirical intuition of it into a perception, the *necessary unity* of space and outer sensible intuition in general lies at the basis of my apprehension, and I draw as it were the outline of the house in conformity with this synthetic unity of the manifold in space.

When, to take another example, I perceive the freezing of water, I apprehend two states, fluidity and solidity, and these as standing to one another in a relation of time.

²⁶ *Prol.* §21; cf. B128 in the *Critique*.

But in time, which I place at the basis of the appearance [insofar] as [it is] inner *intuition*, I necessarily represent to myself synthetic *unity* of the manifold, without which that relation of time could not be given in an intuition as being *determined* (in respect of time-sequence). (B162–63)

Kant goes on to show that the apprehension of the house in space and the apprehension of the freezing of water in time conform respectively to the categories of quantity and causality. The category of quantity is the universal representation of the synthetic unity *in space* in conformity with which I draw the outline of the house. The category of cause is the universal representation of the synthetic unity *in time* in conformity with which I perceive the succession of the states of water. It is highly significant that Kant should have chosen these two categories for his examples, one an instance of *mathematical* synthesis (in this case, quantity), the other an instance of *dynamical* synthesis (in this case, causal relation). Nevertheless, these two examples are not essential to the argument itself. Their full explanation can be given only later, when Kant expounds the Schematism of the Concepts of Pure Understanding and the System of Principles.²⁷ To say the truth, the examples are even partly misleading, because it may seem that Kant is describing two distinct intuitions: on the one hand the intuition of *space*, in which *figures* are apprehended (apprehension of the house); on the other hand the intuition of *time*, in which *successions* are apprehended (apprehension of the freezing of water). But this is not how Kant has explained the intuitions of space and time as products of *synthesis speciosa*. He has explained *synthesis speciosa* as production of the intuition of space by *means of* production of the intuition of time, and conversely production of the intuition of time by *means of* production of the intuition of space, *outer sense* and *inner sense* being linked together by their common relation to the objective unity of apperception.²⁸ In order to elucidate the relation of space and time in our two empirical examples, we thus need to give closer consideration to the relation of outer sense and inner sense in *synthesis speciosa*.

²⁷ On the distinction between “mathematical” and “dynamical” synthesis, see A160/B199, B201–2n. This difference will be elucidated in detail in chapters 9, 10, and 11, together with the Schematism and Principle of Pure Understanding corresponding to each category.

²⁸ This combined production of the representation of space and that of time is most striking when Kant describes *synthesis speciosa* in the second part of §24: “We cannot think a line without *drawing* it in thought, or a circle without *describing* it. We cannot represent the three dimensions of space save by *positing* [*setzen*] three lines at right angle to one another, and we cannot represent time itself save insofar as we attend, in the *drawing* of a straight line (which has to serve as the outer figurative representation of time) merely to the act of synthesis of the manifold by which we successively determine inner sense, and in so doing attend to the succession of this determination in inner sense. Motion, as an act of the subject (not as a determination of an object) and therefore the synthesis of the manifold in space, first produces the concept of succession—if we abstract from this manifold and attend solely to the act through which we determine the inner sense according to its form. The understanding does not, therefore, find in inner sense such a combination of the manifold, but *produces* it, by *affecting* the sense [*bringt sie hervor, indem er ihn affiziert*]” (B154, Kant’s emphasis).

SYNTHESIS SPECIOSA, OUTER SENSE, INNER SENSE

Kant characterizes the figurative synthesis as an “effect of the understanding on sensibility”²⁹ or as “the affection of *inner sense* by understanding.”³⁰ This “affection” has two aspects. First, it is an act by which the understanding affects inner sense with a given manifold:

But since there lies in us a certain form of *a priori* sensible intuition which depends on the receptivity of the faculty of representation (sensibility), the understanding, as spontaneity, is able to determine inner sense through the manifold of given representations, in accordance with the synthetic unity of apperception. . . . This synthesis of the manifold of sensible intuition . . . may be entitled *figurative synthesis* (*synthesis speciosa*). (B150–51)

Second, to say that the determination of inner sense takes place “in conformity with the synthetic unity of apperception” is to say that the understanding affects inner sense with its own acts of combination. These two aspects are interdependent. As spontaneity (understanding), the mind combines what it receives in the form of outer intuition; and it affects itself, as inner sense, with this combination. The proper function of this act of combination and self-affection is to synthesize an empirical given. Nevertheless, this act has a “pure” aspect, manifested in the a priori construction of geometrical concepts. The inseparability of temporal and spatial intuition, the fact that they are jointly produced, is most apparent in this “pure” aspect of the *synthesis speciosa*. The understanding produces the intuition of space only insofar as it affects inner sense with this production. It thereby also produces the intuition of time as the form in which it intuits its own act (of producing the spatial intuition). There would be no intuition of time were it not for the act of producing a figure in space. Both intuitions are the result of one and the same act of self-affection:

We cannot think a line without *drawing* it in thought, or a circle without *describing* it. We cannot represent the three dimensions of space save by *setting* three lines at right angles to one another from the same point. Even time itself we cannot represent, save insofar as we attend, in the drawing of a straight line (which has to serve as the outer figurative representation of time), merely to the act of synthesis of the manifold whereby we successively determine inner sense, and in so doing attend to the succession of this determination in inner sense. (B154)

²⁹ The transcendental synthesis of imagination is “an effect of the understanding on sensibility” (B152); by means of this synthesis, “the understanding determines sensibility” (B161n).

³⁰ “What determines inner sense is the understanding and its originary power of combining the manifold of intuition, that is, of bringing it under an apperception, upon which the possibility of understanding itself rests” (B153). “Thus the understanding, under the title of a *transcendental synthesis of imagination*, performs this act upon the *passive subject*, whose *faculty* it is, and we are therefore justified in saying that inner sense is affected thereby” (B153–54).

Kant insists particularly on this original generation of the intuition of time. It means, he says, that we do not obtain this intuition from perceiving the motion of things in space, but rather from our own action, that is, from the "synthesis of the manifold in space . . . if we abstract from this manifold and attend solely to the act through which we determine the inner sense according to its form" (B155, my emphasis). The reason time is called form of *inner sense* is precisely that it is the form in which we intuit *our own act* of representation. But to say that it is the form of intuition of our *acts* is to say that we no more *find* time in inner sense than we *find* space in outer sense. The intuition of time, in which we perceive the successive character of the production of a figure, is, just like the intuition of space, generated originally by the *synthesis speciosa*. "The understanding does not, therefore, find in inner sense such a combination of the manifold, but *produces* it, in *affecting* that sense" (B155).

The two examples given in section 26 (the apprehension of a house, the apprehension of the freezing of water) obscure the original interdependence of the intuitions of space and of time because they do not illustrate pure figurative synthesis, but *synthesis of apprehension*, by means of which an *empirical* given is taken up into figurative synthesis. The perception of the house is a synthesis of the spatial configuration of an empirical object. The perception of the freezing of water is a synthesis of the succession of states of an empirical object. The case of apprehending the house by "drawing the outline" may perhaps illustrate the interdependence of space and time as it exists in the "pure" *synthesis speciosa* of section 24.³¹ But the case of apprehending the freezing of water presents quite another problem with regard to time. In this example, time is not only the form of the apprehension of my act of representation, but also the form of *the object itself*. Paraphrasing Bergson, we might say that one must wait for water to solidify just as one must wait for sugar to melt.³² Here the perception of succession is dependent on this expectation, not on an arbitrarily performed act of synthesis. In other words, with these two examples we are faced with two different temporalities. One is the temporal character of our act of representation, the other the temporal character of the empirical object. It is not at all clear how the *synthesis speciosa* of section 24 may account for this duality.

The Two Aspects of Time in the Inaugural Dissertation

This difficulty is not a new one. Already in the *Inaugural Dissertation*, Kant considered time under two aspects whose relation was not explicitly analyzed. In the first section of the *Dissertation*, time is presented as the form of our sensibility responsible for the fact that neither the idea of a totality of substantial compounds, nor that of their complete division, can be represented *in concreto*, that

³¹ "I draw as it were the outline of the house" (B162), just as earlier, I drew the line, the circle, or the three dimensions of space.

³² See Bergson, "Données immédiates," chap. 2.

is, generated in intuition, although both are necessary representations of the intellect. This impossibility of representing *in concreto* what is nonetheless thought *in abstracto* (in universal concepts) motivates Kant's distinction between sensible cognition and intellectual cognition, and thus between sensible and intelligible world. In this context, time appears as the sensible condition of all intuitively representable composition and division, which means also, of all mathematical operations.³³

But on the other hand, time is, just as space is, a *forma seu sensibilium species*, form or configuration of sensible *things* (and not merely of our own operations of composition and decomposition, as in the previous case), imprinted on them by the particular nature of our minds.³⁴ From this point of view, time and space are to the same degree, and in the same way, *forms of the sensible world*. The third part of the *Dissertation* is devoted to these forms, which are expounded in exactly parallel ways. Both are prior to the relations whose representations they make possible, both are singular representations, both are intuitions, both are *quanta continua*, both are subjective, and if one attempts to posit either as a being or as the determination of a being *in itself*, for both the result is a purely imaginary being. The distinction between *outer* sense and *inner* sense plays no role in this exposition. Just as much as space, time is the form by means of which we coordinate *sensations*, that is, the effects of outer objects on our sensibility. This identity of function is most clear when Kant characterizes the domain of objects for which space and time provide the forms.

Accordingly, whatever the principle of the form of the sensible world may, in the end, be, its embrace is limited to *actual things*, insofar as they are thought capable of *falling under the senses*. Accordingly, it embraces neither immaterial substances, which are already as such, by definition, excluded from the outer senses, nor the cause of the world. . . . These formal principles . . . are absolutely primary and universal; they are, so to speak, the schemata and conditions of everything sensitive in human cognition. I shall now show that there are two such principles, namely, space and time.³⁵

In section 14, time is described as the "condition of the relations to be found in sensible things" and as the "principle of the laws of what is continuous in the changes of the universe."³⁶ Even when Kant says that the succession of *our representations* gives us the intuition of time, he mentions in the same breath *motion*, that is, the succession of positions of *things*: "we are able to calculate the *quantity* of time only in the concrete, namely either by *motion* or by *a series of thoughts*."³⁷

³³ *Diss.*, §1, Ak. II, 387–89; 377–79.

³⁴ *Diss.*, §4, Ak. II, 392–93; 384–85.

³⁵ *Diss.*, §13, Ak. II, 398; 391.

³⁶ *Diss.*, §14, 3d and 4th points, Ak. II, 399; 392.

³⁷ *Diss.*, §14, 5th point, Ak. II, 401; 394. The only difference to be found between Kant's explanation of time and his explanation of space, is that in the latter case Kant speaks of *outer sensations*, whereas he speaks only of *sensations* in the case of time (§15, C and E). To be sure, he mentions "the doctrine of Leibniz and his followers," according to which time is "something real which has been ab-

In fact, both the exposition of space and the exposition of time have as their background the cosmological controversy stemming from the Leibniz-Clarke correspondence. There space and time were treated in parallel ways. For Leibniz, both space and time are only relations: "If space and time were anything absolute, that is, if they were anything else, besides certain orders of things; then indeed my assertion would be a contradiction."³⁸ For Clarke, the Newtonian, space and time are realities in themselves:

Space and time are not the mere order of things, but real quantities (which order and succession are not).³⁹

If no creatures existed, yet the ubiquity of God, and the continuance of his existence, would make space and duration to be exactly the same as they are now.⁴⁰

In this context, time is not fundamentally related to our inner states, or to the succession of ideas. In the *New Essays*, Philalethes asserts that we obtain the idea of duration from the succession of our ideas, and Theophilus answers that "a train of perceptions arouses the idea of duration, but it does not create it."⁴¹ For Leibniz, what "creates" the idea of duration is the confused representation of an order of incompossibles; similarly, what "creates" the idea of space is the confused representation of an order of compossibles. In the *Dissertation*, Kant too treats space and time on the same footing. But his position is a compromise between the Leibnizian and Newtonian positions, which means it is also a rejection of both. Like Leibniz, Kant asserts that space and time are only relations, and that as such they are infinitely divisible and expandable. But like Newton, he asserts that the one space and the one time are ontologically prior to things, their states, and their relations. Against both Leibniz and Newton, he maintains that space and time are only forms of appearances, which tell us nothing about a world considered *in itself*.

Nonetheless, this strictly symmetrical treatment of space and of time is nuanced in the Corollary to the third part of the *Dissertation*. Kant considers again the representation of time and underlines its primacy over that of space. Time "embraces in its relations absolutely all things, namely, space itself and, in addition, the accidents which are not included in the relations of space, such as the thoughts of the mind." But here, unlike in the *Critique*, Kant does not relate this primacy of time over space to what I have called the "interiorization to represen-

stracted from the succession of internal states." But this is only to state his opposition to this view, which makes time an empirical and abstract, rather than a priori and intuitive representation. In fact, the doctrine he opposes here is surely not Leibniz's, but rather that of the *Schulpfortophen* who were under the influence of Locke as much as of Leibniz. Indeed the Lockian influence is manifest, I think, in Lambert's and Mendelssohn's argument when they deny Kant's assertion of the merely subjective and ideal character of time by invoking the undeniable reality of the succession of our representations. More on this later.

³⁸ Leibniz's fourth paper, §16, *Leibniz-Clarke Correspondence*, in G VII, 378; 39.

³⁹ Ibid., Clarke's fourth reply, §§16–17 (G VII, 385; 49).

⁴⁰ Ibid., §41 (G VII, 388; 52).

⁴¹ Leibniz, *New Essays*, II, 14, §16.

tation of the object of representation." As is apparent in the passage I have just quoted, the "thoughts of the mind" are rather presented as a particular case of objects in time, another case being space and external objects. Time is the universal form in which *changes of state* are possible, whether the latter are representational or material:

[Space and time] constitute the underlying foundations upon which the understanding rests, when, in accordance with the laws of logic and with the greatest possible certainty, it draws conclusions from the primary data of intuition. Indeed, of these concepts the one properly concerns the intuition of an *object*, while the other concerns its *state*, especially its *representational state* [... *alter propriæ intuitum objecti, alter statum concernit, in primis repraesentativum*].

Does this last assertion ("time . . . concerns its *state*, especially its *representational state*") finally point to an original relation between time and what Kant, in the *Critique*, calls *inner sense*? I do not think so. The most the preceding formulation might mean in this regard is that the intuition of time relates *primarily* to the succession of our representations, and only *secondarily* to the succession of states of things. In itself, this is not enough to make time a form of inner sense as Kant will understand it in the *Critique*. Again, time is the form of the sensible world in general, and within the sensible world it is the form of the succession of our representational states. This way of considering time is manifest also when Kant stresses the relation of time to causality: "the relation of cause and caused, at least in the case of external objects, requires relations of space. In the case of all objects, however, whether they be external or internal, it is only with the assistance of the relation of time that the mind can be instructed as to what is earlier and what is later, that is to say, as to what is cause and what is caused."

Only at the end of this recapitulation does Kant return to the relation between *time* and the intuition of *quantity*, which he discussed in the first section of the *Dissertation*: "And we can only render the *quantity* of space itself intelligible by expressing it numerically, having related it to a measure taken as a unity. This number itself is nothing but a multiplicity which is distinctly known by counting, that is to say, by successively adding one to one in a given time."⁴² Here at last we are again presented with the aspect of time with which Kant began the *Dissertation*. But its relation to time as the form of the "coordination of our sensations" remains obscure. It would be comprehensible only if time, as the sensible condition of mathematical operations, were also understood as the form of a coordination of sensations. But what could these sensations be? They cannot be outer sensations, or mathematics would be empirical cognition. Hence they must be genuinely *inner sensations*, in which the mind affects *itself*. Without the notion of such an affection there is no possible unity between time considered as a necessary condition of mathematical thought and time as a condition of the coordination of outer sensations. But this solution is absent from the *Dissertation*. Kant

⁴² All texts quoted are from the "Corollary" to section 3 of the *Dissertation*, Ak. II, 405–6; 399–400.

finds a distinct formulation for it only later. The association of time with *inner* sense is the first step in this direction. But only the doctrine of the *synthesis speciosa*, in the B edition of the *Critique*, provides an explicit and complete exposition of this solution.

Inner Sense: From the Dissertation to the Critique

Time is explicitly attributed to *inner* sense in the 1772 Letter to Herz, in which Kant replies to various criticisms of his *Dissertation*. I submit that even though Kant rejects these criticisms as misunderstandings, they nonetheless played an important role in the evolution that led him to specify that time is the form of *inner* sense and space the form of *outer* sense.

The reaction Kant's *Dissertation* received from Mendelssohn and Lambert is well known. Both found unacceptable the description of time as a *form of sensibility*, that is, as a determination of things *only insofar as they appear to us*. Granted, they said, one might doubt the reality of space. But the reality of time is as indubitable as the succession of our representations, which even the staunchest idealist would not think of denying.⁴³ Thus Kant's view, the import of which was primarily ontological—what is the being of space, what is the being of time?—and whose background was a discussion of rational cosmology, was criticized from a psychological standpoint, by an argument stressing the undeniable empirical reality of the succession of our representations. Kant was surprised by this objection: he took his own doctrine to be no other than the radicalization of the Leibnizian thesis that space and time are only *phenomena*. From this perspective, there is no reason to treat time any differently than space. However, Kant does take the objection seriously enough to answer it at length, not only in the Letter to Herz but again in the first edition of the *Critique*.⁴⁴ The reason he takes such pains is not only, as he says, that the objection will inevitably come to any reader's mind and thus requires a convincing refutation. It is also, I think, that the objection obliged him to pay closer attention to the relation between time and *inner* sense:

An objection . . . has made me reflect considerably, because it seems to be the most serious objection that can be raised against the system, an objection that seems to occur naturally to everybody. . . . It runs like this: changes are something real (according to the testimony of inner sense). Now, they are possible only on the assumption of time; therefore time is something real that is involved in the determination of the things in themselves.

Kant's reply to this is well known: the objection is based on a misunderstanding: "I do not deny that changes are real, any more than I deny that bodies are real, even though by *real* I only mean that something real corresponds to the

⁴³ Letter from Lambert to Kant, October 13, 1770, Ak. X, 103–11 (esp. 107–9); 60–67. Letter from Mendelssohn to Kant, December 25, 1770, Ak. X, 113–17 (esp. 115); 67–70 (esp. 69).

⁴⁴ Letter to Herz of February 21, 1772, Ak. X, 129–35 (esp. 134); 70–76 (esp. 75); also *KrV*, A36–38/B53–54.

appearance.”⁴⁵ Something real corresponds to the succession of our representations, just as something real corresponds to the spatial relations of objects. This answer is in tune with the proper standpoint of the *Dissertation*, in which what was discussed was not the psychological experience of time but its ontological status, which is the same as the ontological status of space: both are mere forms of appearances. However, accepting Lambert’s assertion that thanks to the “testimony of inner sense” the reality of time is more immediately indubitable than the reality of space,⁴⁶ Kant was compelled to give further thought to the relation between space and time.

The outcome is to be found in the first edition of the *Critique*. In the Transcendental Aesthetic, space is presented as the form of *outer* sense, time as the form of *inner* sense:

By means of outer sense, a property of our mind, we represent to ourselves objects as outside us, and all without exception in space. In space their shape, magnitude, and relation to one another are determined or determinable. Inner sense, by means of which the mind intuits itself or its inner state, yields indeed no intuition of the soul itself as an object; but there is nevertheless a determinate form [namely, time] in which alone the intuition of inner states is possible, and everything which belongs to inner determinations is therefore represented in relations of time. Time cannot be outwardly intuited, any more than space can be intuited as something in us. (A22–23/B37)

The notions of inner and outer sense are quite common in German *Schulphilosophie*.⁴⁷ But I suggest that, more than Baumgarten or Tetens, Kant’s discussion here echoes Locke. For it is in Locke and not in the works of German philosophers that Kant could find outer sense (which Locke simply calls *sensation*) correlated with space, inner sense with time. Comparing Locke’s analysis in the *Essay* and Kant’s analysis in the Transcendental Aesthetic will thus be helpful to

⁴⁵ Ak. X, 134; 75.

⁴⁶ In fairness to Lambert, it should be added that, for him, asserting the indubitable reality of time in the name of the undeniable reality of the succession of our representations does not mean we should doubt the reality of space. The merely subjective character of the forms of sensibility seems equally unacceptable to him in both cases, but it seems particularly absurd in the case of time, for the reason mentioned (cf. Ak. X, 107; 63). On the whole, he prefers to abandon any ontological definition of space and time (107; 63), and refuses to bother with Leibniz and Clarke’s “theological difficulties” (108; 64). This letter deserves to be read, for its wit and delightful exasperation with what Lambert holds to be the useless obscurities of metaphysics.

⁴⁷ It is to Locke, it seems, that we owe the notion of inner sense understood as the reflection of the mind on its own operations and representations. Inner sense and outer sense are not mentioned in Wolff’s *Psychologia empirica*: the chapter on *sense* (sec. II, chap. 2: *De sensu*) deals only with *sensations*. However, in 535 of Baumgarten’s *Psychologia empirica* (§§504–669 of his *Metaphysica*), which Kant used in his lectures, we find the following definitions: “I have a faculty of sensing, or *sense* [*sensum, der Sinn*]. *Sense* either represents the state of my soul, *inner sense* [*internus, der Innre*], or the state of my body, *outer sense* [*externus, die äussre Sinnen*]. Consequently, *sensation* is either *inner*, through inner sense (consciousness in the strict sense), or *outer*, actualized through outer sense” (Ak. XV-1, 13; the italics correspond to capitals in the text Adickes transcribed; the German terms next to the Latin terms were Kant’s addition in his copy of Baumgarten’s textbook). Inner sense is analyzed in detail by Tetens, whose *Philosophische Versuche über die menschliche Natur und ihre Entwicklung* appeared in 1777. On the influence this work had on the development of Kant’s thought,

clarify the two aspects of time (time as the form of our own acts of synthesis, time as a form of the object itself) in the *synthesis speciosa* expounded in the second edition of the *Critique*. This comparison will help us to evaluate the ways in which Kant combined his own metaphysical inspiration in the *Dissertation*, and the empiricopsychological inspiration of Lambert's and Mendelssohn's objection.

Time As the Form of Inner Sense: Kant and Locke

According to Locke, we acquire the idea of space through sight and touch—through what Kant later calls *outer* senses. But we acquire the idea of time through *inner* sense. More precisely, the idea of time is the idea of duration insofar as it can be measured; and the idea of duration, just like that of succession, is an idea of reflection, or inner sense:

It is evident to anyone who will but observe what passes in his own mind, that there is a train of ideas which constantly succeed one another in his understanding, as long as he is awake. Reflection on these appearances of several ideas one after another in our minds, is that which furnishes us with the idea of *succession*: and the distance between any parts of that succession, or between the appearance of any two ideas in our minds, is that we call *duration*. For while we are thinking, or whilst we receive successively several ideas in our minds, we know that we do exist; and so we call the existence, or the continuation of the existence of ourselves, or anything else, commensurate to the succession of any ideas in our minds, the duration of ourselves, or any such other thing co-existent with our thinking.⁴⁸

The original of which our ideas of succession and duration are derived is the “train of ideas” within us. When this train ceases—for example, when we are asleep—so does the perception of duration. Similarly, if someone fastens his attention on a single idea, duration will feel much shorter to him than it would to someone feeling a multiplicity of ideas passing through his mind. Only by the mediation of this inner awareness of the succession of our own ideas can the idea of duration also be applied to outer things:

That we have our notion of succession and duration from this original, viz. from reflection on the train of ideas, which we find to appear one after another in our own minds, seems plain to me, in that we have no perception of duration but by considering the train of ideas that take their turns in our understandings.

Indeed a man having, from reflecting on the succession and number of his own thoughts, got the notion or idea of duration, he can apply that notion to things which exist while he does not think; as he that has got the idea of extension from bodies by his sight or touch, can apply it to distances, where no body is seen or felt.⁴⁹

see De Vleeschauwer, *Déduction*, I, 299–322. Note the shift from the singular (*sensus externus*) to the plural (*die aikssre Sinnen [sic]*). The same variation is present in the *Anthropology*, §15. For Kant, outer sense (in the *singular*), the form of which is space, combines the data of the five senses (outer senses, in the *plural*), which relate us to the objects external to our representations of them.

⁴⁸ Locke, *Essay*, bk. II, chap. xiv, §3.

⁴⁹ Ibid., bk. II, chap. xiv, §§4–5.

It might seem, Locke continues, that we acquire our idea of duration from the continuous change of things around us. But in fact this change itself is perceived only if it is commensurable with the perceptible succession and duration of our ideas. A change that is too slow, like the apparent movement of the sun in the sky or the turning of the hands of a watch, is not perceived as such. We perceive only its results, the different positions of the sun, or of the hand of the watch, at different moments. Similarly, a movement that is too fast, like that of a cannonball, is perceived as a continuous line. Only a change that occurs in things at a pace close enough to that of the succession of our ideas can be perceived. Thus the perceived succession of *ideas* is the means by which the succession of outer things and their states is perceived. Nevertheless, when it comes to *measuring* duration, the states of things external to ideas, and more particularly certain regular motions, are the means by which time can be measured. Because of the role played by motion in the *measurement* of time, motion has wrongly been considered as the *origin*, that is, the *original* of our idea of time.

Kant knew the *Essay Concerning Human Understanding*. He probably had Locke's explanations in mind when he wrote that "Time cannot be outwardly intuited, any more than space can be intuited as something in us" (A23/B37). This twofold restriction needs explanation, particularly its first clause: it is in no way self-evident that time cannot be "outwardly intuited," that is, intuited through the changes of state in outer objects. In the exposition of time, Kant makes clear what he means by saying that "[time] cannot be a determination of outer appearances; it has to do neither with shape nor position, but with the relation of representations in our inner state" (A33/B49–50). But this is not convincing. That time has to do neither with shape nor with position is not enough to prove that it is not a form of outer sense if one considers, as Kant did in the *Dissertation* (and as he never denied later), that shapes and positions themselves, along with the entirety of space, are *in time*. However, Kant's intention becomes clearer if we relate it to Locke's psychological analyses. Time is to be related to *inner sense*, not outer sense, if the only succession immediately present to us is the succession of our ideas. In order to be perceived, the succession of states of things must in some way or other be in tune with the succession of our ideas or, in Kantian terms, of our representations. So considered, the relation of time to inner sense is better expressed in the conclusion of the Aesthetic:

Time is the formal *a priori* condition of all appearances whatsoever. . . . But since all representations, whether they have for their objects outer things or not, belong, in themselves, as determinations of the mind, to our inner state; and since this inner state stands under the formal condition of inner intuition, and so belongs to time, time is an *a priori* condition of all appearance whatsoever. It is the immediate condition of inner appearances (of our souls), and thereby the mediate condition of outer appearances. (A34/B50)

Here the shift from the *Dissertation* to the *Critique* is readily perceivable. Only by the mediation of its being *given in inner sense* does every appearance, whether "outer" or "inner," have temporal determination.

To be sure, the manner in which time is related to inner sense is quite different for Kant and for Locke. For the British empiricist, it means that the only succession we directly perceive is the succession of our ideas. The succession of states of things is perceptible only if it can be reflected in a perceptible succession of ideas. For Kant too, only the succession of our representations is immediately perceived.⁵⁰ But the relation between *inner* succession and *outer* succession is different in kind from Locke's image of two parallel chains of events proceeding at more or less comparable rates. For Kant, this relation belongs to the schematism of the categories, which I shall analyze in the following chapters. What matters here is that this difference in the way Kant and Locke understand the relation between *inner* and *outer* succession is related to a fundamental difference in their ontological characterizations of time. For Locke, succession, duration, and time may be perceived only by inner sense; they are nonetheless determinations "in themselves," both of representations and of the things they represent. For Kant, succession, duration, and time are no more determinations that exist "in themselves" in inner sense than they are in outward appearances. To say that time is the form of inner sense is not only to say that all perception of time is primarily perception of the succession of our representations in inner sense, but also to say that time is the form according to which inner sense apprehends what is represented in it. Thus the meaning of the relation between time and inner sense according to Kant is far more radical than it was in Locke's psychological analysis.

Nevertheless, Locke opened the way to this radicalization by treating inner sense as a *receptivity* to be understood on the model of outer receptivity. For

⁵⁰ This is stated most clearly in the Second Analogy of Experience: "The appearances, insofar as they are objects of consciousness simply in virtue of being representations, are not in any way distinct from their apprehension, that is, from their reception in the synthesis of imagination; and we must therefore agree that the manifold of appearances is always generated in the mind successively. Now if appearances were things in themselves, then since we have to deal solely with our representations, we could never determine from the succession of representations how their manifold may be connected in the object. . . . In spite of the fact that appearances are not things in themselves, and yet are what alone can be given to us to know, in spite also of the fact that their representation in apprehension is always successive, I have to show what sort of connection in time belongs to the manifold in the appearances themselves" (A190/B235). This text is not easy to interpret because of Kant's ambiguous use of the term *appearance*. In the first sentence, it means "representation," empirically given as object of inner sense; in the other three sentences, it means "object of representation," empirically distinct from the representation as object of inner sense. This text nevertheless makes quite clear that the succession in outer sense, in the *object of representation*, is accessible only through the succession of *representations* "generated in the mind." However, in the Refutation of Idealism, Kant will also argue that the succession of representations in the mind (*qua* phenomenal object of inner sense) is itself apprehended only under the supposition of a permanent that can be given only in outer sense. With this argument, he claims, "the game played by idealism has been turned against itself" (B276). In this respect also, even if Kant owes to Locke the relation of time to *inner sense*, he nevertheless profoundly transforms the relation of inner sense to *outer sense*: the objects of the second are not simply mirrored by the objects of the first, but both are *jointly* accessed, and when the whole story is told, with *equal immediacy*. This is because one and the same act of the mind (*synthesis speciosa*) generates awareness of self and awareness of outer objects. How much of a refutation of idealism this really is, however, remains dubious.

Locke, the mind is *inwardly* receptive, or receptive to itself, as much as it is *outwardly* receptive, or receptive to things external to it. Witness the terms in which he introduces inner sense as the “other fountain” of our ideas, the first being sensation, which relates us to outward things:

Secondly, the other fountain from which experience furnisheth the understanding with ideas is, —the perception of the operations of our own mind within us, as it is employed about the ideas it has got; —which operations, when the soul comes to reflect on and consider, do furnish the understanding with another set of ideas, which could not be had from things without. And such are *perception, thinking, doubting, believing, reasoning, knowing, willing*, and all the different actings of our own minds; —which we being conscious of, and observing in ourselves, *do from these receive into our understandings as distinct ideas as we do from bodies affecting our senses* [my emphasis]. This source of ideas every man has wholly in himself; *and though it be not sense, as having nothing to do with external objects, yet it is very like it, and might properly enough be called internal sense* [my emphasis].⁵¹

This description of inner sense as an affection of the mind by its own acts, which alone allows it to “reflect” these acts, is confirmed in many other passages. For instance:

Thus the first capacity of human intellect is, —that the mind is fitted to receive the impressions made on it; either through the senses by outward objects, or by its own operations when it reflects on them.

In this part the understanding is merely passive; and whether or not it will have these beginnings, and as it were materials of knowledge, is not in its own power. For the objects of our senses do, many of them, obtrude their particular ideas upon our minds whether we will or not; and the operations of our minds will not let us be without, at least, some obscure notions of them.⁵²

Note that in the earlier quote, the first idea received from internal affection is *perception*. Perception is the act by which the mind applies itself to the ideas it receives.⁵³ When the mind *perceives* the idea received from sensation, it adds to it an idea of reflection, or an idea stemming from inner sense—the idea of perception itself. This probably explains why, when Locke discusses the origin of our idea of time, he no longer views inner sense as a reflection on the *operations* of the mind, but as a reflection on the *ideas* contained in the mind. For him the idea of succession, and then the ideas of duration and time, are derived from the succession of *ideas*, not *operations*, in inner sense. This is surprising: the mind ap-

⁵¹ Ibid., bk. II, chap. i, §4.

⁵² Ibid., bk. II, chap. i, §§24–25.

⁵³ An “act” bordering on passivity. Cf. *Essay*, bk. II, chap. ix, §1: “*Perception*, as it is the first faculty of the mind exercised about our ideas; so it is the first and simplest idea we have from reflection, and is by some called thinking in general. Though thinking, in the propriety of the English tongue, signifies that sort of operation in the mind about its ideas, wherein the mind is active; where it, with some degree of voluntary attention, considers anything. For in bare naked perception, the mind is, for the most part, only passive; and what it perceives, it cannot avoid perceiving.”

pears to be affected by ideas themselves, rather than by its own operations, which makes inner sense harder to distinguish from sensations, that is, from what Kant will later call outer sense. But the difficulty disappears if we recall that the idea itself is an object of *perception*, so that the representation of succession emerges from the succession of these *acts of perception*. Sensations alone—that is, ideas passively received from outside—would not suffice to generate the idea of succession, since, as Locke expressly indicates, the idea of succession could not be derived from ideas to which the act of perception did not apply.⁵⁴

Last, it should be noted that, according to Locke, in this receptivity to its own acts the mind mirrors itself, just as in sensation it mirrors outer objects. This image of the mirror appears explicitly at the end of the passage I just quoted, when Locke stresses that the ideas we receive from the operations of our mind are just as involuntary as the ideas we receive from outward objects through sensation: “These simple ideas, when offered to the mind, the understanding can no more refuse to have, nor alter when they are imprinted, nor blot them out and make new ones itself, than a mirror can refuse, alter, or obliterate the images or ideas which the objects set before it do therein produce.”⁵⁵

Kant shares with Locke the conception of inner sense as receptivity, but he no longer considers the mind as a mirror, either in relation to itself or in relation to objects. The forms or configurations of sensible things, *formae, nempe sensibilium species*, described in the *Inaugural Dissertation* as “laws inherent in our minds” by means of which we coordinate our sense-data, must also be laws by means of which we coordinate the given of *inner* sense, understood as receptivity to oneself. More precisely, *time* holds for inner sense in the same way as *space* and *time* (*via* inner sense) hold for outer sense. Just as the thing in itself that affects me from outside is forever unknowable to me, I who affect myself from within by my own representative act am forever unknowable to me. Something corresponds outside me (i.e., distinct from myself and my representations) to what appears to me as a body in the form of space. Similarly something corresponds in me (as a subject of representations, the very being of these representations, or as Descartes would say, the source of their formal reality) to what appears to me as representations in the form of time. This “something” is known to me only through its phenomenal manifestation, the temporal continuity of my representational acts and their effects.⁵⁶

⁵⁴ *Ibid.*, bk. II, chap. xiv, §4.

⁵⁵ *Ibid.*, bk. II, chap. i, §25.

⁵⁶ The originality of Kant’s position is manifested in the terminological distinctions he devises. Against rationalist metaphysicians, he distinguishes *inner sense* from *apperception*. Inner sense is self-receptivity, “the manner in which the mind is affected through its own activity (namely, through this positing of its representation)” (B68), “the consciousness of what man *undergoes* when he is affected by the play of his own thoughts” (*Anthr.*, §24). Apperception is the consciousness of the act of thinking, the consciousness of the “spontaneity of my thought” (*KrV* B158n), the “consciousness of what man does, [which] belongs to the faculty of thought” (*Anthr.*, §24). But against Locke, Kant also distinguishes *inner sense* from *reflection*. In self-receptivity, the mind is not mirroring itself or its own actions; it perceives or intuits only the way in which it is affected by itself and its actions. For Kant, there is no *reflection* as Locke understood it—no psychological reflection. Kant’s use of the term ‘re-

The complex relation thus established between *outer sense* and *inner sense* finally finds its full-fledged exposition with the *synthesis speciosa* of the B Deduction. Only then are we offered a full clarification of the role in the constitution of appearances played by *external affection* on the one hand, by its *interiorization* in inner sense on the other hand. Kant's explanation is roughly this: our receptivity is constituted in such a way that objects are intuited as *outer* objects only in the form of space. But the form of space is itself intuited only insofar as an act, by which the "manifold of a given cognition is brought to the objective unity of apperception," affects *inner* sense. Thanks to this act the manifold becomes *consciously perceived*, and this occurs only in the form of time. Thus the B Transcendental Deduction leads not only to a rereading of the Transcendental Aesthetic, as I argued earlier, but even to a partial revision of it. In a passage added to section 7 of the Aesthetic in the B edition, Kant stresses the double character of the representations of inner sense. On the one hand, inner sense has no other material than what is given to outer senses; on the other hand, inner sense is nothing but "the manner in which the mind is affected through its own activity (namely, through [the] positing of its representation), and so is affected by itself" (B68). If the acts affecting inner sense by the given of outer sense have an empirical matter (*data* of perception), they are the synthesis of apprehension discussed in section 26 of the Transcendental Deduction. But if these acts are considered in themselves, independently of their empirical matter, they are none other than the *synthesis speciosa* described in section 24, which produces the forms of space and time in which the empirical given is combined.

The Two Aspects of Time in the Synthesis Speciosa

It can still be objected that no solution has been offered to the difficulty concerning the seeming discrepancy between, on the one hand, Kant's examples of *synthesis speciosa* or affection of inner sense by understanding in section 24 and, on the other hand, his two examples of synthesis of apprehension in section 26 of the Transcendental Deduction. In the latter, space and time are treated as two distinct intuitions, the perception of the house being an empirical intuition synthesized *in space*, the perception of freezing an empirical intuition synthesized *in time*. In the former, Kant describes the pure intuition of space and the pure intuition of time as jointly produced, for example, in the act of drawing a line. In following the development of Kant's conception of the forms of sensibility from the *Inaugural Dissertation* to the *Critique*, my main goal was to shed some light on this difficulty. We saw that, already in the *Dissertation*, time seemed to belong to two different contexts: the mathematical synthesis of magnitudes, the phenomenal world and its forms. It seemed that the two aspects of time were properly unified once

flection' alternates between the three following meanings: reflection is the act of relating representations to the unity of consciousness (= the act of forming universal concepts by way of the "merely reflective judgments" of the third *Critique*); it is the act of comparing these concepts (logical reflection, in the "Amphiboly" chapter); lastly, it is the act of relating every representation to its locus in the cognitive power (*transcendental* reflection). See chapter 5, note 22.

time was defined as the form of *inner* sense: for then, *both* the successive character of the intuition of (arithmetical or geometrical) magnitudes, and the temporal succession in which an empirical given (such as the freezing of water) is apprehended, have their source in the affection of the mind by *its own acts*. The difference between the pure and the empirical case, however, is that in the first, the affection is *purely* internal, as the mind intuits in the successive synthesis only *its own act of production*. In the second, on the contrary, the mind intuits, together with its own act, the *outer* empirical given with which this act affects inner sense. In both cases, the intuition of space and the intuition of time are completely dependent on each other. If in pure syntheses the generation of the line is successive and the enumeration quasi-spatial, similarly in empirical syntheses the spatial apprehension of the house is successive and the temporal apprehension of freezing presupposes a spatial configuration of water. Nonetheless, clearly the dependencies are not of the same kind in both cases, because the *temporalities* are not of the same kind. More precisely, the temporal character of the spatial apprehension of the house is of the same kind as the temporal character of the apprehension of a line in pure intuition—in both cases, time is a form of the affection of inner sense by the act of apprehension. But the temporal character of the freezing of water is of a different kind. It seems not to depend on our act of apprehension, but on the (empirical) object itself. Thus we are again faced with our initial problem: how do we account for the two aspects of time—the temporal character of the “pure” *synthesis speciosa*, and the temporal character of the empirical object with which the *synthesis speciosa* affects inner sense?

The answer to this question can be found only when we progress from the general definition of the *synthesis speciosa* to its specifications. Indeed, the difference just stressed between the two aspects of temporality will be at the heart of Kant’s argument in the Second Analogy. More generally, we shall see that there are as many aspects of *synthesis speciosa*, the “effect of understanding on sensibility” or “determination of inner sense by understanding,” as there are intellectual syntheses according to the logical forms of judgment. These different aspects are our next object of investigation.

In the present chapter, my main concern was to show how Kant’s Transcendental Deduction of the Categories, in the B edition, is completed by his reexamination of “the manner in which things are given to us,” that is, the forms of sensibility expounded in the Transcendental Aesthetic. Such a reexamination is the necessary counterpart to Kant’s characterization of the logical form of judgments as “the objective unity of the apperception of the concepts which they contain” in section 19 of the Deduction. For by arguing that our spatiotemporal forms of sensibility are generated by the *synthesis speciosa* or “affection of inner sense by understanding,” Kant provides the universal framework (space and time as qualitative unity, preceding and conditioning all unity according to the categories)⁵⁷

⁵⁷ In §15, Kant stresses that one of the components of his notion of combination is the notion of *unity*. And he goes on: “The representation of this unity cannot *result* from the combination, but makes possible the concept of combination in that it is added to the manifold. This unity, which precedes

within which empirical knowledge of objects may occur. How singular objects are apprehended in such a framework; how this apprehension occurs according to correlations generated so that objects can be recognized under concepts combined according to the logical forms of the *Vermögen zu urteilen*; how they are ultimately thought under the categories, “concepts of an object in general, insofar as the intuition of that object is considered as determined with respect to a logical function of judgment”: the answer to these questions is not given in the Transcendental Deduction, but in the Schematism of pure Concepts of the Understanding and the System of Principles. There, the relation of *synthesis intellectialis* and *synthesis speciosa*, forms of reflection and forms of synthesis, *Vermögen zu urteilen* and *Urteilskraft*, finds its detailed elucidation.

a priori all concepts of the combination, is not the category of unity; for all categories are grounded on logical functions of judgment, but in these there is already combination, and thus unity of given concepts. Thus the category presupposes combination. We must seek this unity (as qualitative) even higher, i.e. in that which is itself the ground of the unity of various concepts in judgments, and thus of the possibility of understanding even in its logical use” (B131). This “qualitative unity” is no doubt the transcendental unity of apperception. But the transcendental unity of apperception generates the *a priori* representation of a complete unity of our representations, whose intuitive form is the unity of space and time.