

# AN INTERPRETATION AND DEFENSE OF THE 'PROOF' OF THE FIRST ANALOGY IN KANT'S *CRITIQUE OF PURE REASON*

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This paper is a close examination, reconstruction, and defense of part of Kant's proof of the principle of the permanence of substance in the First Analogy. The principle, as stated in the B-edition, is this: 'In all change of appearances substance persists, and its quantum is neither increased nor diminished in nature'. We will examine only the first part of this principle—that substance persists through all change of appearances.<sup>1</sup>

Though this limits our task considerably, a proper analysis of just that part has proven, and I do not wish to contend this, an exceedingly difficult task. So although this paper is mainly sympathetic to the argument for the First Analogy, the complexity of the issues and the almost infinite difficulties that it raises make it impossible for me to claim that it proves, in any proper sense of that word, the validity of argument for the First Analogy. I do think, however, that it provides some plausible suggestions for solving some important problems or confusions in the argument. In particular, I try to solve what I consider are two very important questions: (1) 'how are we to understand the claim that time does not change and what role does that claim play in the proof?', and (2) 'why is it the case that the *only* way to represent time is through the concept of substance?' By solving these questions, or at least by getting clear on what they demand of the proof, we will advance considerably in understanding the argument of the First Analogy.<sup>2</sup> The larger task of this paper is to contribute towards a defense of Kant's claim that the existence of something permanent in appearances, of which all appearances must be conceived as particular states, is one of the necessary conditions for the possibility of determining temporal relations among objects of experience.

## The Proof

Commentators often divide the proof of the first part of the principle of the First Analogy into six basic claims or steps (the paragraph at B225).<sup>3</sup> Though I think

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<sup>1</sup> This does not oblige us to take a determinate view of the relationship between the first and the second part of the principle—i.e. we do not have to decide whether the second part follows analytically from the first or whether we need additional arguments to justify it. What is clear is that we cannot get to the latter without first getting clear about the former.

<sup>2</sup> Some preliminary notes. Because I am mainly concerned with finding a philosophically valuable reading of the First Analogy, I shall touch on its relation to other aspects of the *Critique* only when necessary for this specific end. In some steps of the proof I shall consider various ways of interpreting and defending Kant's statements. Most of these suggestions are at least fairly supported by the text, so my criteria for their success or failure is mostly based on purely philosophical considerations. The main source used here is Allison's treatment of the First Analogy in his book *Kant's Transcendental Idealism*. This text is important because it contains one of the most detailed readings of the First Analogy and Allison is basically convinced of the success of the argument, and so responds directly to some of the most important objections that have been raised against it. One of the tasks of this paper is to evaluate the success of Allison's responses to some of the most important criticisms of the proof of the First Analogy.

<sup>3</sup> This paragraph is presented under the heading 'Proof'. With some exceptions (e.g., Ewing), most commentators take it as the main outline of what is essentially a single proof (e.g., Gardner, Roedel, and Allison). I proceed under that assumption. Whether it is a fruitful one depends on whether it allows us to construct a good argument, which I think it does.

that division becomes somewhat artificial towards the end (in step 4 and 5), I will initially follow it by commenting on each step separately.

***All appearances are in time; and in it alone, as substratum (as permanent form of inner intuition), can either coexistence or succession be represented.***

Step (1) reaffirms the results of the Aesthetic. In the Aesthetic Kant argued that time, since it is the form and thus a necessary condition of inner-sense, is the formal a priori condition of *all* appearances. It follows that only in time can the succession or coexistence—the temporal relations—of appearances be represented. Since all our representations are in such temporal relations, time is the permanent substratum ('permanent form of inner intuition') of all our representations.

(1) seems to me uncontroversial, especially if we accept some of the results of the Aesthetic—especially that, because time is the a priori form of inner intuition, all appearances are in time. Indeed, most commentators do not think (1) is problematic. We shall therefore accept this claim as a valid result of the Aesthetic's treatment of time.

***(a) Thus the time in which all change of appearances has to be thought remains and does not change; (b) for succession or coexistence can only be represented in it as its determination.***

The claim that time remains and does not change may strike us as either obviously true or deeply confused. Accordingly, the main difficulty in interpreting (2a) lies not so much in determining whether it is true or false, as in determining whether it says something intelligible, whether it is a meaningful proposition. Some commentators think that some work must be done to make (2a) intelligible (e.g., Gardner); others think that, in the way the proof requires us to take (2a), it is pretty much unintelligible (e.g., Caird and Ewing). I do not agree with this last party. Yet it seems to me that the problems with (2a) are more serious than some of the more sympathetic commentators seem to think.

One way to try to make sense of the claim that 'time remains and does not change' is by trying to figure out why Kant makes that statement. From (2b) we can see that the implicit justification for that statement is, roughly, as follows. Succession, and hence change, can only be represented as determinations of time (by (1)). Thus change presupposes time, i.e., change can only take place within a temporal framework. Now time itself cannot change because only in time can something change, thus for time itself to change there would have to be another time for it to change in, which is impossible because (by the 'General Principle' of the Analogies [see A-edition]) there is only one time. It follows that time is permanent, that is, 'remains and does not change'.

This seems like a fine argument. It becomes less clear, however, if we examine the statement ‘time is permanent’ from another perspective. Consider this question: is the proposition ‘time remains and does not change’ a true proposition or is it rather the case that its negation is unintelligible? This question is important because if the concept of ‘permanence’ shifts in meaning when it is used in propositions to denote a characteristic of time (e.g., in the proposition, ‘time is permanent’) to when it is used to denote a characteristic of substance (e.g., in the proposition, ‘substance is permanent’), then it seems that the move—required by the proof according to some interpretations (though often it is not explicitly recognized)—from the ‘permanence’ of time to the ‘permanence’ of substance becomes, to say the least, problematic.<sup>4</sup> Ewing, for example, takes this problem as a definite objection against the proof:<sup>5</sup>

It is true that we cannot use ‘change’ of time in the sense in which we use it of things in time, but neither can we use ‘permanence’ in that sense of time. But, if we cannot apply ‘permanence’ to time in the same sense as that in which we apply it to phenomena, the argument from the permanence of time to the permanence of phenomena is undermined. (SC, 153)

Unlike Ewing, I do not think this is a definite objection. To take it as such we have to assume at least two things: (i) that the structure of the proof requires that the concept of ‘permanence’ should have the same meaning when used to denote a property of time and when used to denote a property of appearances or substance, and (ii) that we cannot find such a meaning for ‘permanent’ (i.e., one that allows us to state meaningful propositions in both cases). But Ewing does not show that both assumptions are necessarily true. If we assume (i), we can overcome the paradox by rejecting (ii), i.e., by finding a meaning for ‘permanence’ that does not shift significantly from its application to time to its application to substance (while preserving the meaningfulness of the sentences in both applications). Until we give good reasons to think that this cannot be done, assuming (i) is not a definite objection to Kant’s argument. If we assume (ii)—if we hold, like Ewing, that it is not possible to construct such a concept—then we can reject (i) if we can show that the structure of the proof does not depend on the move from the ‘permanence’ of time to the ‘permanence’ of substance. Again, until we show that this can’t be done, assuming (ii) is not a definite objection.<sup>6</sup>

That said, we have hardly begun to answer Ewing’s objection. Given the apparent structure of the argument, the most natural way to try to solve the problem is by assuming (i) and rejecting (ii). Yet trying to find a suitable meaning for the concept of ‘permanence’ is not an easy task. Ordinary uses of the concept ‘permanent’, which usually name a characteristic of appearances or objects in space, will not be adequate—i.e., will not result in meaningful propositions—

<sup>4</sup> This move seems to be required by the coming steps of the proof. Later I shall try to give an alternative reading.

<sup>5</sup> This is one reason why he thinks that the best argument for the principle is found in B229, B231-2. See his *Short Commentary on the Critique of Pure Reason* (154).

<sup>6</sup> We could, of course, simply reject both assumptions. I will later show why that is neither possible nor necessary.

when used to denote a supposed characteristic of time. For example, when we say things like 'x persists' or 'x remains and does not change', we usually mean something like 'x remains over time' or 'x does not change over time'. Conversely, when we say things like 'x changes' we usually mean something like 'x alters over time' (e.g., when we are talking about the corruption of a certain body). If statements about permanence or change are taken in those ways, it would be inappropriate, confused, to substitute, in those propositions, 'time' for 'x'. If we do so we are left with claims like, 'time remains over time' or 'time alters over time'. If we interpret (2) in this way, the trouble with Kant's claim is not that time might change (in other words, we are *not* objecting, as we often do in discussions, by asserting the truth of the negation of his claim); the trouble is that the proposition 'time changes' is not a contradiction or an empirical falsehood, but seems to be, properly speaking, a meaningless proposition. And if that is the case, then its negation—'time does not change'—is also meaningless, unintelligible.<sup>7</sup>

To generalize somewhat: 'persists' is ordinarily used as a temporal concept and temporal concepts apply (by referring to properties of something, like in statements of the form 'x persists' or 'x changes'), truly or falsely, not to time itself but only to things in time. Thus if we wish to make the phrase 'time persists' intelligible, we have to stipulate a new use for the word 'persists', and make explicit its relation to the old concept and its application to appearances.

This then is the problem that we want to solve: (a) we need a concept of 'permanence' that can make the statement 'time is permanent' (= 'time does not change') a truth-valued proposition, i.e., something of which we can say that it is 'true' or 'false'; and (b) that concept must, essentially, keep the same meaning when applied to time as when applied to substance. In response to Craig, Allison recognizes a very similar problem. This is his solution:

The claim that time is unchangeable or permanent is really equivalent to the claim that it retains its identity as one and the same time (temporal framework) through all change. The most that Kant can be charged with here is a lack of clarity...Moreover...this is precisely the sense in which substance is said to be unchangeable or permanent. (KTI, 202)

Allison's suggestion is to take Kant's statement 'time is permanent' to mean 'time retains its identity as one and the same time through all change'. The latter statement, he thinks, is a perfectly meaningful (and true) proposition (condition (a)). In addition, he suggests that this is precisely the way in which we must then take the sense of 'permanent' as it applies to substance ('substance retains its identity as one and the same substance through all change [in substance]') (condition (b)). This, in turn, lets us 'link substance directly to time'.

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<sup>7</sup> If the proposition 'time changes' is meaningless, then so is the proposition 'time does not change' (the negation of a meaningless statement is also meaningless).

It is not clear if this would satisfy anyone with a worry such as Ewing's; and Allison does not develop his suggestion in more detail. Is the proposition 'time retains its identity through change' clearer than just 'time does not change'? Consider the phrase 'retains its identity'. Usually to say of anything that it retains its identity is either: (i) a tautology (everything is identical with itself), or (ii) an assertion involving a temporal claim ('x retains its identity over time'). It is clear that Allison does not want to make a tautological statement, for, among other things, that kind of tautological statement about time only attributes to time a property that is also a property everything else. So we must take his statement as a form of (ii). Now, when we say of anything that 'it *retains* its identity', we usually mean that 'it retains its identity over time' ('x retains y' means 'x keeps y over time', so if 'x' stands for 'time' and 'y' for 'identity', we have, 'time keeps its identity over time'). But is it not then obvious that to say 'time retains its identity over time' is just another way of saying 'time does not change'? If so, then anyone who rejected the claim 'time does not change' will most certainly reject the claim that 'time retains its identity...'. The claim that something retains its identity is very close to the claim that something does not change (it even seems to implicitly presuppose it<sup>8</sup>), which gave rise to the same problem (i.e., the obscurity of the claim 'time does not change') this suggestion is supposed to solve. For this reason, it seems to me that Allison's suggestion would not entirely satisfy someone, like Ewing, who thinks that the claim 'time changes' is meaningless.<sup>9</sup>

A more promising way to respond to Ewing is to assume (ii) (which the above discussion seems to oblige us to do) and reject (i). (i) says that the claim 'there is something permanent in appearances' somehow depends on the claim that 'time is permanent', and that 'permanent' has the same sense in both propositions. But the problem, suggested by our previous discussion, is that all that seems to follow from the claim that all change presupposes time, is that the concept of 'change' does not apply to time itself. Now, this negative characteristic of time—that the concept of 'change' cannot be applied to it—plus the more important positive characteristic—(proved at 1) that all change happens in time—is all we need to justify the claim that what represents time cannot change. Let me put it somewhat differently. So far we have established two characteristics of time: (a) it is that in which change happens, it is the underlying substratum of appearances, and (b) the notion of succession, hence of change, does not apply to it. These two properties, in combination with the fact (which we will try to establish in step (4)) that what represents time must be found in appearances, is all we need to establish the permanence of that which represents time. So we need not take the proof to depend on the move from permanence (unchangeableness) of time to the permanence of substance in any conventional

<sup>8</sup> If we say of x that it retains its identity it seems we presuppose that it does not change. The traditional concept of substance is not a counter example, for to say of substance that it retains its identity is to say that it does not change, only its particular configurations or states change, states which do not, in general, retain their identity.

<sup>9</sup> [There might be another solution along these lines. 'Time persists' means something like, 'the objective time-series does not change through all change of the subjective time-series'. But here we still have the phrase, 'the objective time series does not change'. Or: 'the objective time-series *retains its identity* through all alterations in the subjective time series'. Or: 'the objective time-series is identical with itself through all changes in the subjective time series'. ]

sense. This at least is my proposal; whether it is a good one, and so whether we can fully overcome Ewing's objection, will have to wait till step (4).

***Now time itself cannot be perceived***

This statement is a direct consequence of the Aesthetic. As Allison notes, the Aesthetic shows that 'time is a form or mode of representing objects rather than itself an object that is represented'. Thus we cannot perceive time itself. We perceive things as in time, existing in a temporal framework. Thus, if we accept the treatment of time in the Aesthetic, (3) is clearly a valid premise.<sup>10</sup>

***(a) Consequently there must be found in the objects of perception, that is, in the appearances, the substratum which represents time in general; (b) and all change and coexistence must, in being apprehended, be perceived in this substratum, and through relation of the appearances to it.***

As we have seen, only in time can succession and coexistence, essential elements of our experience, be represented. We can put the same point thus: all change of appearances has to be thought in time; so we need a representation of time, a way to think of objects as in time. We need, somehow, to represent time for the determination of temporal relations of appearances to be possible. But time itself cannot be perceived. From this Kant jumps somewhat quickly to the conclusion that there must therefore be found 'in the objects of perception' the substratum which represents time (4a). In the next paragraph he gives a brief (and incomplete) justification for this move:

Our apprehension [subjective] of the manifold of appearances is always successive, and is therefore always changing. Through it alone we can never determine whether this manifold, as object of experience, is coexistent or in sequence' (B225).

This passage is often explained through a distinction between an objective and a subjective time-series. The subjective time-series is always successive, i.e., it only gives us a series of successive perceptual moments and by itself tells us nothing of the relation or connection between the objects of these perceptions. To take appearances as temporally related in certain determinate ways we need to conceive them as existing in an objective time-series. Now from the subjective time-series itself we cannot infer the objective time-series. For example, suppose the subjective time-series gives us a series of perceptions A at T(1), B at T(2), and C at T(3) (A-B-C). This, by itself, does not tell us whether C necessarily follows B and B necessarily follows A or whether the series could just as well have had another temporal sequence, say, C before A, without thereby altering

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<sup>10</sup> This is not to say that this claim is completely uncontroversial. Forster, for example, thinks it is quite unclear (Lecture Notes, 2001). Indeed, one can argue, for example, that the concept of time cannot be separated from our perceptions of change, so that to say that time itself cannot be perceived would be absurd, for perception, on this view, is inherent to the concept of time. Objections such as this one, however, seem to me to be objections against some aspects of the Aesthetic's treatment of time, which we are here, for obvious reasons, constrained to assume as essentially correct.

the object or event that the perceptual representations stand for. If the temporal sequence A-B-C represents a boat going downstream, altering the order to C-B-A alters the event itself, it now represent a boat going upstream. On the other hand, if A, B, and C stand for representations of parts of a house (as perceptions of the front, the side, and the back), altering the order of the sequence does not alter the object itself (we still have a representation of a house, irregardless of the order in which we perceive each part). In the first case the perceptions must necessarily follow that order for the event to be possible; in the second case the order is irrelevant. This is just to say that in the first case A-B-C follow each other objectively in time; whereas in the second case A-B-C coexist with each other in time (thus they can be apprehended in a different order). But the succession of our representations, by itself, does not determine whether the objects they are representations of stand in relation of succession or coexistence. It follows that we need 'something else' to be able to take objects themselves as either successive or coexistent by placing our representations of them in the objective time-series.

So far, it seems to me, this is a valid argument.<sup>11</sup> Now: what is this 'something else' that we need to be able to represent the objective time-series, and thus to be able to determine the temporal relations of appearances? We know Kant's answer: to put it briefly, we need a permanent substratum in appearances, of which change and coexistence are ways in which it exists:

For such determination we require an underlying ground which exists at all times, that is, something abiding and permanent, of which all change and coexistence are only so many ways (modes of time) in which the permanent exists (B226).

Now, this raises a very difficult question: why does it follow, from the claim that subjective apprehension does not give us anything that can represent time (or the objective time-series), that what represents time must be 'found in the objects of perception' as substance? In the proof itself Kant makes this move but neither explains nor justifies it.<sup>12</sup> One natural way to take it is that the move results from

<sup>11</sup> [Why do we need to represent time? In order to think or experience things as coexistent or successive, we must place them, represent them, in a objective time-series, which is not the immediate, subjective time-series. So we ascribe certain appearances to certain points in the objective time-series (in ways that are different, in some cases, from that immediately given by direct, subjective perception). But to do this we need to represent this objective time-series. But we cannot represent time by itself; therefore...]

<sup>12</sup> Before I proceed to try to explain this, I must say something about some exegetical problems that commonly arises at this point. (i) How much does Kant think his argument establishes at stage (4)? And (ii) How much can we actually accept Kant's argument establishes at stage (4), regardless of what Kant thought? Various answers have been given, implicitly and explicitly, to this problem. Allison, although he does not say so explicitly, seems to think that the answer to both questions is the same: (4) establishes the necessity, to represent succession and coexistence, of a *relatively* permanent perceivable object. In other words, there must always be something permanent through which the temporality of objects can be thought, but we have not established so far if that something must itself endure through all times, though it must certainly endure while we use it to represent time. If this is taken as a response to (ii), I agree with Allison: it seems Kant gives no argument, so far, to establish the absolute permanence of substance. For if taken as an argument of the absolute permanence of substance, it is not clear why the 'something' which represents time must always be the same. Kant refers to the 'something else' that is needed to represent the objective time-series as '*the* underlying something', but it seems that all that follows from his argument is that at each brief duration we need '*an* underlying something'. So it is not clear why that 'underlying something' which we use to represent time during, say, event X must be the same we use to represent time during event Y, or why it cannot change when it is no longer used to represent time. (That which represents time can certainly not change, for then it is something that changes in time, and we need another representation of time for it to change in. The worry is that that which we use to represent time at some point, changes at another point when we are no longer using it to represent time.)

elimination of possibilities—somewhat as follows. 'The unperceivability of time makes it necessary to presuppose some perceptually accessible model for time itself as a condition of the possibility of determining the temporal relations of appearances'.<sup>13</sup> Subjective apprehension does not provide us with this model, nor does the subjective time series. It follows (because there is no other possibility) that what represents time must be found in outside appearances themselves.

Let us for a moment assume that this is true and proceed to see why this is supposed to establish the existence of substance. We said that what represents time must somehow embody the essential properties of time (by 'essential' I mean 'necessary for the existence of temporal objects'). In step (2) we concluded by characterizing those properties thus: (i) all change or alteration must happen in it as its substratum and must be thought as determinations of it, and (ii) the notion of 'change' cannot be applied to it.<sup>14</sup> Now, if we assume that what represents time lies in spatial appearances, it follows that there is in appearances a permanent substratum in which all change happens and of which all change must be thought as its determinations. Now, this substratum of change must be permanent for the following reason.<sup>15</sup> The substratum represents time. We can only think of change if we think of it as in this substratum. Now, to think of the change of the substratum itself we need something else to represent time, for the representation of all change presupposes the representation of time. But the substratum is the representation of time, therefore we would have representations of two distinct time-series, which is impossible (I show why in (6)). But we know that the substratum is the representation of time. Therefore we have to reject the other premise—that the substratum which represents time changes.]

Although this last argument seems fine, the argument for substance by elimination of possibilities might leave us with the sense that we have not found other means of representing or accounting for the determination of objective time-relations merely because of lack of imagination, which hardly establishes necessity. In other words, we might hold that the above clearly shows that *one* way to place appearances in the objective time-series is by thinking or conceiving them as particular accidents or determinations of a permanent substratum of

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However, it is not clear to me whether Allison's and Kant's positions coincide. For example, in the passage just quoted, which appears as an elaboration of (4), Kant says that what we require is 'an underlying ground which *exists* at *all* times' (my emphasis). This suggests that he thought (4) establishes absolute permanence. In any case, most commentators suggest that this argument justifies, if anything, only relative permanence. Allison agrees; but also thinks that Kant gives us other arguments for the permanence of substance (which we will examine in (6)). With the material we have thus far, I see no option but to follow Allison's suggestion. Yet we must keep in mind that this is a somewhat liberal reconstruction of the argument, and it is not clear whether it agrees with Kant's intentions. Whether or not this is correct, proceeding as if it is will turn out to be quite harmless. For in (6) I will use much of the material of this part to try to explain and justify Kant's move from relative to absolute permanence. So, instead of saying, that absolute permanence has not been proven at this point, I would say instead that most of the necessary material is here, but has not yet been made explicit.

<sup>13</sup> Allison, 203.

<sup>14</sup> Appearances either change or do not change. That only which does not change can serve as a representation of time because that which changes requires something in which it can change.

<sup>15</sup> What follows is developed in more detail in step (6).

appearances. It follows that *one* model for the representation of time is provided by the concept of substance. But why does it follow that this is the basic and *necessary* model (which we need to hold to sustain the claim that substance is necessary for the determination of temporal relations)? Why do we not have other means of representing or constructing the objective time-series, or of determining whether objects are in succession or coexistence? In other words, can we not account for the ‘something else’ that is needed to construct the objective time-series, or to conceive of appearances as temporally related, in some other way than by positing substance?

Merely from what we have said so far, it seems we can. If we are to think A-B as temporally related in a determinate way, then we need to think more than just that they succeed one another in our apprehension of them. We need to place them or take them as existing in an objective time-series. But do we need substance to do that? Let us ask another question: how do we ordinarily learn to take certain appearances as related objectively in succession or coexistence even though we immediately perceive them only in succession? Here’s a story. We learn that the fact that we saw, say, first the front of the house and then the back does not mean that the front comes, objectively, before the back; for we see that we can re-construct the experience by seeing first the back and then the front. This tells us that the temporal order between a representation A and B depends on *our will*. Adding a few other factors, this suggests to us that the best way to organize this experience is to say that A and B coexist. Take a different perception, that of a ship going downstream. When experiencing an event of that kind, we quickly realize that, in a certain sense, the succession of our representations does not depend on our will, on our intentional action. We therefore assume that such succession is due to the world, that it is objective. In this way we begin to create an objective time series—a kind of logical construction by means of which we organize our experience—and begin to posit objects in this time-series in ways that often differ from the temporal relations of our representations of them.

Although this is only a rough story, I think it is good enough to at least suggest that, from what we have said, it is not entirely clear that the ‘something else’ that is needed to represent objects as temporally related or as existing in an objective time-series is, necessarily, the notion of substance. We can put the problem thus: we have not shown why we need anything else (mainly, substance) to make these empirically based time-determinations.

How can we respond to this? The empirical time-determination is based on the assumption that we can construct the objective time-series (that we can take appearances as temporally related in certain determinate ways) just from the subjective time-series and some other facts of experience.<sup>16</sup> One way

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<sup>16</sup> One cannot counter the objection fully by saying things like ‘we experience objects as successive or coexistent, so that what is necessary for such an experience must be presupposed for the experience to be possible’. The problem is that we do not immediately perceive objects as successive or coexistent. We do not perceive the front of the house as coexistent

commentators sympathetic to Kant try to counter this objection is by claiming that, somehow, substance is necessary for experience itself, and so that we need substance to even be capable of empirically constructing an objective time-series.<sup>17</sup> By itself, this hardly amounts to a response.<sup>18</sup> To establish the necessity of substance, we need to *show*—and this is certainly *not* obvious—why empirical time-determination itself presupposes the notion of substance. We have to show why judgments of time determinations such as the ones made above require the notion of substance.

Given the task, we might be tempted to think that the Refutation of Idealism provides the solution. Commentators are divided on this issue. Some think the First Analogy presupposes the Refutation of Idealism (e.g., Guyer); others think the relation is the other way around (e.g., Roedl and Allison). I think the latter group is correct. I do not here have time to go into the details of the debate. I will only give one reason. One of the first premises of the proof of the Refutation is that 'all determination of time presupposes something permanent in perception' (B275). This claim seems to clearly presuppose the validity of the First Analogy. If so, it would be hopeless to seek for the help we need in the Refutation of Idealism.

In any case, there is a more promising solution. The key is found in Kant's statement (4b) that all coexistence and succession *must* be conceived as determinations of substance. If this is true then our empirical temporal judgments presuppose substance because in making such judgments I'm necessarily conceiving objects as either successive or coexistent and thus are presupposing whatever is necessary to make that conception possible. Consider the case of coexistence (in step (5) we will deal with succession). What makes possible the very conceiving of two appearances, given at different moments, as coexistent? Clearly, this question is more essential, and its results are presupposed by, any empirical time determination of a particular case of coexistence. At this point the argument becomes clear: to be able to think of two appearances as coexistent, when we perceive them at different times, we *have* to think them as persisting. (To think them as persisting *is* to place them in the objective time-series.) This way of conceiving of the existence of appearances underlies the empirical construction of any objective time-series, for to be able to think of a set of given appearances (whatever is the empirical reason for doing so) as coexistent, in cases when we perceive them at different times, we have to conceive of these appearances as enduring, over, at least, all these different times. But this means that to make this time-determination we are constrained to take our ever fleeting representations as representations of enduring objects. Without conceiving of our

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with the back of the house, we posit or assume it. The problem can thus be stated in this way: what do we have to assume about appearances to be able to make those kinds of judgments?

<sup>17</sup> See, for example, Gardner.

<sup>18</sup> ['Time' is our form of inner intuition. But 'time' as used in 'the objective time-series', cannot be our form of inner intuition, for our subjective time-series is not the same as the objective time-series. It follows that what is true of the former is not, without further argument, necessarily true of the latter. It follows that it is not clear why we need to represent an objective time-series to take objects as temporal in the Kantian sense.]

representations in this way we could not think of them as necessarily standing for appearances that coexist.<sup>19</sup>

**(a) But the substratum of all that is real, that is, of all that belongs to the existence of things, is substance; (b) and all that belongs to existence can be thought only as a determination of substance.**

(5a) just gives a name to the necessary substratum of appearances which Kant takes to have proven in the previous steps. The interesting claim is (5b): 'all that belongs to existence can be thought only as a determination of substance'. By 'all that belongs to existence', Allison suggests that Kant wants to refer to 'changing appearances'. Accordingly, Allison thinks that the claim here is that all change of appearances must be conceived as alterations in substance. This fits well our previous discussion. We have shown that substance is needed to conceive of things as coexistent; now we have to show that it is needed to conceive alterations in appearances, to think of the existence of objects which change.

Allison provides a good argument to support this claim. What follows is a fairly faithful reconstruction of his argument. We cannot infer from a single observation that a change of a certain sort has taken place. Any experience of a change requires at least two successive observations and 'the noticing of some difference between what is observed in each case'. But this is not enough, for we could be having successive observations of coexisting state of affairs. Thus to experience a genuine replacement change,

I am constrained to refer the successive states of affairs to some common subject and to view this occurrence as an alteration in this subject. Only by so doing can I represent through my successive perceptions or observations the replacement of one state of affairs or determinations by its contrary. The crucial point here...is that the assignment of the successively represented state of affairs to an enduring substratum (as its successive states) functions as the rule through which we think of replacement change. It can also be described as the form of the thought of a replacement change in the sense that to think such a change (as an object of possible experience) is just to connect ones perceptions according to the rule. (KTI, 205)

The essential point is simple: to experience alteration in the object, I must connect two successive perceptions by conceiving them as distinct states of a persisting subject.<sup>20</sup> If I do not conceive them as distinct alterations of the same subject I have no reason to think that they do not coexist, and so have no reason

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<sup>19</sup> [This seems to be a problem: suppose we take A and B as coexisting, but are mistaken. It would seem to follow from this argument that there is persistence where in fact there is none. That we must conceive of appearances in this way seems then to say nothing of how they really are. ]

<sup>20</sup> [If we think of replacement change (the judgment of) as being based on family resemblance (through properties such as spatial position, etc) then this argument might prove quite problematic. Unfortunately, I do not have space in this essay to address that apparently serious objection.]

to think that they objectively succeed each other. For any two appearances that are not different states of the same subject may coexist and the fact that they succeed each other in our representations of them tells us nothing of their objective temporal relation. Thus a necessary condition for conceiving something as objectively succeeding another thing is that I do not conceive them as coexistent. But the only way in which I can think that two appearances are necessarily not coexistent is to conceive them as different states of a common subject (for to assert that two different states of a common subject coexist is a contradiction). It follows that to experience alteration I must take the existence of the successive state of affairs as states or alterations of a common subject.

At this point, however, a serious problem, in relation to both this argument and the one at the end of (5), is beginning to become apparent. It seems that all we have shown is that we must *conceive* of the existence of appearances as particular states of an underlying substance, but why does this show anything else than how we must look at the world? How does this show that, in fact, in all change of appearance substance persists, and not *only* that we must *assume* that in all change of appearance substance persists? Allison, for example, thinks that because to think of change of an object is just to connect our distinct representations of it according to the rule that they are distinct states of an underlying substance, this makes it into a transcendental condition for the experience of replacement change. But *what* is the transcendental condition? Clearly, all we have shown is that the transcendental condition is only the constraint to *conceive* of the existence of appearances as particular states of substance; we have not shown that, *in fact*, appearances are particular states of substance (in other words, we have shown nothing, it seems, about the ontology of the world). How can we collapse this distinction? I will give this answer: (i) there cannot be absolute change in *our* world (hence all change must be taken in the above form) because we cannot experience it. If we cannot *conceive* of absolute change then absolute change cannot be something we experience and thus it cannot be an ontological part or phenomenon of *our* world. That which we cannot experience cannot be part of our world, for a necessary condition for something to be part of our world is that we can, somehow, even if only indirectly, experience it. We must now try to prove (i).

***Consequently the permanent, in relation to which alone all time relations of appearances can be determined, is substance in the [field of] appearance, and as the substrate of all change remains ever the same.***

So far we have taken Kant's proof to have established that we need a relatively permanent substratum to conceive of appearances as in certain determinate temporal relations (hence to think of temporal objects). Now we have to examine why Kant thinks that this substratum must be absolutely permanent. This is not an easy task, and it is clear that we do not find that argument in statement (6). (6) simply asserts that that which is the substratum of all change remains ever the same. Now, if we had shown that there is a substrate of all change, then of

course that substrate could not change, for we would then need another substrate in which it could change (by (5)), from which it follows that the substrate would not be the substrate of all change, for it cannot be the substrate of its own change. But so far, it seems, we have only established that we need (to think of) enduring entities which function as the substrata of particular changes.

The question, then, is this: can that substrate which represents time itself change? We said at the end of (5) that what we need is an epistemic argument—that is, one that answers that question in the negative by showing that such a phenomenon is not an object of possible experience. Now, it seems to me that, if we accept the validity of our previous results (steps (1) to (5)), the argument for the absolute permanence of substance follows smoothly. I think that we can construct two arguments.

*First argument (B231).*<sup>21</sup> Assume that substance—the permanent in appearance which serves as the substrate of change and as the representation of time—could itself change. By (5) we know that to conceive and experience any replacement of one state of affairs by its contrary we have to link both states of affairs to a common subject, of which they have to be taken as different states: ‘arising and perishing per se cannot be a possible perception unless it concerns merely a determination of that which persists’ (B231). But in the case of a change of substance those conditions would not hold, for substance is not a state of another more fundamental permanent. It follows that either we were mistaken in what we took to be the permanent and it is in fact just a state of a more fundamental permanent, or that the permanent substratum of change cannot itself change.

*Second argument ( B231-2).* Substance is the ‘substratum of all determinations of time’. Assume that the substratum of time determination changes. It follows (by (2)) that there must be another substratum of time determination for it to change in. But we would then have two representations of time, which is just to say that we would have to distinct ways in which to make the temporal determinations of objects (in other words, we would have two objective time-series, hence two ways in which objects would be temporally related), which is impossible, for this would remove the ‘sole condition of the empirical unity of time’ (assumed in (2)).

These arguments show that it is impossible to experience absolute substantial change. It seems to me that they are valid arguments. However, they rest heavily on the validity of *all* previous steps. Accordingly, the decisive discussion for the First Analogy lies in steps (1)-(5). I have attempted to tackle some of the most important issues surrounding those sections, and hope to have contributed to a

<sup>21</sup> I have borrowed from Allison (208-9) in both of these arguments, but have also made significant changes. More importantly, I have tried to follow Kant carefully in B231-2.

good degree of acceptance of Kant's argument. Although it is evident that there are some problems I did not address and that some of the issues I mentioned required a more detailed analysis—especially the issue of how much ontological weight Kant attributes to substance—I hope that this essay shows that the First Analogy is a document of much philosophical, not only historical, value.

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