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## Saving the Substratum: Interpreting Kant's First Analogy

### Abstract

Kant's transcendental idealism requires that experience be both spatial and temporal. In the First Analogy of Experience, he argues that in order for experience in time to be possible, there must be something permanent in our experience. This something permanent is substance: a bearer of properties that persists and conserves its quantity throughout any empirical change. The trajectory of Kant's argument in the First Analogy is not entirely clear and this has left room for multiple interpretations. In this paper, I introduce the First Analogy and three suggested interpretations of its argument. I defend the so-called substratum interpretation, associated with Henry Allison and Andrew Ward, from philosophical objections raised by Paul Guyer. In order to unify all of experience within a singular time-frame, we must presuppose a persistent substratum through which all experiences can be related to one another.

# Saving the Substratum: Interpreting Kant's First Analogy

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## Abstract

Kant's transcendental idealism requires that experience be both spatial and temporal. In the First Analogy of Experience, he argues that in order for experience in time to be possible, there must be something permanent in our experience. This something permanent is substance: a bearer of properties that persists and conserves its quantity throughout any empirical change. The trajectory of Kant's argument in the First Analogy is not entirely clear and this has left room for multiple interpretations. In this paper, I introduce the First Analogy and three suggested interpretations of its argument. I defend the so-called substratum interpretation, associated with Henry Allison and Andrew Ward, from philosophical objections raised by Paul Guyer. In order to unify all of experience within a singular time-frame, we must presuppose a persistent substratum through which all experiences can be related to one another.

Kant's *Critique of Pure Reason* is a profoundly ambitious defense of empirical realism. While the Refutation of Idealism represents this defense in its pure distilled form, many of the tools that he will draw upon are forged in the Analogies of Experience. We cannot understand this ultimate proof without a crystal clear conception of the Analogies that precede it. With this in mind, I present an in-depth discussion of the Analogies of Experience and their function within Kant's system, focusing in particular on the First Analogy. I then turn to the critical interpretations of Kant's argument in the First Analogy. I defend the substratum interpretation, advocated by Henry Allison and Andrew Ward, against several serious objections raised by Paul Guyer.<sup>1</sup>

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<sup>1</sup> See Andrew Ward "Kant's First Analogy of Experience," *Kant-Studien: Philosophische Zeitschrift der Kant-Gesellschaft* 92, no. 4 (2001): 387-406; Henry Allison, *Kant's Transcendental Idealism* (New Haven: Yale University Press, 2004), 236-44; Paul Guyer, *Kant and the Claims of Knowledge* (New York: Cambridge University Press, 1987), 215-230.

The Analogies of Experience lie within Kant’s Analytic of Principles whose aim is to articulate the a priori principles which necessarily govern our experience.<sup>2</sup> The preceding Analytic of Concepts, in particular the Transcendental Deduction, was intended to establish that the categories must be applied to the data of intuition in order to produce genuine experience (i.e. cognition of objects).<sup>3</sup> The resulting view of experience is essentially judgmental. For Kant, a judgment involves subsuming sensible data under concepts.<sup>4</sup> In the claim ‘The *Critique of Pure Reason* is a book’, I have subsumed a sensibly given object (the *Critique of Pure Reason*) under a concept (being a book). All experience essentially involves judgments of this sort, which subsume sensible data under concepts.<sup>5</sup> Kant’s argument in favor of this view of experience is incredibly complex and its success remains contested.<sup>6</sup> In my discussion, I will evaluate the Analogies and the Refutation on the assumption that this argument (and the prior argument in the Aesthetic) is sound.

Assuming that the application of the categories is presupposed in all experience, it still remains an open question as to *how* these categories are applied. That is, Kant must still explain what the necessary application of the categories can tell us about how experience and its objects are structured. This is the work of the Analytic of Principles, which is divided into four sections: one for each set of categories.<sup>7</sup> Kant develops his argument for these principles of experience around the notion of time-determination. In the Schematism, Kant argues that the categories are only abstract concepts and can be applied to the concrete data of intuition only by adapting them to this function.<sup>8</sup> That is, the abstract categories must be reinterpreted in concrete terms such that they can be meaningfully applied to intuitions given in time and space. Time takes precedence over space in this process because *all* intuitions are given in time,

<sup>2</sup> Immanuel Kant, *Critique of Pure Reason*, Trans. and ed. Paul Guyer and Allen W. Wood (New York: Cambridge University Press, 1998), 281-286.

<sup>3</sup> Ibid, 263-6.

<sup>4</sup> Ibid, 130-1.

<sup>5</sup> Ibid, 267-8.

<sup>6</sup> See for example Paul Guyer, “The Deduction of the Categories: The Metaphysical and Transcendental Deductions,” in *The Cambridge Companion to Kant’s Critique of Pure Reason* ed. Paul Guyer (New York: Cambridge University Press, 2010), 118-50.

<sup>7</sup> Kant, 286.

<sup>8</sup> Ibid, 271-7.

while only the intuitions of outer sense are given in space.<sup>9</sup> This process of reinterpretation or adaptation of the categories therefore comes to be known as “time-determination.” The Principles of the Understanding are the result of this process of categorical time-determination. They tell us how experience and its objects must be structured such that our categories may be applied to them in time (and space). Since the application of the categories is presupposed in all experience, the principles so derived must be constitutive of all possible experience. That is, any possible object of experience must conform to these principles. These principles are therefore an abundant source of the synthetic a priori knowledge whose discovery is a central aim of the *Critique*.<sup>10</sup>

The Analogies of Experience constitute the third division of the Analytic of Principles and concern the categories of relation: substance-accident, cause-effect, and community.<sup>11</sup> Unlike the other sections of the Analytic of Principles, the Analogies include a separate principle for each category.<sup>12</sup> The principles derived from the application of these categories to data given in time are as follows. The First Analogy argues that there must be some permanently enduring substance such that all changes are understood as alterations of that substance.<sup>13</sup> That is, any change is only a change in the accidents inhering in an unchanging substance. The Second Analogy claims that all changes must be governed by laws of cause and effect.<sup>14</sup> Accordingly, any possible event must be relatable to some cause which contains the grounds of that event. Finally, the Third Analogy claims that any co-existing states of affairs must be related by mutual interaction (i.e. causation).<sup>15</sup>

Kant's choice of title for the Analogies of Experience is apt because we might best understand the Analogies as pointing out the relatability of certain intelligible conditions to their analogous sensible conditions. That is, the purpose of the Analogies is to determine what features of sensible data are suitable targets for application of the categories of relation. In the First Analogy, substance, understood in the classical sense of a bearer of properties, is seen as analogous to the permanent in time. Similarly, accidents (i.e. properties) are seen as analogous with the changing

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<sup>9</sup> Ibid.

<sup>10</sup> Ibid, 281-3.

<sup>11</sup> Ibid, 295-320.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid, 299.

<sup>14</sup> Ibid, 304.

<sup>15</sup> Ibid, 316.

in time.<sup>16</sup> The permanent may then be subsumed under the concept of substance and the changing under the concept of accident, thereby completing the time-determination of the category of substance-accident. The categories, prior to the time-determination of the principles, might be thought of as having intensions but no extensions, meanings but no referents. Their intension is constituted by the intelligible marks of the concept (e.g. bearer of properties), but their extension is supplied only by sensible data (e.g. the permanent in time). Prior to the time-determination, we can think these concepts according to their marks, but we cannot refer them to anything in experience. This is why Kant talks about the vacuity and emptiness of the categories considered in themselves.<sup>17</sup> Far from being an ambiguity then, the co-presence of two notions of substance in the First Analogy is a necessary part of unifying that concept's sensible and intelligible aspects.<sup>18</sup> This process of providing sensible analogues or referents to the (until now) merely intelligible categories of the understanding constitutes the central work of the Analogies.

Having discussed the goal of the Analogies and their role within Kant's larger system, I now turn to Kant's argument for the First Analogy. The basic thrust of this argument must be that applying the category of substance in this way (i.e. to the permanent in time) is necessary for us to have the kind of experience that we do. It is clear that Kant is concerned with the temporal form of our experience and that part of the argument rests on his claim that we cannot perceive time itself.<sup>19</sup> Moving beyond this simple outline however, we immediately encounter critical and interpretive issues. For the remainder of this section, I will follow Guyer in identifying three plausible interpretations of Kant's argument: the analysis of alteration interpretation, the substratum interpretation, and the knowledge of empirical change interpretation.<sup>20</sup>

The first of these interpretations claims that Kant's argument rests on an analysis of the concept of alteration. On this interpretation, Kant argues that the very concept of alteration contains the condition that only a persisting substance can alter.<sup>21</sup> We can only apply the concept of alteration if we presuppose the existence of persisting substances to which the concept of alteration can rightly be applied. The principle of

<sup>16</sup> See Kant, 300.

<sup>17</sup> See Kant, 271-7; 256; 344.

<sup>18</sup> See for example James Van Cleve, "Substance, Matter, and Kant's First Analogy," *Kant-Studien: Philosophische Zeitschrift der Kant-Gesellschaft* 70 (1979): 149-161.

<sup>19</sup> Kant, 300.

<sup>20</sup> Paul Guyer, *Kant and the Claims of Knowledge* (New York: Cambridge University Press, 1987), 215-230.

<sup>21</sup> *Ibid.*, 222-3.

the First Analogy is therefore established purely by conceptual analysis of *alteration*. Guyer is correct that this interpretation is deeply inadequate.<sup>22</sup> It significantly misrepresents Kant's aims and strategy. Kant is explicit that conceptual analysis can tell us only about the logical consistency of concepts and not about the possibility of objects corresponding to our concepts. Analytic arguments give us knowledge of conceptual relations, but no knowledge of the world.<sup>23</sup> However, knowledge of the empirical world is exactly what Kant takes himself to be establishing in the Analogies. The Analogies are intended to establish principles governing empirically real objects.<sup>24</sup> In the First Analogy, Kant is trying to prove that these objects (or some part of them) realize the concept of substance.<sup>25</sup> This cannot be shown by pure analysis. Even if analysis proves that our concept of alteration presupposes substance, it cannot prove that any objects undergo alteration of this sort. Given Kant's sustained discussion of these issues, it is highly unlikely that he intended his argument in the First Analogy to proceed purely analytically. I will therefore set this interpretation aside and focus on the remaining two views.

On the substratum interpretation, the argument begins with the claim from the Aesthetic that all experience must be represented as being in time.<sup>26</sup> However, since Kant holds that time itself is not perceivable, experience can only be represented in relation to time through the substitution of something perceivable for time. Put another way, we can only experience relations between perceivable entities. Time itself is not a perceivable entity; therefore, we cannot directly relate objects or events to time. But all objects and events must be represented as standing in a relation to time, and so these objects and events must be related to *something* perceivable which stands in for time. Such an entity would serve as a *substratum* for experience, linking it all together within one time. This substratum for all experience must be absolutely and not merely relatively enduring. Only an absolutely enduring substance would be capable of linking *all* of experience together in one unified time-frame. Similarly, no substance can come into or out of being, as this would create a rupture in the substratum and thus in the temporal representation of experience. It is this final

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<sup>22</sup> Ibid.

<sup>23</sup> Kant, 279-83.

<sup>24</sup> Ibid, 295-8.

<sup>25</sup> Ibid, 299.

<sup>26</sup> I draw my discussion of this interpretation from a combination of: Andrew, Ward "Kant's First Analogy of Experience," *Kant-Studien: Philosophische Zeitschrift der Kant-Gesellschaft* 92, no. 4 (2001): 387-406; Paul Guyer, *Kant and the Claims of Knowledge* (New York: Cambridge University Press, 1987), 216-21; Henry Allison, *Kant's Transcendental Idealism* (New Haven: Yale University Press, 2004), 236-44.

consideration which grounds Kant’s claim that the “quantum [of substance] is neither increased nor diminished”.<sup>27</sup>

The knowledge of empirical change interpretation bases Kant’s argument upon a different aspect of our temporal experience.<sup>28</sup> On this interpretation, Kant’s argument rests not on the need for an enduring substratum, but on the possibility of having knowledge of empirical change. For Kant, all subjective representations of the world (i.e. mental representations) occur successively. That is, our mental representations of the world always occur one after the other and never co-exist simultaneously. However, in the objective empirical world, there are both successive events and simultaneous events. In order to have knowledge of objective succession (i.e. change), we must have some means of determining when our always-successive subjective representations refer to objectively successive states of affairs and when they refer to objectively simultaneous states of affairs. That is, my subjective representation of A followed by my subjective representation of B is not sufficient to ground a claim that A objectively preceded B. I might be merely perceiving two co-existing objects one after the other. Permanently enduring objects with histories are necessary to ground claims about objective succession and simultaneity.

In order to ground a claim that two objects are simultaneously existing, I must be able to perceive them in succession “both ways”. That is, I must be able to perceive A followed by B *and* B followed by A. If the succession of perception is possible in both directions, then I can be assured that these states of affairs are simultaneous. However, this condition can only be met if A and B are composed of something enduring such that it is the *very same* A and B that I perceive both ways. Similarly, in order to ground a claim that one and the same object has changed over time and not merely that I have perceived two different objects, I must presuppose that there are entities (substances) that endure across changes in their properties. Interpreted in this way, the argument for a permanent enduring substance rests on its necessity for the successful representation of objective change and simultaneity. Furthermore, if we were to suppose that this substance could come absolutely into or out of being, then this would undercut its ability to ground these types of objective claims. This ensures that substance must remain absolutely and not merely relatively enduring, and again reinforces Kant’s claim that the quantity of substance must be conserved.

Guyer opts for the knowledge of empirical change interpretation. He is motivated by apparently decisive philosophical objections to Kant’s argument as portrayed by the

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<sup>27</sup> Kant, 299.

<sup>28</sup> I take my discussion of this interpretation from Guyer, *Claims of Knowledge*, 224-230.



substratum interpretation.<sup>29</sup> I will address each of Guyer's objections in order to show that the substratum interpretation is still a live philosophical option.<sup>30</sup>

Guyer's first objection is to the claim that "the permanence of time requires something permanent among appearances or empirical objects to represent it".<sup>31</sup> He observes that there are serious problems with describing time itself as "permanent". According to Guyer, describing time as changeless or permanent is just as misleading as describing time as changing.<sup>32</sup> Time neither changes nor remains unchanging, the application of these terms to time itself is a category mistake. Guyer's concern is justified: a permanent entity presupposes a time within which that entity persists. In order for time to be permanent, there would have to be some other time, call it time\*, in relation to which time could be judged as permanent.<sup>33</sup> However, Guyer's interpretation of Kant's premise is not quite right. As Allison points out, the essential feature of time is not its permanence but rather its numerical self-identity.<sup>34</sup> There is only one single unified time. Any representation of experience in time necessarily relates that experience to this one time. Now, something which is permanent is necessarily numerically self-identical. That is, to call something permanent is to assert that the *same* thing persists over time. However, something can be numerically self-identical without being permanent. In particular, this would be the case if there is no time by reference to which an entity's self-identity could be understood as permanence. These conditions obtain precisely when we are talking about time itself because there is no time\* within which the self-identity of time can be understood as permanence.<sup>35</sup> Kant's premise assumes only that time is self-identical in this sense. Guyer's concerns about category mistakes have no bearing on this more moderate interpretation of the premise.

Let us consider Guyer's further objections with this clarified premise in view. According to Guyer, it is not clear why time's self-identity must be represented by

<sup>29</sup> Guyer, *Claims of Knowledge*, 224.

<sup>30</sup> The substratum interpretation, for which I am arguing, is held by Henry Allison and Andrew Ward. They have their own positive arguments in the *Kant's Transcendental Idealism* and "Kant's First Analogy of Experience" respectively. It is beyond the scope of this paper to summarize their arguments. Rather, I turn to Allison and Ward to defend this view from Paul Guyer's criticism in *Kant and the Claims of Knowledge*.

<sup>31</sup> *Ibid*, 219.

<sup>32</sup> *Ibid*.

<sup>33</sup> See Kant, 300.

<sup>34</sup> Allison, 238.

<sup>35</sup> Kant explicitly rejects the possibility of multiple time-frames, see Kant, 303.

something in experience.<sup>36</sup> In other words, he wonders why time requires a stand-in or substratum in experience at all. To respond, we must consider time's function in constituting experience: the unification of all representations into a singular horizon (i.e. a singular time-frame).<sup>37</sup> All representations, insofar as they are within the same horizon, must be relatable to one another. However, because not all representations (i.e. experiences) can be directly related to one another, they must all be related to *something* that remains self-identical throughout all of its relations. All events can then relate to each other *through* this self-identical substratum. For example, the experience of my fifth birthday and that of my high school graduation are quite disparate. Nevertheless, I can relate the two events to one another in a unified time-frame insofar as I presuppose that *something* has remained identical between them. By virtue of this entity's continuity, I can be assured that the two events occupy a continuous time-frame (rather than two or more discontinuous time-frames). The self-identical substratum thus makes a singular horizon or time-frame possible and it does so precisely by manifesting the self-identity characteristic of time. Kant's claim that time cannot itself be perceived becomes crucial here. Time itself cannot be this substratum in experience. Nevertheless, this unifying function must be played by something represented in experience. This something is substance.

Now, the only way to represent something in appearance as numerically self-identical across time is to represent it as permanent. An entity can be identical with itself across time only if it persists throughout that time. Therefore, an entity that is self-identical for any possible experience must persist throughout *all* time, i.e. it must be permanent. So, while time can realize complete self-identity without permanence, substances—as appearances in time—must realize complete self-identity by being permanent. Substance, therefore, plays the role of unifying substratum by exemplifying permanence in experience. Guyer's question about why time must have a stand-in can now be answered: time must be represented by a substratum in experience so that all representations can be related to one another through that substratum and thus form a unified temporal horizon. In order to reject the substratum interpretation, Guyer would need to provide an alternative account of how all representations relate to one another in a unified horizon without relating to time directly.

Guyer's next point concerns Kant's distinction between represented properties and representational properties.<sup>38</sup> If we think of representations as vehicles containing content, then represented properties are the properties of the content, i.e. the properties of what is being represented. On the other hand, representational properties

<sup>36</sup> Guyer, *Claims of Knowledge*, 219-20.

<sup>37</sup> Kant, 296-7.

<sup>38</sup> Guyer, *Claims of Knowledge*, 219-20.

are the properties of the representational vehicle, i.e. the representation itself. Kant claims that a representation can represent certain properties without the representational vehicle itself exemplifying those properties. In his words, “The representation of something persisting in existence is not the same as a persisting representation”.<sup>39</sup> This means that a representation can represent permanence without being permanent itself. This means that we can have an experience as of permanence without that experience itself being permanent. Without this assumption, one might think that it was impossible to represent permanence because all of our representations are themselves temporary. However, given this distinction, Guyer wonders why the substratum for time must itself be self-identical.<sup>40</sup> Could the substratum for time represent the self-identity of time without itself exemplifying self-identity? Now, our previous discussion revealed that the substratum is not merely *representing* time, but is providing the conditions for uniting all experience into a unified horizon. This question rests on mistaken assumptions about the role that the substratum is supposed to be playing.

Certain transcendental realist presuppositions might underlie Guyer’s concern and the resultant confusion. Kant makes it abundantly clear that time is not itself an entity. Time is merely a form of sensibility, that is, a mode of representation.<sup>41</sup> Strictly speaking, time is not something that we can represent as it is only itself a mode of representing. When we say that time cannot be perceived, it is not merely that time is in some sense inaccessible to us. Rather, time itself cannot be perceived because it is not an object at all. If we are being precise, then, we do not represent the numerical self-identity of time as if that were some property of time. Rather, the representation of numerical self-identity in an object is the very process by which time itself is actualized. Time is merely the representation of all events as being within a unified horizon. Numerical self-identity must be represented in order to represent all events within a unified horizon. Therefore, the representation of numerical self-identity (in a substance) is a necessary condition of time as a mode of representation (i.e. time-determination). That is, the substratum does not *represent* time. Rather, the substratum *realizes* time. From this properly transcendental idealistic perspective, it makes no sense to suggest that the self-identity of time might be represented by a substratum which is not itself self-identical. Our goal is not to represent time at all, but rather to represent objects as being in time.

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<sup>39</sup> Kant, 122.

<sup>40</sup> Guyer, 219-20.

<sup>41</sup> See for example Kant, 180.

Guyer's final worry with the substratum argument is that Kant has equivocated on the concept of substance.<sup>42</sup> According to Guyer, Kant's argument for the necessary existence of substance applies only to substance as something that is permanent throughout time. However, Kant is using this argument to establish the necessary existence of substance further understood as something that bears properties. Kant's premise concerns substance as a permanent entity, but his conclusion concerns substance as both a permanent entity and a bearer of properties. Guyer worries that Kant has smuggled this classical notion of substance into a conclusion that properly concerns only permanent entities. In particular, he suggests that there might be permanently enduring properties which would serve the purpose of time-determination equally well.<sup>43</sup>

Guyer comes very close to resolving his own concern. He allows that, if there is a permanent property, then that property must be borne by a permanent substance.<sup>44</sup> This reveals an asymmetry: any permanent property entails a permanent substance that bears it, but a permanent substance does not similarly entail a permanent property. In either case, if substance is altered, then the permanence is lost; either immediately or through the disruption of the property's permanence. However, properties can be altered without disrupting the permanence of the substance. If we accept that there is something permanent in experience and that this something also sometimes undergoes alteration, then we must accept that it is the properties which alter and the substance that endures. Kant's conclusion can be conserved. However, this additional sub-proof remains only implicit in Kant's argument. Guyer is, therefore, partially right about Kant's equivocation: Kant's explicit argument can only establish the necessity of substance as both a permanent entity and as a bearer of properties if we make these tacit premises explicit.

I have shown that the substratum interpretation of Kant's argument in the First Analogy can withstand these apparently devastating criticisms. The substratum argument remains philosophically viable and a strong candidate for the correct interpretation of Kant's First Analogy.

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<sup>42</sup> Guyer, *Claims of Knowledge*, 221.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid.