

# Subject-Dependence and Trendelenburg's Gap

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A famous objection against Kant's transcendental idealism – known under the title *Trendelenburg's Gap*<sup>1</sup> – goes like this: In the *Transcendental Aesthetic*, Kant claims to have shown that spatio-temporal properties do not pertain to things in themselves but rather only to appearances. However, the argument in the *Aesthetic* only justifies the claim that we can *never know* whether spatio-temporal properties are properties of things in themselves, and hence the argument neglects the alternative that spatio-temporal properties pertain both to appearances and to things in themselves. In the following paper, I will try to show that the objection can be met if Kant's distinction between appearances and things in themselves is interpreted properly. The two core ideas of my interpretation are the following:

- i. We should distinguish between subject-dependent properties, i.e. properties that objects only have in relation to epistemic subjects of a certain kind, and subject-independent properties, i.e. properties that objects have in themselves, i.e. independently of any relation to epistemic subjects.
- ii. Kant's transcendental idealism amounts to the claim that we can only have knowledge of properties of the first kind because all spatio-temporal properties are such that objects have them only in relation to epistemic subjects like us.

It is not the aim of this paper to discuss these two ideas in full detail and to defend them against other interpretations of Kant's distinction between appearances and things in themselves.<sup>2</sup> Broadly speaking, my interpretation belongs in the camp of so-called double-aspect views. According to these views, Kant does not speak about two distinct classes of entities

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1 Dating back to A. Trendelenburg, *Über eine Lücke in Kants Beweis der ausschließenden Subjektivität des Raumes und der Zeit*, Leipzig 1867.

2 I have defended other advantages of my interpretation in more detail in T. Rosefeldt, "Dinge an sich und Sekundäre Qualitäten," in J. Stolzenberg (ed.), *Kant in der Gegenwart*, Berlin, New York: Walter de Gruyter 2007, pp. 167–209.

when distinguishing appearances from things in themselves (e. g. about purely mental entities on the one hand and mind-independent objects on the other), but rather distinguishes between two aspects of one and the same kind of mind-independent objects. Moreover, I interpret these aspects as kinds of properties: When Kant distinguishes things as they appear to us from things as they are in themselves he draws a line between two kinds of properties mind-independent objects can have: properties that these objects only have in relation to epistemic subjects of a certain kind and properties that they have in themselves, i. e. independently of any relation to epistemic subjects.<sup>3</sup> This characterisation obviously provokes the following question: What exactly is meant by the claim that certain properties are not had by objects in themselves but rather only by objects in relation to epistemic subjects of a certain kind?

In order to answer this question, I will firstly interpret a passage in the B-edition of the Aesthetic that, in my opinion, offers Kant's clearest and most promising formulation of his distinction between appearances and things in themselves. In doing so, I will introduce some terminology which I find helpful for defining what exactly is meant by a property that objects have only in relation to epistemic subjects of a certain kind. I will then try to show that the proposed interpretation does not only help to understand Kant's distinction between the way things appear to us and the way things are in themselves, but also makes it possible to spell out what exactly is the illusion of a transcendental realist who thinks that spatio-temporal properties are ways things are in themselves. I will then argue that Kant's argument in the Transcendental Aesthetic does not fall afoul of Trendelenburg's objection against it if we understand his claim that spatio-temporal properties are not properties of things in themselves in the suggested way.

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3 Other authors before me have suggested interpreting Kant's distinction between appearances and things in themselves as a distinction between subject-dependent and object-dependent properties as well. Some ideas in this direction can be found in the interpretations of Paton, Dryer and Putnam (cf. Paton, 1951, 442 ff., Dryer, 1966, ch. 11.6, Putnam, 1981, 59 f.). My own interpretation has most affinity to that of Arthur Collins (*Possible Experience. Understanding Kant's Critique of Pure Reason*, Berkeley, Los Angeles: University of California Press 1999) and Lucy Allais ('Kant's One World. Interpreting "Transcendental Idealism"', in: *The British Journal for the History of Philosophy*, 12 [2004], 655–684; 'Kant's Idealism and the Secondary Quality Analogy', in: *Journal of the History of Philosophy*, 45:3 [2007], 459–484). Again, I will not have space to discuss the differences between my own and their interpretation.

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In the second edition of the *Transcendental Aesthetic*, Kant writes the following:

Wenn ich sage: im Raum und der Zeit stellt die Anschauung sowohl der äußeren Objecte, als auch die Selbstanschauung des Gemüths beides vor, so wie es unsere Sinne afficirt, d. i. wie es erscheint, so will das nicht sagen, daß diese Gegenstände ein bloßer Schein wären. Denn in der Erscheinung werden jederzeit die Objecte, ja selbst die Beschaffenheiten, die wir ihnen beilegen, als etwas wirklich Gegebenes angesehen, nur daß, so fern diese Beschaffenheit nur von der Anschauungsart des Subjects in der Relation des gegebenen Gegenstandes zu ihm abhängt, dieser Gegenstand als Erscheinung von ihm selber als Object an sich unterschieden wird. (B 69)

This is not only one of the clearest statements supporting a double-aspect interpretation (the object as appearance is distinguished *from itself* as object in itself), it also entails the core idea of my variant of it. Spatio-temporal properties are said to 'depend on the kind of intuition of the subject in the relation of the given object to it.' In a footnote to the quoted passage Kant explicates how this baroque formulation is to be understood:

Die Prädicate der Erscheinung können dem Objecte selbst beigelegt werden in Verhältniß auf unseren Sinn, z. B. der Rose die rothe Farbe oder der Geruch; aber der Schein kann niemals als Prädicat dem Gegenstande beigelegt werden, eben darum weil er, was diesem nur im Verhältniß auf die Sinne oder überhaupt aufs Subject zukommt, dem Object für sich beilegt, z. B. die zwei Henkel, die man anfänglich dem Saturn beigelegt. Was gar nicht am Objecte an sich selbst, jederzeit aber im Verhältnisse desselben zum Subject anzutreffen und von der Vorstellung des letzteren unzertrennlich ist, ist Erscheinung, und so werden die Prädicate des Raumes und der Zeit mit Recht den Gegenständen der Sinne als solchen beigelegt, und hierin ist kein Schein. Dagegen wenn ich der Rose an sich die Röthe, dem Saturn die Henkel, oder allen äußeren Gegenständen die Ausdehnung an sich beilege, ohne auf ein bestimmtes Verhältniß dieser Gegenstände zum Subject zu sehen und mein Urtheil darauf einzuschränken, alsdann allererst entspringt der Schein. (B 69 f. Anm.)

Three properties are mentioned here: the property of having handles (which was attributed to Saturn by Galileo when he first saw it through a telescope), the property of being red, and the property of being extended. In the cases of all three of these properties illusion arises if they are attributed to things in themselves. Hence, the following three claims are false, according to Kant:

- (1) Saturn has the property of having handles in itself.

- (2) The rose has the property of being red in itself.
- (3) Outer objects have the property of being extended in themselves.

Kant describes the mistake made in these claims as that of ‘attributing to the object for itself what pertains to it only in relation to the senses or in general to the subject.’ That suggests that, although the three properties should not be ascribed to the mentioned objects *in themselves*, they could nevertheless be ascribed to them in relation to certain kinds of subjects. So, it seems as if by the following reformulation of the sentences the illusion could be avoided:

- (1a) Saturn has *the property of having handles* in relation to Galileo looking through his telescope.
- (2a) The rose has *the property of being red* in relation to subjects with our visual sensory system.
- (3a) Outer objects have *the property of being extended* in relation to subjects with our forms of intuition.

Although these formulations are rather close to the Kantian text, I do not find them fully satisfactory. They imply the notion of having a property in relation to something else which I find rather awkward. If a ball moves to the left from the goal-keeper’s point of view and to the right from the striker’s point of view it would be odd to say that it has *the property of moving to the left* in relation to the goal keeper and lacks one and the same property in relation to the striker. A more natural way of describing the situation would be to say that the ball has *the property of moving to the left viewed from the goal-keepers perspective*, but does not have *the property of moving to the left viewed from the strikers perspective*. These are two distinct properties. So it would be preferable to reformulate the three sentences in a ways that makes the relativisation to a subject part of the property-designator. Another problem with (1.a) – (3.a) is that it is not clear what exactly the relation is which is mentioned in these sentences.

What Kant has in mind becomes clear when he describes appearance as that which ‘is not to be encountered in the object in itself at all, but is always to be encountered in its relation to the subject and is inseparable from the representation of the object’. Hence the relevant relation of Saturn, the rose and outer objects in general, is that of appearing to subjects of a certain kind in a certain way. The following reformulation of (1.a) – (3.a) suggests itself:

- (1b) Saturn has the property of appearing to have handles to Galileo, looking through his telescope.
- (2b) The rose has the property of appearing red to subjects with our visual sensory system.
- (3b) Outer objects have the property of appearing extended to subjects with our forms of intuition.

The properties designated by the italicized expressions have the following three features: (i) they are properties of mind-independent objects ('can be attributed to the object itself', as Kant writes), (ii) they are intersubjectively accessible properties, i.e. can be detected by different subjects, at least by those who belong to the kind of subject mentioned in the property-designators, i.e. by subjects who look through Galileo's telescope, have our visual sensory system or share our forms of intuition, and (iii) they are – in some sense – relativised to epistemic subjects.

In order to make a little more explicit how the last characterisation is to be understood I want to introduce some terminology.<sup>4</sup> A predicate shall be called *objective* iff its extension is independent of all parameters to which it is not explicitly relativised. There are many predicates that are not objective in this sense. Take the predicate 'moves to the left' for example. Although someone can say something true by using it – e.g. the goalkeeper who says 'The ball moves to the left' – its extension depends on parameters that are not explicitly mentioned in the predicate but contributed by the context of the utterance (such as the perspective of the person who utters the sentence). It is not always as easy to detect the non-objectivity of a predicate as in the case of 'moves to the left' (where it only takes two people shouting long enough to each other: 'It moves to the left' – 'No, to the right' – 'No, to the left' etc...) Take a predicate such as 'begins at 5 o'clock'. Someone who has never left her time zone may never detect that something can begin at 5 o'clock with respect to the London time zone and, at the same time, begin at 6 o'clock with respect to that of Berlin. Moreover, it can still be a rather shocking insight that the predicate 'moves upwards' is not objective, and it needed some progress in cosmology to detect that its extension depends on the position to the centre of a gravitational field. (In the Epicurean cosmology, for example, all objects in the world were taken to

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4 I adopt some of the terminology from F. Mühlhölzer, "On Objectivity," in: *Erkenntnis*, 28, 1988, 185–230.

move constantly downwards – obviously in some absolute sense.) And, as physics has taught us, even such objectively sounding predicates as ‘weighs 5 kg’ or ‘is simultaneous with such-and-such event’ are not objective in the explicated sense.

Now, a predicate can be made objective, or more objective, if parameters on which its extension depends are made explicit in them. The predicate ‘moves to the left viewed from the goalkeeper’s perspective’ is more objective in this sense than the predicate ‘moves to the left.’ It is still not completely objective because its extension also depends on the time (something can move to the left at some time but not do so at some other time). The predicate ‘moves to the left viewed from Petr Cech’s perspective on the 11<sup>th</sup> of May 2008 at 5 o’clock London time-zone’ may have a good prospect of being completely objective.

Now, if one of the parameters to which a predicate is explicitly relativised is an epistemic subject, or a kind of epistemic subjects, as standing in an epistemic relation then I will call this predicate *relativised to a (kind of) subject*. ‘Moves to the left viewed from Petr Cech’s perspective’ is relativised to an epistemic subject in this sense, because the epistemic subject Petr Cech and the epistemic relation of viewing something are mentioned in this predicate. The predicate ‘moves to the left viewed from the perspective of subjects standing at Petr Cech’s position’ is relativised to a kind of epistemic subject, namely to subjects that are similar to Petr Cech in having the same direction of looking. Finally, if a predicate is both objective and relativised to an epistemic subject or a kind of epistemic subject, I will say that it expresses a *property that is relativised to a (kind of) epistemic subject*. The predicate ‘moves to the left viewed from Petr Cech’s perspective on the 11<sup>th</sup> of May 2008 at 5 o’clock London time-zone’, if completely objective, expresses such a property.

It is important to note, though, that this property can also be expressed by a predicate that is not objective. If Petr Cech, on the 11<sup>th</sup> of May 2008 at 5 o’clock London utters the sentence ‘This ball moves to the left’, then the predicate ‘moves to the left’, at this utterance, expresses the property of moving to the left viewed from Petr Cech’s perspective on the 17<sup>th</sup> of March at 5 o’clock London time zone. (His utterance is true just if the ball has this property.) And Petr Cech can do so even if he does not know what time or what day it is. So, in general, you can express a property which is relativised to certain parameters without knowing the values of these parameters. Moreover, and that is the more interesting case for our purposes, you can express a property which is relativised to certain parameters without even knowing *that*

the property you express is relativised to any of these parameters. Someone could fail to see that a predicate such as 'begins at 5 o'clock' is not objective and that it expresses different properties when uttered in different time zones, each relativised to the respective zone. As long as this person does not meet someone from another time zone, her mistake may never come to light for she applies the predicate to exactly the same things as people who know about the relativity of the time of day. Similarly, people could use predicates such as 'moves upwards' or 'weights 5 kg' without noticing that these predicates express properties that are relativised to the position in a gravitational field and to its force. All these people would fail to notice that the properties they ascribe to things are relativised to certain parameters.

Let me come back to Kant's examples and apply the new terminology to them (I will confine myself here to the case of the colour and that of extension):

(i) Both properties that are talked about in (2.b) and (3.b) – the property of appearing red to subjects with our visual sensory system, and the property of appearing extended to subjects with our forms of intuition – are properties that are relativised to a kind of epistemic subjects in the explicated sense. For both can be expressed by predicates which are relativised accordingly (e. g. the predicate 'appears extended to subjects with our forms of intuition.' I will assume, for the sake of argument, that this predicate is objective, although other parameters would have to be made explicit, of course.) The fact that these properties are relativised to epistemic subjects is compatible with the fact that they are properties of objects that are distinct from these subjects. (Just as the fact that the property of moving to the left viewed from Petr Cech's perspective is relativised to a subject is compatible with the fact that it may be the property of a football.)

(ii) Kant's claim that we can only know things as they appear to us but not things as they are in themselves can be understood in the following way: All predicates that we normally apply in order to gain knowledge of objects in the world around us – predicates such as 'is red', 'is extended', or 'is round' – express properties that are relativised to epistemic subjects of a certain kind. Since the predicates 'is red' and 'is extended' do not make the relativisation explicit, they are not objective in the explicated sense. The relativisation is made explicit in the predicates 'appears red to subjects with our visual sensory system' and 'appears extended to subjects with our forms of intuition' that are used in the formula-

tions (2.b) and (3.b). All of this is compatible with the fact that someone who fails to see that the mentioned predicates express relativised properties might apply them to exactly the same things as a Kantian does. Just as someone who fails to see the lack of objectivity of the predicate 'moves upwards' can apply it to the same things as someone who knows that its extension depends on the position on our planet. In this case the agreement is possible if both users of the predicate just *are* at the same position on the planet. In the case of the two persons who speak about extension no disagreement occurs because both persons just *are* subjects with the same forms of intuition.

(iii) The claim that, for Kant, all properties which we can cognize are relativised to epistemic subjects and hence, in a way, are secondary qualities does not imply that he cannot account for the traditional distinction between primary qualities such as extension and secondary qualities such as colour. Although both of these properties are relativised to epistemic subjects of a certain kind they can be distinguished by the generality of the kind to which they are relativised. Traditional primary qualities are relativised to the class of subjects with our forms of intuition, traditional secondary qualities to a subclass of the first, namely the class of subjects with our visual sensory system.<sup>5</sup> Kant assumes that things can appear in different colours to different human beings (and therefore they are not empirically real), but that things appear in space for all human beings.

(iv) Obviously, the way to find out that a predicate such as 'is extended' is not objective and needs to be relativised to some hidden parameter is different from the way in which one can find out that 'moves to the left', 'begins at 5 o'clock' or 'weighs 5 kg' are not objective. In the latter case we can encounter situations in which the parameter takes some other value (e. g. when we take another point of view, move to a different time zone, or travel to another planet). As human beings with fixed forms of intuition, however, we are never in a position to know that an object has a property that is relativised to some kind of subject that does not have our forms of intuition. Kant's reasons for the claim that all spatio-temporal

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5 In the *Prolegomena* Kant discusses the case in which certain human beings see everything in black and white (AA VII 168) and in B 45 he writes that one and the same thing can have different colours for different human beings. Kant also thinks that things could fail to appear in space and time to subjects with forms of intuition distinct from ours (at least this is how I read AA IV 451). However, he was convinced that all human beings have the same forms of intuition and hence that objects appear in space and time to all humans (cf. A 26/B 42).



properties are relativised to subjects with our forms of intuition are philosophical in nature. He thinks that the claim offers the only explanation for the fact that we have a priori knowledge of some features of the objects of our experience, and he seems to think that subjects with a receptive sensibility can only gain knowledge of properties of this kind.

(v) My terminology offers a nice way to describe the kind of error that Kant describes as 'illusion.' Kant says that illusion arises when 'I attribute the redness to the rose in itself, [...] or extension to all outer objects in themselves, without noticing a certain relation of these objects to the subject and limiting my judgement to this.' It would be wrong to interpret Kant as saying here, I think, that the man on the street who calls a house extended suffers from an illusion. The man on the street does not bother about whether the property which he ascribes is relativised to some kind of subject or is a property of the subject in itself. Illusion arises, I think, on a philosophical level, i. e. at a point at which somebody explicitly assumes that a predicate such as 'is red' or 'is extended' is objective and hence does not express a property that is relativised to some other parameter. Such a person would attribute something 'to the object for itself what pertains to it only in relation to the senses or in general to the subject.' In the same sense illusion arises if somebody thinks that the predicate 'moves to the left' expresses a property which is not relativised to his point of view, or that the predicate 'weighs 5 kg' expresses a property that is not relativised to a gravitational field with a certain force. Again, it is important to note that someone who suffers from this kind of illusion can apply the predicate to exactly the same things as someone who has detected it. Hence, a Kantian who believes that the predicate of being rectangular is mind-dependent can apply it to the same things as a transcendental realist who thinks that rectangularity is a property that things have completely independently of us.

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Let me finally come back to Trendelenburg's famous objection against the argument for transcendental idealism given in the Aesthetic. The objection runs as follows: Even if Kant has succeeded in showing that spatio-temporal properties are properties of appearances and that we cannot know whether they are properties of things in themselves, that leaves still open the alternative that things in themselves have these properties although we cannot know this. Hence Kant is not justified when making

his further claim that things in themselves do not have spatio-temporal properties. This objection is based on the presupposition that it is conceptually possible that one and the same properties pertain to the things as they appear to us and to the things as they are in themselves. This presupposition seems to be grounded in our way of speaking about appearances: You can say that a thing is red or round and you can say that it only appears to be red or round. Hence, being red or being round are normally treated as properties that things can have and can appear to have. However, on my interpretation, what Kant wants to say is not that there is a property such as being round and that things only appear to have this property. His claim is rather that the predicate 'is round' expresses a property that is relativised to epistemic subjects and *is identical* to the property more properly expressed by the predicate 'appears round to epistemic subjects with our forms of intuition.' If he is right, then Trendelenburg's objection fails, because then 'is round' expresses a property which cannot pertain to things in themselves, for that would mean that it expresses a property that is not relativised to epistemic subjects.

An analogy may again help to see this point clearer. As I have said, the conclusion of the argument in the Aesthetic can be compared to the discovery that the properties expressed by the predicate 'moves to the left' or the predicate 'moves downwards' are relativised to some parameter such as a point of view or a position in a gravitational field. Once you have noticed that, it would be absurd to ask whether a ball that has the property of moving to the left viewed from your perspective may not also have the property of moving to the left in itself, i. e. without any specification of a point of view, or whether that ball that has the property of moving downwards with respect to London may not also have the property of moving downwards in itself and absolutely (just as the Epicureans thought). The reason is that there is simply no such thing as moving to the left without moving to the left viewed from some perspective or another, and no such thing as moving downwards absolutely. There are no such properties that things in themselves could have. In just the same way one should say: If Kant is right and all spatio-temporal predicates express properties that are relativised to epistemic subjects of a certain kind then there simply is no such thing as an object having a spatio-temporal property in itself.