# The Phenomenal Presence of Spatiality*

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## 1 Introduction

I am interested here in the necessary conditions on a certain species of objective veridical experience: seeing objects. The focus on visual *experience* means that I am restricting attention to those visual episodes or states that have some conscious or phenomenal character. I restrict attention also to seeing *bodies*: things which have extension and figure, and which occupy space to the exclusion of other bodies (of the same kind) (Cassam 2005, p. 279)—the ordinary things we find around us, such as books, cups, and animals. The thesis to be considered is that the perception of spatiality (that is, the perception of (some of) the spatial features of objects) is necessary for seeing objects. Call this *The Kantian Thesis*. The thesis is defended in recent work by Cassam 2005, 2007. Cassam defends the specific version of The Kantian Thesis which says that seeing a material object, $o$, requires seeing $o$ as spatially located. Before we get to Cassam's defence of this specific version of The Kantian Thesis we need some minimal understanding of seeing a material object. I outline how Dretske 1969 understands seeing a material object (section 2), and a certain condition he places on it. This is relevant here for Dretske thinks that seeing $o$ requires that $o$ be *visually differentiated* (see section 3), and Cassam takes it that we can explain why the perception of spatiality is necessary for seeing a material object in terms of visual differentiation (see section 4).

I shall argue as follows. We should distinguish at least two species of object seeing: simple seeing, that is, seeing $o$, and a specific form of seeing as, that is, seeing $o$ as an $F$, what I'll call *kind seeing* (see section 2). Dretske is wrong to think that visual differentiation is necessary for simple seeing (see sections 5, and 6). So, if Cassam is interested in simple seeing, then an explanation of why

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The Kantian Thesis holds cannot be given in terms of visual differentiation. However, if Cassam is concerned with kind seeing, his claim, I suggest, is more plausible (see section 7). But even if we admit this, we might still want to say something about the conditions of the possibility of *simple* seeing. In section 7 I articulate, and explain, a specific version of The Kantian Thesis for simple seeing: seeing $o$ requires seeing $o$ as *determinably* spatial (e.g., as *shaped*, or *located*, or *extended*). One way to put this is that seeing $o$ requires the phenomenal presence of $o$'s determinable, or generic, spatiality.

# 2 Two Species of Object Seeing

## 2.1 Simple Seeing

What then is the kind of 'simple seeing' that Dretske gives expression to? Dretske says

> There is a primitive visual ability which is common to a great variety of sentient beings, an ability which we, as human beings, share with our cocker spaniel and pet cat. It is an endowment which is relatively free from the influences of education, past experience, linguistic sophistication, and conceptual dexterity (1969, p. 4).

The kind of seeing in question later came to be known as 'simple seeing' (Dretske 1979, see also Warnock 1954). Simple seeing is a species of object seeing where such seeing is usually expressed in the following terms: '$S$ sees/saw $o$' (where '$o$' is a noun phrase or small clause), e.g., $S$ sees the desk, or $S$ saw the desk collapse. Simple seeing is to be contrasted with such visual achievements (if that they be) as seeing *that* the book is on the desk. Dretske is keen to emphasize how simple seeing is, in a certain sense, non-*doxastic* (that $S$ sees $o$ doesn't logically imply that $S$ has any particular belief about $o$), moreover, it is '*distinct from*, but nonetheless fundamental to an organism's higher-level cognitive and conceptual activities' (2000, p. 98, my emphasis). So it seems that Dretske thinks that simple seeing is *non-conceptual* in the sense that seeing $o$ isn't itself a constitutively conceptual state or episode, and in that seeing $o$ doesn't require possession of the concept of $o$ and certain other concepts (though it is consistent with this that one who is capable of seeing $o$ possesses *some* concepts).

## 2.2 Kind Seeing

It seems also that there is such a thing as seeing $o$ *as* an $F$. For example, seeing something *as* a cup (or something else). This seems to be a different species of object seeing, a kind of object seeing which has different requirements to simply seeing $o$ (I'll call this *kind seeing*). One might represent the difference in terms of conceptuality. According to this way of thinking of things kind seeing is conceptual in Strawson's terms: 'the visual experience [of seeing $o$ as a cup] is

*irradiated* by, or *infused* with, the concept [of a cup]; or becomes *soaked* with the concept [of a cup]' (Strawson 1974, p. 63).

Take 'an $F$' to be a sortal predicate, where '$F$' is a term for a kind (typically a noun phrase, such as 'cup', or 'animal', or 'book', or something generic like 'thing' or 'object'). Accordingly to see $o$ as an $F$ is to see $o$ as a certain kind of thing. I take it that when authors such as Vesey 1965 (in Swartz 1965) claim that all seeing is seeing as they have something like this in mind. Moreover, I take it that such authors would construe such seeing as conceptual in a certain sense (at least as strongly related to judgement). But it is not obvious that we have to think of kind seeing as conceptual. We might construe $S$ sees $o$ as an $F$ in terms of visual appearances (looks). Accordingly we might say: $S$ sees $o$ as an $F$ only if $S$ has an experience, $e$, of $o$, with a certain phenomenal character, $c$, where $c$ is such that in having $e$, $o$ looks either like or to be an $F$ to $S$. Suppose then that (A) $S$ sees $o$ as an $F$, and this means that (B) $o$ looks to be an $F$ to $S$. Alternatively, we might suppose that it means (C) $o$ looks like an $F$ to $S$. It is not obvious that the truth of either of these looks claims requires that $S$ has or employs the concept of $o$ or the concept of an $F$ (though this is controversial).

Suppose, then, that there is such a thing as non-conceptual kind seeing. Have we given expression to a different species of object seeing? Perhaps all simple seeing is ultimately kind seeing? Perhaps this is what Dretske is getting at when he admits that in a sense he can *agree* that all seeing is seeing as:

> I shall adopt a view somewhat similar, in expression if not in substance, to that embodied in the above quotation [which includes the slogan "all seeing is seeing as"]...I am quite willing to admit that, in a certain sense, $D$ must look some way to $S$ (*not* to be read as: must look *like* something to $S$) in order for $S$ to see $D$...I would agree, for instance, that whenever it becomes true to say of an infant that it can now see its mother, or of a rat that it can see the lever, it also becomes true to say of the infant and the rat that they see the mother and the lever as something—the mother looks some way to the infant and the lever looks some way to the rat (1969, pp. 9–10)

However, I think even if we admit that there is such a thing as non-conceptual kind seeing, it is not seeing as *in this sense* that Dretske means to articulate in the above passage. We should distinguish two notions of seeing as:

1. Seeing $o$ as an $F$
2. Seeing $o$ as $\phi$

Dretske wants to understand seeing as in terms of $o$ looking some way to one, but he explicitly says that $o$ looking some way to $S$ is *not* to be understood as $o$ looks like something (that is, an $F$) to $S$. I take it that (2) can capture what Dretske has in mind. We can take '$\phi$' to be an adjectival phrase which picks out some visible characteristic of $o$, such as, for instance, 'large', 'red', or 'square'. And again we can construe this in terms of looks (and so, again, non-conceptually). So for $S$ to see $o$ as $\phi$ is for $o$ to look $\phi$ to $S$.

This seems to require seeing $o$ as $\phi$ as being understood in terms of Jackson's category of *phenomenal* looks statements (Jackson 1977). But we have to be careful here. For a start no commitment is made to Jackson's specific understanding of such statements. Moreover, some are sceptical that Jackson's category is the best way to understand $o$'s looking $\phi$ (Martin 2010). This need not worry us for we can say this: $S$ sees $o$ as $\phi$ only if $o$ looks $\phi$ to $S$, and then we can understand this as, say, $o$ looks like a characteristic $\phi$ thing to $S$. Once again we need not think of seeing $o$ as $\phi$ as conceptual. We can say: $S$ sees $o$ as $\phi$ only if $S$ has an experience, $e$, of $o$, with a certain phenomenal character, $c$, where $c$ is such that in having $e$, $o$ looks $\phi$ to $S$ (and how to construe this latter aspect will depend on the stance one takes regarding phenomenal looks).

In admitting that all seeing is seeing as (in the sense of (2) above) Dretske is doing no more than expressing the claim that one sees $o$ only if $o$ looks some way to one in different terms (hence his remark that he is agreeing with the slogan in *expression* if not in *substance*). The value of $\phi$ in '$S$ sees $o$ as $\phi$' specifies *which way* $o$ looks to $S$ when $S$ sees $o$. To say that *all* seeing $o$ is seeing $o$ as $\phi$ we can take to mean this: for any instance of seeing $o$, if $S$ sees $o$, then $S$ sees $o$ as $\phi$, where the value of $\phi$ is determined by the circumstances of the case. For instance in certain cases $S$ will see $o$ as large, or blue, but that *those* are the values of $\phi$ is just a matter of the circumstances, e.g., what $S$ sees and the circumstances in which $S$ sees it. There is no such thing as $S$ seeing $o$ but not seeing it as $\phi$ for *some* value of $\phi$, and this is just to say that $S$ sees $o$ only if $o$ looks some way to $S$. (I have simplified things somewhat, for I take it that we don't have to say that there is just *one* way that $o$ looks to one when one sees it, so the story will have to be slightly more complex to accommodate this).

But Dretske doesn't merely think that one sees $o$ only if $o$ looks *some way* (or *ways)* to one. Dretske makes a stronger claim. He thinks that $S$ sees $o$ only if $o$ looks some way different to its immediate environment to one. We can put Dretske's claim like this: $S$ sees $o$ only if $S$ sees $o$ as discrete. (It is consistent with this that $S$ sees $o$ only if $S$ sees $o$ as $\phi$ for some other circumstance dependent values of $\phi$, but Dretske's claim is that whatever the circumstances, if $S$ sees $o$, then $S$ sees $o$ as discrete). This is the visual differentiation condition mentioned above. I discuss it in more detail shortly (see section 3).

We can assume, with Dretske, that if one sees $o$ one sees $o$ as $\phi$ (for some circumstance dependent value(s) of $\phi$), for this just gives expression to something we would surely want to admit about seeing $o$, viz., that if one sees $o$ then $o$ looks some way to one (though we don't have to agree with Dretske's stronger claim about visual differentiation, and later I will argue that we should reject this). Even if we grant the alignment of seeing $o$ and seeing as (in the second sense), there still seems to be a distinction between seeing $o$ (and, seeing $o$ as $\phi$) on the one hand, and seeing $o$ as an $F$ on the other (where the latter may or may not be best understood as conceptual). This is the distinction between two species of object seeing: simple seeing and kind seeing. I will return to this later, but for now, let's outline in a little more detail Dretske's visual differentiation condition.

# 3 The Visual Differentiation Condition

The visual differentiation condition is a condition on visual appearances. For *o*—a material object—to be visually differentiated from its immediate environment for *S* is for *S* to see *o* as discrete (for *o* to look, to *S*, some way different to its immediate environment—immediately surrounding objects and background, etc).

But how are we to understand the visual differentiation condition when construed in terms of visual appearances? It is not obvious. Imagine a blue background and a blue patch set against the background. The patch has a shade of blue which is different to the shade of blue that the background has, but the difference is so subtle that one simply cannot visually detect the difference. The patch, in virtue of the shade difference, looks some way different to the background, and in that sense one might think that the patch is visually differentiated—the patch has a blue look which is ever so slightly different to the blue look that the background has. So here we have a case which seems to be a case of visual differentiation where it is not possible in the circumstances for *S* to distinguish (to actively pick out), by means of detecting a shade difference, the object from its environment.

I take it that the difference in look between an object and its background need not be *noticed* for the object to be visually differentiated. However, there is a sense in which the shade difference between the blue patch and the blue background is not only not noticed by *S* but it is not even *visible to S*. So it is not a failure to notice a visible difference, it is a not noticing of a non-visible difference. One might require that for *o* to be visually differentiated it must look some way different to its surroundings and the difference(s) in look must be visually *noticeable* or *detectable* or *distinguishable*, and hence visible to *S*. The difference in shade between the blue patch and the background is a genuine difference in the way the patch *looks* to how the background looks (it is, as it were, an objective difference in visual appearance), but the difference isn't visible to *S*, and *S couldn't* notice (etc) the difference since *S*'s powers of shade detection are not that powerful.

So, let's work with the following rough specification of the visual differentiation condition: *o* is visually differentiated from its immediate environment only if *o* looks some way different to its immediate environment (to *S*) no matter how subtle the difference is, and even when the difference isn't noticed, *so long as the difference is in principle visually detectable or noticeable by S, hence visible to S* (from *S*'s point of view). The satisfaction of this condition just is what it is for *S* to see *o* as discrete. This requires further working out, but it will serve the discussion that follows. (Note we are taking it that there is a restriction to cases of seeing *o* where it is also the case that *o*'s immediate environment visually appears some way to one too).

Dretske defends the visual differentiation condition on the basis of various various examples (Dretske 1969, pp. 23–28). One is what we can call: *Wall of Cubes*. Consider *S* viewing nine cubic bricks making up a wall of cubes (fig. 1). *S* sees each cube as discrete. But suppose the lights are dimmed and *S* retreats to

a distance such that the ensemble of cubes appears to $S$ as a uniform mass without distinguishable parts. Consequently, cube #5, for instance, is not visually differentiated—$S$ no longer sees it as discrete.

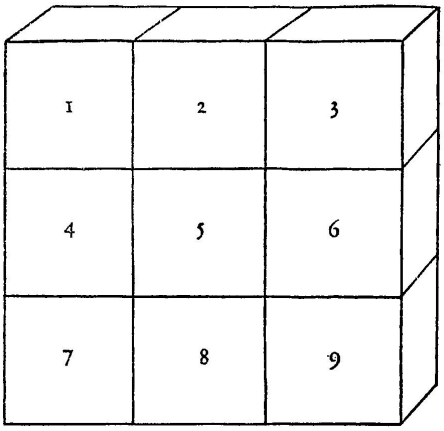


Figure 1: *Wall of Cubes*, see Dretske, p. 24.

Dretske thinks that when the lights are dimmed and $S$ retreats $S$ can no longer *see* cube #5. This is because the cube is not visually differentiated. Although it is not *seen*, still, Dretske thinks, 'cube #5 makes a positive contribution to the way the 'square' [the wall of cubes] looks, in the sense that without it the square might appear to have a hole in the center, and in the sense that the light from #5 is stimulating [$S$'s] visual receptors...' (pp. 23–24). And in this sense, Dretske admits, the cube still *looks some way* to $S$. It's just that the way it looks to $S$ is not characterized by visual differentiation, and hence it looks some way to $S$ even though $S$ doesn't see it.

The visual differentiation condition is relevant to our purposes here for Cassam takes it that the fact that seeing requires visual differentiation can help explain why The Kantian Thesis—that seeing requires the perception of the spatial features of things—is true. I turn to this now.

# 4 Perception of Location

In taking spatial perception to be necessary for seeing Cassam takes perception of location to be privileged:

> one might see an object glinting in the far distance without seeing what shape it is or perceiving its solidity. One might *believe* that the object is shaped and solid, but that is a different matter. On the other hand, there is no question of the glinting object being seen without its being seen as located in relation to the perceiver and,

> perhaps, other objects. One might sometimes misperceive the locations of the things which one sees, but this is not to say that bodies can be seen without being seen as having a spatial location (p. 280).

Supposing that Cassam is interested simple seeing then the claim is that seeing *o* requires seeing *o* as having a spatial location. And this is just a more specific version of The Kantian Thesis (we will return later to supposition that Cassam *is* interested in simple seeing, rather than kind seeing, see section 7).

The question Cassam addresses is why this specific version of the Kantian thesis is true (p. 282)? *What makes it the case* that seeing *o* as having a spatial location is necessary for seeing *o*? Cassam wants a *realist* answer to this question, and for him this means an explanation in terms of the nature of material objects. Cassam says:

> A material object or body cannot exist without a spatial location, and the principle by reference to which material objects are individuated is that two material objects of the same kind cannot be in exactly the same place at the same time.

Cassam relates this fact to the perception of objects:

> at least part of what makes it the case that the perception of location is necessary for the perception of material objects is the fact that material objects...are fundamentally and essentially spatially located (pp. 285–286).

But even if spatial location is fundamental and essential to material objects it doesn't follow that this is a crucial aspect of one's *perception* of material objects. How does Cassam respond to this worry? As follows:

> It is hard to see how our experience could be said to present us with material objects without presenting us with discrete material objects; but experiences that are capable of presenting us with discrete material objects cannot be ones that do not in any way reflect the basis upon which material objects are individuated. In Peacocke's terminology, they must be experiences that are 'suitably sensitive'...to what makes discrete material objects discrete from each other (p. 287. See Peacocke 1993 in Eilan, McCarthy, and Brewer 1993).

Cassam is saying that the perception of location is necessary for seeing material objects as discrete, but an 'inability to perceive discrete material objects as discrete would amount to an inability to perceive material objects.' (p. 287). So Cassam can be understood as arguing as follows (see here also Cassam 2007, Chapter 3), where *o* is some material object:

1. *S* sees *o* only if *S* sees *o* as discrete.
2. *S* sees *o* as discrete only if *S* sees *o* having a spatial location.

Therefore,

3. *S* sees *o* only if *S* sees *o* as having a spatial location.

A crucial element here, then, is premise (1), Dretske's visual differentiation condition on seeing *o*. So if it is not true that to see *o* one must see *o* as discrete this undermines Cassam's explanation of The Kantian Thesis.

I will now argue that it is false that to see *o* one must see *o* as discrete (sections 5 and 6). And so we need to either suspend judgement on the Kantian thesis or offer a different explanation for it. My strategy in section 7 will be to articulate a modified version of The Kantian Thesis and offer some suggestions as to what might explain its truth (given that we can't invoke visual differentiation).

# 5 Against Visual Differentiation

One might attempt to argue against Dretske's condition along the following lines: In the cases we have considered which supposedly motivate the visual differentiation condition it is still the case that the object that is not seen looks some way to the perceiver. In the *Wall of Cubes* case, for instance, cube #5 although not seen still looks some way to *S*. But Dretske admits more than this, he admits that *S* sees the front surface of cube #5, and that is to say, I take it, that *S* sees a *part of* the cube (and something similar would be said for other examples).

But now consider the following principle on seeing *o*:

(P) For any material object *o*, and for any part of *o*, *i*, if *S* sees *i*, then *S* sees *o*.

To be precise we would need to say something about parts of objects, but hopefully we can get by operating with an intuitive sense of a part of an object. For instance, an arm is a part of a human body, a trunk is a part of a tree. But also arbitrary regions or chunks of things are parts of things (where we might demonstrate such parts by saying "that part there"). We often see objects in virtue of seeing their parts (where the 'in virtue of' relation is constitutive, see Martin 2005 in Jackson and Smith 2005, section 2). What (P) claims is that *whenever* one sees a part of a material object, one sees that object. If this is true then Dretske's cases, where *o* is not visually differentiated, and where *S* sees a part of *o*, *are*, *pace* Dretske, cases of seeing *o*. So, Dretske is faced with the following inconsistent triad:

1. The visual differentiation condition.
2. Cases supporting (1) involve seeing parts of *o*.
3. (P)

I take it that Dretske would reject (P). One might argue that (P) is too strong on the basis of counterexamples. Consider the following case given by Martin 2005, p. 706

> Now take a case in which one suddenly sees through a slit a vivid flash of turquoise. Behind the slit someone has walked past wearing a turquoise scarf. So how that person was, in wearing such a scarf, and how that scarf was, being turquoise, were responsible for how things looked to one. Nonetheless, we can't simply determine from that whether one has seen the person, or indeed the scarf.

Suppose we agree that in this case one sees a small part of the scarf, *i* (though this is not indisputable). It is not obvious that we can determine from this fact alone that one sees the scarf in virtue of seeing *i*. So this case may present a counterexample to (P). As Martin says

> Indeed, in this case it seems that what we are inclined to say very much turns on the context: we can imagine a case in which you know that the given individual is liable to wearing such bright colours and that no one else is, so that in the circumstance you would be so placed to determine by sight whether that person had walked past. Against such background assumptions, we can construe a context in which one can truly say one saw the person; as well as a context in which one is prepared only to say that one saw a flash of colour [or, as I would maintain, merely a part of the scarf] (p. 706).

So, it seems plausible that whether $S$ sees $o$ by seeing some part of it is a context-dependent matter (for something like this view, see Clarke 1965 in Black 1965, see also Travis 2004). (One way to pursue this would be think of (P) as a *defeasible* generalization where such generalizations are understood as in Lance and Little 2004, 2007, I hope to pursue this suggestion in further work). But now the question is are there some contexts in which it would be quite intuitive to hold that $S$ can see $o$ by seeing a part of it, despite the fact that $o$ is *not* seen as discrete? In the following sections I offer some cases which I think support this claim.

## 5.1 Jasper

Suppose that we have constructed a wall of cubes, as in fig. 1 above. The cubes are all white. We ask a friend, Jasper, to help us out, and seat him in front of the large construct of nine cubes. We briefly project numbers onto them, so that Jasper knows which cube is which. Then we tell Jasper exactly what we are going to do: "We are going to alter the lighting and simultaneously move the construct back from where you are seated until you no longer see the cubes as discrete, we will then reverse the procedure until once again you see the cubes as discrete".

The whole procedure goes on over time, call the period of time in question $T$, and there are three noteworthy periods of time within $T$: $Tb$ = the beginning period where Jasper sees the cubes as discrete, $Tm$ = the middle period where Jasper doesn't see the cubes as discrete, and $Te$ the end period where once again Jasper sees the cubes as discrete. (Of course, there is a gradual transition from one period to the next, but this doesn't matter for our purposes). One who holds the visual differentiation condition is committed to denying that Jasper sees cube #5 during $Tm$, and can allow that Jasper sees it in the other periods. The reason that Jasper can't see cube #5 in $Tm$ is that it is not visually differentiated during $Tm$. So as soon as the transition has been made to the middle period Jasper *stops seeing cube #5*.

But now imagine that the context is one in which we give Jasper some simple instructions. We ask Jasper to *watch cube #5* for the duration of the procedure, from $Tb$ through $Tm$, to $Te$. Accordingly, our instructions to Jasper are: watch cube #5 for $T$. Jasper, I am claiming, can watch cube #5 over period of time $T$, and since he watches it during $Tm$, he sees the cube, at a certain period, even though he doesn't see it as discrete during that period.

But why can't we just deny that Jasper watches the cube over $T$? After all, one might say, he *can't* watch it during $Tm$ for he can't *see* it during $Tm$ (for he doesn't see it as discrete). I think there are some considerations which put pressure on this response, they form a kind of abductive argument for the claim that Jasper does watch the cube for $T$.

(a) *The task doesn't seem to be impossible:* In asking Jasper to *watch* cube #5 for $T$ (in full knowledge of what will happen to the cube), intuitively—that is, before any *theory* of seeing, such as Dretske's, is in play—we don't *seem* to be setting Jasper a task which it is *impossible* for him to succeed at. We might claim that it *is* impossible, but then some story about why it, pre-theoretically, *seems* possible would need to be offered.

(b) *It seems to Jasper as if he engages in the task successfully:* Let's assume that the procedure begins with Jasper watching the cube. Does Jasper's watching the cube continue uninterrupted for the remaining time? It doesn't seem to Jasper as if his watching the cube stops. Moreover, suppose Jasper exits the room after the experiment and his partner asks him "What have you been doing?" It seems that it would be completely unproblematic (though not maximally informative) for Jasper to say simply: "watching a cube". And likewise it would be unproblematic (but more informative) for Jasper to reply: "watching a cube move backwards and then remain stagnant for a period, and then move forwards, while some guys altered the lighting conditions".

The point is that there is a challenge here, to account for Jasper's activity in such a way that the activity Jasper is engaged in during $Tm$ doesn't enjoin that during $Tm$ Jasper sees cube #5. I am recommending that we explain the *seeming* watching by having it that the situation is one in which Jasper *genuinely does* watch the cube.

(c) *A different explanation?* One might offer an alternative explanation as follows: Suppose we think that on this occasion staring is a way of watching. We might say that Jasper stares into, or watches, the middle of the *wall* (where cube

#5 is). But this doesn't mean that he stares at, or watches, or sees the cube.

But how are we understanding the nature of the *object* of the activity construed in this way? Are we understanding it as being *space* which is stared at, *as opposed* to what is in that space? If so, then there is the following problem: Jasper doesn't *begin* his visual activity by merely watching the space but rather by watching *the cube*. So, there would have to be a switch in the nature of Jasper's watching at $Tm$. That is, Jasper's overall visual activity (which goes on for $T$) would have to be such that it switches (at $Tm$) in nature from being an activity in which Jasper watches the cube to being an activity in which Jasper merely watches the space it occupies. Even if we grant that merely space-based watching is possible the problem is that the switch from object-watching to space-watching doesn't, as it were, "show up" in Jasper's action awareness (I borrow the term 'action awareness' from Peacocke 2008, Chapter 7)

It is quite unlike a situation in which the cube is removed leaving a hole in the middle of the wall. One might think that in such a case Jasper would switch from watching the cube to watching the space it occupied—one might think that Jasper, in such a case, watches, or stares into empty space. But the switch in Jasper's overall visual activity is, plausibly, something that would "show up" as such in his action awareness.

The point is not that every aspect of the nature of Jasper's overall visual activity must figure in Jasper's awareness of that activity. It is not even that any *switch* in elements of Jasper's overall visual activity will have to "show up". For instance, if one were to swap cube #5 and cube #6 so rapidly that Jasper couldn't be aware of it, then insofar as Jasper doesn't alter his gaze, he will (unbeknownst to him) be staring at cube #6, not cube #5. In this sense there will be a swtich in Jasper's overall visual activity from staring at cube #5 to staring at cube #6. This seems possible even though the *switch itself* doesn't show up in Jasper's action awareness. The point is rather that if the activity switches from being directed to a material thing, to merely space, a switch of this kind should show up. Or at least, if one's action awareness doesn't disclose such substantial switching then this is *prima facie* reason to doubt that there *is* any such switching.

Perhaps, then, the suggestion under consideration should be understood differently. Perhaps the suggestion is that Jasper's overall visual activity is directed to the middle *bit* of the wall (so not merely the space in the middle, but rather the *matter* in that space). The problem with this suggestion is that insofar as Jasper does manage to, say, stare at the middle bit of the wall this will be what staring at cube #5 *consists in* (in this context). So once again we would have a situation in which Jasper stares at, and hence watches, cube #5, and hence *sees it*, even though he doesn't see it as discrete.

The case is that there is, upon reflection on Jasper's predicament, something to be accounted for: Jasper *seems* to be watching cube #5 for $T$. Of course, how things seem isn't always how they are. But the point is that in this case a good explanation of things *seeming* the way they do is that they *are* as they seem. That is, what explains why Jasper seems to be engaged in watching the cube for $T$ is simply that this is precisely what he is doing. I have tried to suggest that denying this is counter-intuitive, and an initially plausible alternative explanation of

Jasper's activity is inadequate.

One might offer the following reply: The case as described does not show that visual differentiation is not necessary for seeing *o*, what it does do is force us to reconsider the precise role of visual differentiation and the way in which it is necessary. It is still necessary for seeing even in *Jasper* since Jasper sees cube #5 during *Tm* only because he *previously*—during *Tb*—saw the cube as discrete.

But it is not obvious that we should think that previous visual differentiation is necessary for seeing. Here is a further case to illustrate why such previous visual differentiation is not necessary.

## 5.2 Juliet

Consider Juliet, a security guard at the philosophy lab where Jasper had been watching cube #5. At the end of the day when everyone has gone home Juliet has to inspect all of the rooms to make sure that everything is in order. She enters the room where Jasper had been. The experimental apparatus is left as it was during the *middle period* of Jasper's experiment—so the wall of cubes is far back from the chair that Jasper sat on, and the lights are dimmed. Now, imagine Juliet enters the room, and sees the construct as she does (assume that from her position entering the room she does not see the cubes as discrete). Assume that Juliet makes her way to the chair and sits down. There are instructions before her which say: "stare into the middle of the wall before you and watch". She does this, and nothing happens. She stares for some time, nothing happens. Curious as she is she presses the green button on her right hand side (she doesn't know what it will do). Suddenly the wall moves towards her and the room gets brighter. She is still staring at the middle of the wall and watching as it comes forward. The wall arrives in the position closest to the chair, and Juliet can clearly see that the wall is composed of nine cubes, all of which she sees as discrete. Then the projection comes on and displays the numbers of the cubes.

When she first sat down and stared did Juliet see cube #5? If the answer is yes, then it is clear that it wasn't necessary for her seeing the cube that it *previously* looked some way different from its surroundings to her, since she had no previous visual experience of it as such. Here is why one might think that Juliet *did* see cube #5 all along. When the cubes come forward such that Juliet can visually differentiate them, Juliet is in a position to *realize* something (more specific) about what she had been doing while sitting in the chair. She is in a position to realize something about the activity she was engaged in; namely, staring at and watching cube #5 (imagine her thinking to herself "so *that's* what I *was* staring at"). It follows that Juliet saw cube #5. But Juliet didn't previously see the cube as discrete, so previous visual differentiation of *o* is not necessary for subsequently seeing *o*.

That cube #5 is not differentiated when Juliet first stares into the middle of the wall doesn't mean that she isn't really staring at cube #5, or seeing the cube. It is just that a certain kind of knowledge is not available to her. That is, she can't know what she is directing her visual activity towards. But that one lacks a certain higher-order perspective on what one is doing, or the possibility

of revealing to oneself exactly what one is doing at the time one is doing it, doesn't show that one is not doing it. One can later come to realize in more detail what one was doing.

### Reply to Juliet

One might reply to *Juliet* along these lines. That Juliet *eventually* visually differentiates the cube is partially constitutive of the fact that she (originally) watched (and so saw) the cube. That is to say, we cannot individuate Juliet's perceptual activity independently of the *subsequent* visual differentiation of the cube.

We shouldn't rule this suggestion out in principle given the phenomena of post-dictive effects recorded in some psychological experiments (for discussion see Phillips Forthcoming in Mole, Wu, and Smithies Forthcoming). However, it is no good appealing to such work for, as far as I know, in such cases timing is important, and we can alter the Juliet case so as there is a massive time lag: Suppose Juliet falls asleep as soon as she presses the green button, and so she doesn't see the cubes move towards her and she doesn't see them as discrete. But then suppose that weeks later she is, in her role as a security guard, reviewing security footage, from the CCTV at the philosophy lab. She sees herself sitting in the chair, pressing the button and falling asleep. But then she sees what effect pressing the button had, and she sees, on video, the wall move forwards. She then sees the cubes as discrete. At this stage Juliet realizes something about what she initially—when she was initially in the chair—directed her visually activity towards (imagine her thinking to herself "oh so *that's* what I *was* staring at all those weeks ago"). The video footage is what prompts Juliet to realize something more specific about her initial watching. But if we think that her seeing the video footage, and so seeing the cubes as discrete weeks later, is partially constitutive of her initially seeing the cube, then this can't be assimilated to post-dictive cases as the time lag is significantly different (and this is important for it is only with short time lags that one gets post-dictive effects). The question will then remain as to how it is possible that such subsequent differentiation makes it the case that initially Juliet saw the cube.

The point of these cases is that it is Juliet's *being in a position* to realize something more specific about her perceptual activity that is relevant, not her actually doing so (and so, not any *actual* subsequent visual differentiation).

## 6 Watching and Seeing

So far I have tried to defend the idea that in the circumstances described Jasper and Juliet can stare at and watch cube #5 for $T$. This is supposed to deliver the result that these are contexts in which a subject can see $o$ (by seeing its surface) even though they don't see $o$ as discrete. But one response to this is to say that it relies on a too simplistic understanding of the relation between the perceptual *activity* in question, and the *perception* in question. The response claims that since watching $o$ doesn't entail seeing $o$ (at least not in any straightforward way),

one can't move from the fact that there are cases of watching $o$ which don't require seeing $o$ as discrete to the conclusion that there are cases of seeing $o$ which don't require seeing $o$ as discrete.

It seems that the following assumption has been in play:

(A) If $S$ watches $o$ for some period of time $n$ then, for any time $t$ during $n$, $S$ sees/saw $o$ at $t$.

The problem with this is that it is false (Crowther 2009). Crowther's example is that of watching a bird. It seems that one can watch a bird for $T$ even though, when flying around, it passes behind a tree during a stretch of time internal to $T$. The tree occluding the bird counts as an interruption to one's *seeing* the bird, but it doesn't seem obvious that one doesn't *watch the bird* for $T$. So, one might think, the Jasper case is similar: when the cube becomes undifferentiated at $Tm$, this is an interruption to Jasper's *seeing* the cube, even though he can still watch it for $T$.

Such cases are puzzling since there *is* a connection between watching and seeing, since watching is a *perceptual*, specifically *visual* activity. Crowther's bird case shows that we can't understand that connection in terms of (A). Crowther recommends an alternate understanding. I turn to that now.

## 6.1 Crowther's Event Analysis

Crowther suggests that we understand watching $o$ in terms of watching $o$ $\phi$-ing, and we understand the relation between watching and seeing as follows:

(A*) $S$ watches $o$ $\phi$-ing for $T \rightarrow S$ sees $o$ $\phi$-ing for $T$.

So, one can watch the bird for $T$, and one does so by 'watching it flying along, passing behind the tree, and flying up to its perch again' (Crowther 2009, p. 22). Call this complex event that one watches $B$-ing. That one watches the bird for $T$ by watching it $B$-ing over $T$ means that one sees the bird $B$-ing over $T$. But this seeing *doesn't* entail that one sees *the bird* at every point at which it is $B$-ing, for at some such points the bird is behind the tree.

If (A*) captures the link between watching and seeing, then, one might think that the argument I have been trying to support is flawed. We might say something like the following: Jasper watches the cube for period of time $T$ (which, it will be remembered, includes $Tb$, $Tm$, and $Te$). The seeing that is implied by this watching is this: Jasper sees a complex event involving the cube: the cube moves backwards, the cube goes out of view, the cube comes back into view. Call this complex event of which the cube is a constituent, $C$-ing. So, Jasper sees the cube $C$-ing (that is, Jasper sees the cube moving backwards, going out of view, and coming back into view). And this might be broken down as follows: Through $Tb$ Jasper sees the cube moving backwards, through $Tm$ Jasper sees the cube *going out of view*, and then, through $Te$ he sees it *coming back into view*. This, one might think, is what it is for Jasper to see the cube $C$-ing over period of time $T$. The question is, in order for Jasper to see the cube $C$-ing over

$T$ does Jasper have to see *the cube* at every point internal to $T$? The answer is no, for at $Tm$, Jasper sees the cube going out of view, and in order to see such a (sub-)event, it is not necessary that Jasper sees the cube at every point during the stretch of time over which such a (sub-)event unfolds.

## 6.2 The Object Analysis

This is a fair reply. I would protest that the cube doesn't go out of view at all, and that it seems strained to describe the situation in this way. But this runs the risk of begging the question, or at least of getting us only to a stand-off. It is not obvious what to think about the *Jasper* case when we introduce Crowther's event analysis of watching. I think, however, we can make some progress by thinking again about the *Juliet* case.

In this case Juliet, intuitively, watches the cube for $T$, there are two noteworthy periods: (1) the beginning period of time, $Tb$, when the cube is (a) stationary, and (b) *not* seen as discrete, but (2) there is also the later period, $Te$, when the wall, and so the cube, moves (after Juliet presses the button), and the cube *is* seen as discrete. But now assume that during $Tb$ Juliet watches the cube. Given the state of the cube during $Tb$ we can't understand Juliet's watching of it along Crowther's lines. This is because there is no $\phi$-ing such that the cube is $\phi$-ing (it is doing *nothing*), and hence one can't *watch* the cube by watching it $\phi$-ing.

One might try hold onto the event analysis for this case by insisting that Juliet watches the cube doing *nothing*. But it is just not clear that there is such an event that can be the object of one's visual activity. It *is* true that the cube is doing nothing, but it seems more natural to understand 'the cube is doing nothing' along these lines:

1. $\neg\exists e$ & Subject($e$, the cube)

than these:

1. $\exists e$ doing nothing($e$) & Subject($e$, the cube)

It seems clear, to me at least, that not all watching $o$ is constituted by watching $o$ $\phi$-ing. We can do things like watch the sky, the ocean, or watch the luggage (and here I don't mean monitor it, I mean watch it, by say, staring at it). I can also watch something that is part of some event, even though my watching it is not constituted by my watching the event. For instance, I watch Martha while she plays the concerto, but I am not watching her play the concerto, I am watching *her* (it is just *her* that I am watching, perhaps, because she fascinates me, or because I am besotted by her). It might be that I just don't *attend* to the salient aspects of the event of which she is a part, I just watch her. Likewise, during $Tb$ Juliet simply watches *the cube* (she does so by simply watching the middle bit of the wall, and she does so for that is what the instructions tell her to do).

So, that there is no event of which the cube is subject (which is a suitable candidate for the object of Juliet's watching) shouldn't make us question that Juliet can *watch* the cube. It should rather make us question the generality of

Crowther's proposal. That is not to say that Crowther isn't on to something, but rather that we need to think about different types of cases differently (note Crowther only proposes the event analysis for *core* cases, so this shouldn't be understood as a criticism of Crowther's position). The question, then, is how to understand the relation between watching and seeing—that is, what conception of watching is in play—for *those* cases (and hence, for *Juliet*)? I propose:

(W1) If $S$ watches $o$ for $T$, then

i. $S$ (object) sees $o$ when the watching begins, and

ii. For some moments and stretches of time (during $T$, and after the watching begins), $S$ (object) sees $o$ at those moments and during those stretches of time.

So watching entails *object* seeing in the following sense: watching $o$ cannot begin *without* such object seeing, and watching $o$ cannot persist unless one sees $o$ at some points and for some stretches of time after the watching has begun. (W1) doesn't require that if one watches $o$ for $T$ then one sees $o$ at any moment during $T$. We have the *existential*, not the *universal* quantifier in play here. Watching can be sustained, or preserved, despite interruptions to seeing $o$, according to (W1), as long as those interruptions aren't such as to entail that (ii.) isn't satisfied. That is, as long as those interruptions to the seeing don't entail that $S$ fails to see $o$ at some moments or stretches of time during $T$.

Of course (W1) doesn't give us a full explanation of the connection between watching and seeing. So, one might wonder about what moments and stretches of time during $T$ are the moments and stretches that $S$ needs to see $o$ during such that $S$ can be counted as watching $o$ during $T$? Is there anything we can say about this in general, that is, is there anything we can say that goes for any particular case? There is no context-independent way of specifying the moments/stretches, during $T$, at which $S$ must see $o$ such that $S$'s watching $o$ is preserved for $T$. Let's make things a little more precise by defining the notion of a 'watching-seeing specification', as follows:

> **A Watching-Seeing Specification**, $S\,p$, for a given case $C$ of $S$ watching $o$ for $T$, is something which specifies which moments and stretches of time, during $T$, $S$ must see $o$ at in order that $S$'s watching $o$ is preserved (that is, in order that $S$ watches $o$ for $T$).

I take it that (a) the $S\,p$ in any given case will depend on the context and circumstances of the case, and (b) it is misleading to talk about *the* $S\,p$, since context will (likely) determine a range of $S\,p$'s such that if $S$ watches $o$ for $T$, then if $S$'s seeing $o$ is not in accordance with any one of those $S\,p$'s then $S$ doesn't watch $o$ for $T$. That is, $S$ watches $o$ for $T$ only if $S$'s seeing $o$ is in accordance with one of a range of contextually determined $S\,p$'s (for $S$'s seeing to be 'in accordance with' a given $S\,p$ is just for $S$ to see $o$ at the moments and stretches of time specified in the $S\,p$).

To illustrate, consider the following case, call it, *Tourist*: I am at the airport, I try to watch your luggage for you, for $T$, by staring at it during that time. But at $Tn$ some tourists come between myself and the luggage, they are trying to ask me for some local information, but since their English isn't very good they end up standing between me and the luggage for quite some time whilst they try to sort out their phrase books. I try to get them to step aside a little so I can see the luggage, but (a) they don't understand me, and (b) the airport is crowded. Still, they eventually step aside. So, there is a rather lengthy period of time, $Tn$, during which I don't see the luggage. This seems to be a context in which we would want to say that my *watching*, not just my *seeing* the luggage, is interrupted. That is to say: in *Tourist* there is a range, $R$, of contextually determined $S\,p$'s but $S$'s seeing $o$ in *Tourist* is in accordance with none of the $S\,p$'s in $R$. So, $S$ doesn't watch $o$ for $T$.

How does this conception of watching and its relation to seeing help with *Juliet*? As follows: Juliet watches the cube only if she sees it at the beginning of her watching, and for some periods of time after that (during $Tb$). Which periods of time she is, as it were, *required* to see it at, in order to count as watching it for $Tb$, are given by the range of contextually determined $S\,p$'s. So, since Juliet watches cube #5 throughout $Tb$, she sees the cube at some points during that period of time. But at *no* point in that period of time is the cube visually differentiated. Therefore, seeing $o$ doesn't require visual differentiation.

One reply to this is that I have illegitimately focused on $Tb$—which is only *one* part of the whole event of Juliet's watching. Perhaps when we take into account the other part of the event, namely, $Te$, things will have to be given a different treatment. So, one might argue, Juliet counts as watching the cube at $Tb$ only because of what goes on *after* $Tb$, namely, her watching the event of the cube moving forward at $Te$, and he seeing the cube as discrete at that later time. However, it is not obvious that the focus on $Tb$ *is* illegitimate given the alternate *Juliet* case mentioned earlier. There we imagined that Juliet fell asleep just as she pressed the green button and so couldn't watch the event of the cube coming towards her. What is required for this altered case to support the point I am making is that it be plausible that it is possible for Juliet to come to realize something more specific about her visual activity (namely that she was watching cube #5, not just the wall) at a later point. Suppose the realization is prompted by video evidence weeks later. This still seems to be a scenario in which Juliet comes to realize that she was watching cube #5.

This is consistent with it being the case that when Juliet *doesn't* fall asleep the nature of the event is determined by what happens at *both* $Tb$ and $Te$. The claim is just that we have available a modified case, *Juliet**, which makes the same point but where what subsequently happens (Juliet*'s falling asleep, and seeing footage weeks later) can't have the same claim to determining the event of her watching (the event that occurs only at $Tb$).

I have tried to defend an argument which claims that since subjects can watch cube #5 during a period in which it is *not* visually differentiated, and since, in some sense, watching implies seeing, subjects can see cube #5 without it being visually differentiated. So these are contexts in which such subjects see the

cube in virtue of seeing a part of it, even though they don't see the cube as discrete.

# 7 Spatial Perception

As we saw in section 4 what makes it the case that spatial perception is necessary for seeing *o*, according to Cassam, is (a) the fact that being located is fundamental and essential to the nature of *o*, and (b) the fact that *o* must be seen as discrete, and so as having a spatial location. Requiring that an object is seen only if it is seen as discrete involves, or amounts to, imposing a visual differentiation condition on seeing *o*. However, if visual differentiation isn't required for seeing *o*, as I have argued, then we are yet to articulate why spatial perception is necessary for seeing *o*.

I think it would be legitimate for Cassam to reply to this by drawing on the distinction mentioned earlier between two species of object seeing (section 2). Cassam could say that visual differentiation is only a condition on *kind seeing*. This would be to say that one cannot see *o* as an *F* unless one sees *o* as discrete. Suppose that *S* sees *o* as a cup; so *S* has a visual experience, *e*, of the cup, with a phenomenal character such that in having *e* *o* looks like or looks to be a cup to *S*. But it is not clear that we have a grip on the ideas of *o* looking like or or looking to be a cup (at least in straightforward cases) in the absence of *o* looking like or looking to be, say, a cup-shaped thing (this is part of what's involved in *o* having the look of a cup). But if something is to look *that* way to one then presumably it must be seen as discrete (since, presumably, one would need to see its outer boundaries in order for its specific shape to be visually apparent to one). There is a lot more to be said here, still it seems plausible that something like the visual differentiation condition holds for kind seeing.

If we grant this, then what are we to make of The Kantian Thesis as applied to *simple* seeing, which has been the primary focus here? It might still be that Cassam's specific version of The Kantian Thesis is true for simple seeing—that to see *o* one must see it as having a spatial location. It is just that we are not entitled to explain or argue for the truth of this specific version of The Kantian Thesis on the basis of the premise that to see *o* one must see *o* as discrete, for this, I have argued, is false. I want to articulate an alternative (though not incompatible) version of The Kantian Thesis, which holds for both simple seeing and kind seeing. The specific version of the thesis I have in mind is this:

> *The Determinable Spatiality Thesis (DST):*
> For any perceiver *S*, and any material object *o*, for *S* to see *o* requires that *S* sees *o* as *determinably spatial*; where this means *S* sees *o* as shaped, or extended, or located (and so on for other determinable spatial features, and where the disjunction is inclusive).

Generic, or determinable spatial features (e.g. *being shaped, extended, located*) contrast with the *specific* or *determinate* spatial features (e.g. *being square shaped*). Although for *o* to *have* a determinable spatial feature it must *have* a determinate

spatial feature, it doesn't follow that for *o* to *look* some determinable spatial way to one it must *look* some determinate spatial way to one.

One can see an object without seeing (some of) its *determinate* spatial features, and one can see an object whilst *mis*perceiving its determinate spatial features (e.g., an Ames room). When Juliet doesn't see the cube as discrete she doesn't see the cube as cubic, nor does she see its surface as square-shaped, nor does she see the cube as located relative to the other cubes; moreover, Juliet doesn't see the specific way in which the cube is extended in space. But Juliet sees the cube. One way to handle this and other cases would be to deny The Kantian Thesis. That is, one might say: such cases show that the perception of spatiality is not required for seeing. But this seems to be in tension with the *phenomenology* of such cases. It still seems, we can suppose, to Juliet as if there is something *spatial* about her experience of the cube, that is, her visual experience still seems to have a spatial character. At this stage one might try to find further determinate spatial features which are present in (or represented by) Juliet's experience of the cube. But another strategy is to capture things in terms of the specific version of The Kantian Thesis outlined above, DST. Juliet may fail to see the cube as having various determinate spatial features, but she sees it as *shaped*, *located*, and *extended*.

According to DST it is the visual appearance of the *generic* or *determinable* spatial features of things which is necessary for seeing those things. To say that to see *o* requires one to see *o* as determinably spatial is to say that *S* sees *o* only if *S* sees *o* as $\phi$ where the value of $\phi$ is some determinable spatial feature (or range of such features). Take the determinable spatial feature of *being shaped*; according to DST *S* sees *o* only if *S* sees *o* as shaped. In line with something noted earlier (section 2) it might be that we have to understand *o* looking shaped to *S* as *o* looking like (having the look of) a shaped thing to *S*. However precisely we understand this the kind of fact we are trying to register is a fact about the phenomenal character of one's experience. That is to say, to paraphrase Strawson, in seeing *o*, the phenomenal character of one's experience is *irradiated by*, or *infused* with, the *appearance* or *look* of (determinable) spatiality. In this sense it seems quite appropriate to say that, according to DST, seeing *o* requires the *phenomenal presence* of spatiality.

I have just articulated a version of The Kantian Thesis. But I haven't argued for it. We can ask, though, what might *explain* the truth of DTS, *supposing* that it is true?

One suggestion takes inspiration from the following remark of Warnock's: 'we may say for a start that one who sees must have a field of vision, and that what he may rightly be said to see must be in it' (1954, p. 53). That is to say, it is partially constitutive of vision that it involves a field of vision, and if we see material objects, they must be in one's field of vision. A field of vision is something which is essentially spatially structured (one *might* go as far as to say that it just *is* the region of three-dimensional space in which the things one sees are spatially located, but that is not necessary for my purposes here). Strawson's characterization of the visual field, which we shouldn't necessarily identify with the field of vision (see Clark 1996), is nonetheless apt: one's field of vision is 'necessar-

ily extended at any moment, and its parts must exhibit spatial relations to each other' (Strawson 1959, p. 65). As I understand this it is a claim about visual *experience*—instances of vision that have a conscious or phenomenal character. Baring this restriction in mind we can say that it is constitutive of visual experience that it involves a field of visual experience. The field of visual experience is *spatial*, and it is a field of *visual experience*—this is to emphasize the fact visual experiences themselves are spatially structured.

But this puts a constraint on how we are to understand what it is for an object to *be in* one's field of visual experience. As a minimal requirement we can say that for an object, *o*, to be in one's field of visual experience involves *o* appearing some spatial way to one (to the experiencer). So, given that the field of one's visual experience is essentially spatial—and given that part of what this involves is that one's experience itself has a spatial structure—for an object to be in one's field of visual experience requires that it appears in some spatial way to one. If an object didn't look determinably spatial to one then it wouldn't be possible for it to be in one's field of visual experience, and therefore it wouldn't be possible for it to be seen. So, supposing that DTS is true, one might attempt to explain its truth in this way: given that it is partially constitutive of visual experience that it involves a field of visual experience, if one is to see *o* then one must see *o* as determinably spatial.

If we carry on supposing that DTS is true there is more we can offer regarding an explanation of its truth, in line with something we saw Cassam emphasize earlier. Cassam wanted to explain the truth of The Kantian Thesis partly in terms of the nature of the material objects that we see. There is a sense in which we can still do this if we accept a certain claim about the nature of the appearance of determinable spatiality. Determinable spatial features are essential to material objects being what they are. So, is there a sense in which DST reflects the metaphysical nature of the objects that we see? I think there is, but conditional on it being the case that the appearance of determinable spatiality (the look of being shaped, etc) that is necessary for seeing *o* is wholly constituted by those material objects possessing determinable spatial features. That is, on condition that the determinable spatial look or appearance of *o* owes simply to *o*'s possession of determinable spatial features. The condition is that the determinable spatial *appearance* properties of something (its generic spatial way of looking) are constituted by their determinable spatial *properties*. (This is to utilize some kind of *objectivism* about appearances, see e.g., Travis 2004, Hyman 2006, Brewer 2007 and Brewer 2008 in Haddock and Macpherson 2008, Martin, forthcoming, Part 2. The seeds of such views can be found in Wilson 1926/1969, Chapter XII, and Prichard 1906, 1909).

If we accept the above remarks about the nature of visual experience and objectivism about (spatial) appearances then we can say that what explains the truth of DST is (a) the fact that it is a condition of the possibility of *o* being seen by *S* that *o* is in *S*'s field of visual experience, and (b) that for *o* to enter into *S*'s field of visual experience it must look some determinable spatial way to *S*, and finally (c) for *o* to have determinable spatial appearance properties (and so for it look some determinable spatial way to *S*), is for it to have determinable

spatial properties (which it *must* have). So part of why spatial perception is necessary for object seeing is that material objects have a certain metaphysical nature, they are *spatial*. Explaining The Kantian Thesis in this way contrasts with Kant's own *idealist* explanation of it in the Transcendental Aesthetic (see Kant 1781/1787).

These are suggestions. I don't offer them as an argument for DTS—that would require much further discussion. But they are the seeds of the ways in which one might develop and explain DTS, and so The Kantian Thesis. I want to end by mentioning an interesting consequence of DTS.

As Vesey 1965 observes, 'The less definite one's perception the less chance of its being non-veridical' (p. 73). We can exploit this remark in the following way: it is just not possible for one to visually misperceive the determinable spatial properties of the material objects that one sees. There is no such thing as seeing $o$ as determinably spatial when in fact $o$ is *not* determinably spatial (all material objects essentially have determinable spatial features). This stands in contrast to our perception of determinate spatial properties. It is possible to misperceive the, say, shape of something. One can see $o$ as $\phi$-shaped when in fact it is *not* $\phi$-shaped (this might be as innocent as $o$ looking like a $\phi$-shaped thing, when it is not in fact a $\phi$-shaped thing). And similar things can be said for other determinate spatial features.

Why is this significant? One way in which it is significant is in understanding the epistemic significance of seeing objects. One way to articulate the way in which seeing $o$ is epistemically significant—a way which is, like many such ways, disputable—is to say the following: for any subject $S$ who is cognitively equipped for knowledge, if $S$ sees $o$ then $S$ must be in a position to know *something* about what they see. Suppose we accept this, then it seems that seeing $o$ must be veridical in *some* respect (that is, seeing $o$ can't be wholly non-veridical). But it is a consequence of DTS and the explanation of it suggested here that seeing $o$ *is*, necessarily, veridical in certain respects: with respect to the determinable spatial features of things. So we can say this: at least one way in which seeing $o$ puts one in a position to know *something* about $o$ is that seeing $o$ puts one in a position to know that $o$ is $\phi$, where $\phi$ is some, or some range of determinable spatial features.

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