

LOOKS ARE SITUATION-DEPENDENT  
PROPERTIES

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by  
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And hereby certify that, in their opinion, it is worthy of acceptance.

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I dedicate this work to my mom, Devona M. Moore, and my dad, Douglas J. Moore, for their unflinching support in my pursuit of my, sometimes strange, philosophical interests.

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## **Looks are Situation-Dependent Properties**

By Douglas Moore

Dr. Matthew McGrath

### **ABSTRACT**

This thesis concerns the distinction between appearance and reality. Particularly, the metaphysical nature of a class of visual appearances that I call “looks.” I answer the question of what looks are. My position constitutes a break with philosophical tradition: looks are not mind-dependent properties, but objective--mind-independent--properties of objects. They are not, however, intrinsic properties, but relational properties objects have of projecting light of a certain informational character to a viewpoint. Looks-properties are instantiated relative to certain of the intrinsic properties of objects, spatial relations between objects and viewpoints, and environmental conditions on which the character of the light at the viewpoint depend.

## 1. Introduction

My topic here concerns the distinction between appearance and reality. Particularly, the nature of visual appearances, which I will call “looks.” The main question concerns what looks are. I will break with philosophical tradition: looks are not mind-dependent properties, but objective--that is mind-independent--properties of objects. Looks are not, however, intrinsic properties, but rather are relational properties objects have of projecting light of a certain character to a viewpoint. They are instantiated relative to certain of the intrinsic properties of objects, spatial relations between objects and viewpoints, and environmental conditions on which the character of the light at the viewpoint depend.

In outline, my argument will be as follows: the most compelling account according to which looks-properties are objective and intrinsic properties of objects fails for three reasons. First, it's plausible that it collapses into a view on which objects have both objective, intrinsic looks, and perceiver-dependent looks. Second, the underlying semantics necessary to make the view intelligible effectively collapses the meaning of “x looks F” into “x looks F to me” in such a way that it's inexplicable why they differ in their susceptibility to challenge. Finally, I will provide an example of a possible object--“sphere”--with the objective, intrinsic properties that ordinary objects have, but with no looks-properties. That the sphere has no looks is in need of explanation. Frank Jackson's view, according to which looks-properties are complexes of intrinsic properties

and relations is ruled out on the grounds that it does not explain how objects can have the same look, but different complexes. I eliminate the most plausible perceiver-dependent view: that to look F is to be disposed to look F to a certain class of perceivers, since the view is inconsistent with the sphere example. I give reason to reject perceiver-dependent views according to which looks are relativized to normal perceivers in normal conditions on the grounds that we can provide a simpler explanation of why the sphere has no look, which does not appeal to the problematic notion of normality. Finally, I argue that the web of dependence relations brought out by variations on the sphere example points to a best candidate for the class of properties to be identified with looks properties: objective, but situation-dependent and thus relational properties of objects concerning the character of light they project to viewpoints.

## **2. History and Relevance**

The distinction between appearance and reality is well-worn philosophical territory and, historically, answers have tended strongly towards identifying appearances with something mind-dependent. Perhaps the first clear example of the distinction comes from Plato. In the Allegory of the Cave Plato describes the separation between the ways in which things appear to us and the ways things are: appearances are only shadows of the way things are. Later, Kant made much of the same distinction between the noumenal and the phenomenal. The noumenal world is the world as it is in itself, and the phenomenal world is the world as it is to us, where how the

world is to us depends on us. Berkeley collapsed the distinction between appearance and reality: appearance and reality are the same and both are mind-dependent. In the early twentieth century, Bertrand Russell was concerned with the way things change in appearance with perspective, which he addressed with a metaphysics of perception in which we are immediately acquainted not with objects or their properties, but with mind-dependent sense data. Finally, besides being relevant to the metaphysics of perception, and being of intrinsic interest, the distinction between appearance and reality bears on issues in epistemology concerning how we know of the external world. If we know about things in virtue of their looks, then we might be curious as to what those looks are in order to understand how looks are something in virtue of which we can know of the world. It is to the question of the nature of looks that I now turn.

### **3. Martin and Basic Visible Properties**

I will begin by examining the simplest view concerning what looks-properties are. According to this view, looks properties are identical to objective, mind-independent, basic visible properties such as size, shape, and color (call these “v-properties”). The initial question is simple: could looks-properties be v-properties? Initially, it seems clear that we must say no. On my desk now is a coffee mug. As I move it around the desk, changing its distance from me and turning it on its various axes, the way it looks changes, but nothing about those activities changes the v-properties of the mug. Its looks-properties change, but its v-properties do not. Given

that, by Leibniz's Law, we can conclude that v-properties are not looks-properties. At first glance, the argument seems clear and decisive, but the identification of looks-properties with v-properties is not so easily dispensed with.

Michael Martin has argued that looks-properties just are v-properties.<sup>1</sup> Martin's view is that, when I move the mug around, its appearance does not change. Only the way it strikes me changes. He attempts to make this coherent by constructing a semantics of looks-statements and then applying it to cases of perceptual variation such as the mug example. For example, the statement "the stick looks bent" when uttered when the stick is submerged in water is true, even if the stick is straight. According to Martin's semantics, the statement "the stick looks bent" has the semantics of a comparative: the stick looks similar to the way bent things look. But what way do bent things look? Is the comparison between v-properties of the stick and v-properties of bent things? We can't be comparing the relevant v-property of bent things--that of being bent--to some property of the stick. The stick has no property similar to bentness. Martin's answer is that "the stick looks bent" is true in virtue of the way the stick strikes the utterer of the sentence psychologically. Martin denies that the appearances of the stick change when submerged in water. Rather, his view entails that when we observe the stick out of water and in the water, the stick strikes us differently in each case. When the stick is

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<sup>1</sup> Martin, M. G. F. "What's in a Look?" In *Perceiving the World*, edited by Bence Nanay, 160–225. Oxford University Press, 2010.

submerged it strikes us as bent things do, but when it is out of water, it strikes us in a different way.<sup>2</sup>

Although Martin's view has great initial appeal, it is, unfortunately, problematic. There are three serious problems with it. First, the natural question is *why* does the stick strike us as bent when in water and not bent when out of water? The v-properties view, and thus Martin's view, can handle the latter part of the question easily. The stick does not look bent when out of water because the stick is not bent, but it's clear that the stick's looking bent in water cannot be explained by its v-properties. Rather, as mentioned above, there must be some other property or properties which explain its striking one as bent. What sort of other properties? Perhaps psychological properties of perceivers concerning how objects strike them. But by endorsing that view, Martin would be committed to thinking that good candidates for looks-properties are properties of objects corresponding to their striking perceivers in certain ways--what I will call s-properties, which are relational or dispositional properties concerned with objects striking a certain class of perceivers in certain conditions in certain ways. So x looks red iff x strikes (or looks to) (a certain class of) perceivers (in certain conditions) as red, or x looks red iff x has or manifests a disposition to strike (a certain class of) perceivers (in certain conditions) as red. Presumably, Martin is committed to thinking that there are a full range of such properties for all ways that an object

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<sup>2</sup> Ibid., 215.

might strike perceivers.<sup>3</sup> Further, if Martin is right concerning the semantics, they seem quite good candidates for a general account of looks properties:

x looks F iff in optimal conditions x strikes ordinary perceivers as F.

But Martin might hold out and deny that such properties are plausible candidates for looks-properties. His semantics does not obviously entail that he must identify some looks-properties with s-properties. However, by Martin's own lights, the simplest semantic account is preferable. So, if there is a simpler semantics which explains all of the data at least as well as rival theories, and entails that the best candidates for looks-properties are properties concerning ways objects strike us, Martin will be committed to such properties as good (perhaps the best) candidates for looks-properties. Kathrin Glüer provides just such an account.

Glüer argues that Martin's semantics of looks statements is doubly contextual.<sup>4</sup> Martin gives his semantics for the statement "that model looks pregnant," which takes the following form,

$\exists s$  [has (that model, s)  $\wedge$  [Look(s) SIM(C(Pregnant, Look, k), (s))]]<sup>5</sup>

And Glüer explains it as follows,

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<sup>3</sup> Since there will be a way an object strikes a perceiver for every way an object looks to a perceiver.

<sup>4</sup> Glüer, Kathrin. "Martin on the Semantics of 'Looks.'" *Thought: A Journal of Philosophy* 1, no. 4 (2012): 292–300.

<sup>5</sup> Martin, "What's in a Look," 172.

Here we are to take SIM as a predicate of predicates and individuals:  $SIM(F, i)$  it is true of  $i$  just in case  $i$  is relevantly similar to the  $F$ s; the metric of similarity (and so, which function is selected) being itself a contextually determined matter . . . In turn we should understand  $C(F, R, k)$  as the function which returns the value that the psychological operation *getting-the-characteristic* ought to return for the lexical item  $F$ , for respect  $R$ , given a contextual restriction  $k$ .<sup>6</sup>

Glüer reckons that Martin first needs a context parameter to restrict what is characteristic of the  $F$ s being compared--the work which  $k$  does-- and a second to set whether the measure of comparison is between basic visible properties of objects and ways objects strike perceivers psychologically--i.e. to determine what work SIM is supposed to do. So, she says that the logical form Martin gave above is not sufficient to capture what Martin intends, rather, Martin's semantics needs the following amendment,

$$\exists y (\text{has}(o, y) \ \& \ (\text{WL}(y) \ \& \ \text{SIM}(C(F, \text{WL}, k), y, c)))^7$$

Where  $o$  is an object, WL specifies a way of looking, SIM is as described

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<sup>6</sup> Glüer, "Looks," 294.

<sup>7</sup> Ibid.

above,  $C$  is a function restricted by the context parameter  $k$ , returning the characteristic way of looking of a class of  $F$ s on that restriction, and  $c$  is a context parameter that sets the similarity measure of  $SIM$ . Given this account of the semantics of looks statements, she thinks, we can see that there is a simpler semantics that does not require double contextual elements, which retains the function  $C$  and replaces  $SIM$  with the identity function ( $ID$ ):

$$\exists y (\text{has}(o, y) \ \& \ (\text{WL}(y) \ \& \ \text{ID}(C(F, \text{WL}, k), y)))^8$$

Rather than requiring that context determine the relata of a similarity relation and whether the measure of similarity is between features of objects or of ways objects strike perceivers, the above semantics eliminates the need for context to determine the measure of similarity by changing the relevant relation from similarity to identity and restricting the relata to ways of striking perceivers.

Given this semantics and the plausible assumption that the best explanation for why objects strike perceivers in certain ways is that objects instantiate  $s$ -properties, Glüer and Martin are committed to there being properties concerning ways objects strike perceivers, but Glüer provides a more semantically parsimonious account of looks statements, avoiding the additional context variable. If Glüer is right, then by Martin's own lights, he

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

should endorse the existence of plausible candidates for looks-properties, properties concerning how objects strike us, which are not among the v-properties objects have, and not identify looks-properties with v-properties, but with s-properties. This is a bad result for Martin. It seems that his view collapses into a perceiver-dependent view.

The second problem concerns the function of what would seem to be sentences with the same content. Is it really plausible that the sort of shift determined by context that Martin supposes happens actually does happen? That such a shift occurs is plausible in certain cases. When we say of a dog “it looks dangerous” we might be taken to be referring to v-properties of the dog that are similar to properties characteristic of dangerous animals. But if someone replies “Really? It’s a twenty pound poodle and all of its teeth have fallen out” we might fall back on “Well, it *looks* dangerous,” where the context has determined that “it looks dangerous” has shifted in meaning to “it looks dangerous to me” In the case of “it *looks* dangerous” it’s plausible that context has shifted the comparison to ways objects strike us psychologically. While it makes sense to challenge a claim such as “the dog looks dangerous” it does not clearly make sense to challenge a claim such as “the dog looks dangerous to me.” The problem is now that, on Martin’s semantics, “the stick looks bent’ seems to operate in the way that “the dog looks dangerous to me” operates, or more precisely, the way that “the stick looks bent to me” does. But this is plainly false. It makes sense to challenge such claims as “the

stick looks bent.” Since it makes sense to challenge “the stick looks bent” but not “the dog looks dangerous to me” it can’t be that they are operating in the same way. We need some way to distinguish the former from the latter and the best way to do that seems to be to say that, in the latter case, we are reporting ways objects strike us psychologically and the ways things strike us psychologically is cognitively inaccessible to others, which explains the report’s resistance to challenge, but then it can’t be that we are saying the same thing in the former case.

To be more precise, according to Martin, there does not seem to be any *semantic* difference between “the stick looks bent to me” and “the stick looks bent” (when submerged). When either is uttered, the semantic content is something like: I am currently having an experience of the stick that is similar in certain ways to the experiences I have when perceiving bent things. Consider Martin’s explanation of what explains the assertibility of “the stick looks bent” when uttered when the stick is submerged: “. . . we have a simple answer to the question of what could be in common between the way the stick is and the way bent things are. The stick is similar to bent things simply with respect to how it strikes me.”<sup>9</sup> But then “the stick looks bent” uttered when the stick is submerged, on Martin’s account, actually compares a way one is struck psychologically with ways one is generally struck when seeing bent things. As such, “the stick looks bent” involves a psychological report and a comparison and seems to have largely the same content as “the stick looks bent to me.” Consider

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<sup>9</sup> Martin, “What’s in a Look,” 215.

Martin's account of "the stick looks bent to me: " in uttering [the stick looks bent to me'] I am at least putting forward the opinion that as things are for me subjectively, it is very similar to how it is for one . . . when confronting characteristic bent things."<sup>10</sup> Martin needs to explain *why* the two function differently. Why is it that "the stick looks bent" is open to challenge and "the stick looks bent to me" is not?

Speaker intention will not be sufficient to explain the difference. A speaker may utter "the stick looks bent" and *intend* that it be taken as resistant to challenge in the way that "the stick looks bent to me" is, but "the stick looks bent" remains open to challenge despite the speaker's intention. Nor will context be enough to determine when an assertion is resistant to challenge on Martin's view. In order for context to do this work, it would have to change the meaning of the assertion but, on Martin's semantics, we do not have the necessary machinery to do the required work. If Glüer is right, Martin's semantics involves two contextually sensitive elements: C and SIM, but C picks out a class for comparison and SIM a measure of similarity and it's hard to see how C could do any work relevant to whether or not an utterance is open to challenge. SIM could do the work by shifting the measure from v-properties to ways perceivers are struck psychologically, but this is precisely the move that is not open to Martin because of his semantic account of looks-statements. We can conclude that Martin's view, as it stands, cannot explain why x looks F statements can have the same content as x looks F to S statements and

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<sup>10</sup> Ibid., 214-15.

differ with respect to whether they are open to challenge.<sup>11</sup>

#### **4. Sphere**

The third problem with Martin's view is that there are non-semantic, metaphysical reasons to suppose that looks-properties are more than the basic, visible properties of objects: no object could have looks properties apart from the existence of, at least, a viewpoint, but objects could have ordinary visible properties apart from the existence of a viewpoint.<sup>12</sup>

Consider the following possible world: call this world "Sphere." In Sphere, there exists only one object, a perfectly smooth sphere composed of continuous, opaque, matter with a radius of ten meters. In Sphere, space extends only as far as the outer surface of the sphere, such that there is no space beyond the surface. Now the question is, does the sphere have a look? Intuitively, the answer seems to be no. Now, if it's true that the sphere does not have a look, then looks-properties are not v-properties, since the sphere presumably has a complete (or nearly complete) set of v-properties.<sup>13</sup>

#### **5. What explains Sphere?**

If it's true that the sphere in Sphere does not have a look, then we ought to be concerned with what the best explanation of that fact is. I will

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<sup>11</sup> Martin gestures at degrees of subjectivity being introduced to explain the difference, but does not seem to spell out how these degrees are introduced non-semantically.

<sup>12</sup> I will understand "viewpoint" as McGrath (forthcoming) defines it. Viewpoints are "positions in physical space from which one might view an object together with an egocentric coordinate system, specifying up/down and right/left." The idea is to specify a frame of reference so that issues with relative object orientation are dealt with which would otherwise be problematic.

<sup>13</sup> I say "nearly complete" because I want to leave it open that the sphere is not colored intrinsically. Color might be mere looks-property.

consider several explanations, not all of which are mutually exclusive:

**Perceiver Dependence:** looks-properties could be dispositions to affect perceivers or relations between objects and perceivers. I will call such theories perceiver-dependent views.<sup>14</sup> On perceiver-dependent views, since there are no perceivers in Sphere, there are no look.<sup>15</sup>

**Complex Identity:** looks properties are identical to complexes of properties that include certain relational and environmental properties. I will call such complexes J-complexes.<sup>16</sup> J-complexes are complexes of v-properties along with “spatial relational properties such as distance and orientation as well as environmental conditions such as the direction and character of the illumination falling on the object relative to the viewpoint, where the latter relational properties are relations to the viewpoint rather than any perceiver.”<sup>17</sup>

**Viewpoint Dependence:** looks-properties are relational properties that hold between objects and viewpoints.

**Light Dependence:** looks-properties depend upon the presence of

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<sup>14</sup> I do not think that dispositions are relational properties, but manifestations of dispositions may well be relational.

<sup>15</sup> Note one view that is ruled out immediately: views on which there is some dependence on possible perceivers. The sphere has no look even though it's metaphysically possible that a perceiver come to be in Sphere--all that is entailed is that space would have to expand--but the sphere lacks a look even though it is metaphysically possible that there be a perceiver. I believe that dispositionalist accounts are ruled out as well, but I will discuss that in the body of the paper.

<sup>16</sup> Matthew McGrath in “A Metaphysics of Looks.” (Forthcoming) calls these “Jacksonian Complexes.” I've taken the liberty of abbreviating for simplicity.

<sup>17</sup> Ibid.

light.

## 6. Examining the Explanations

Consider Complex identity first. The idea here would be that, when we see the looks of things, we are, necessarily, seeing complexes of intrinsic properties along with spatial relations, environmental properties and the like. Perhaps some necessary component of the complex is missing from Sphere and, since these complexes are identical to the looks of objects, the sphere does not have any looks. The explanation clearly works to explain why the sphere has no look, since some relations necessary to form an appropriate J-complex are missing from Sphere (e.g. appropriate spatial relations). However, there are other reasons to reject the view that J-complexes are looks-properties. If J-complexes are looks properties, then cases in which things have the same looks should be cases in which they have the same complexes of properties, but there are cases in which things have the same looks and different complexes of properties. Imagine a rubik's cube in normal light and a forced-perspective drawing of a rubik's cube in the same light. It may be that the cube and the drawing have precisely the same look. Both look like a three-dimensional cube, but they have very different complexes of properties.<sup>18</sup> For example, the forced-perspective drawing differs with respect to its intrinsic properties by being

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<sup>18</sup> We can stipulate that the cube and drawing differ with respect nearly all of the elements of their respective complexes: distance, intrinsic properties, and environmental conditions. It still seems that the cube and drawing could look precisely the same as long as the elements of the drawing covaried in the right ways.

two dimensional rather than three dimensional.<sup>19</sup> While perceptual variation where we wouldn't expect it causes problems for the view that looks-properties are basic visual properties of objects, lack of perceptual variation where we would expect it causes problems for the J-complexes view. J-complexes are just poor candidates for identifying with looks-properties.

Consider Viewpoint Dependence. It suggests that what is going on in Sphere is that the sphere does not have a look because it is not spatially related to any viewpoint. Remember that space extended only to the edge of the sphere in the example, but imagine a variation on Sphere in which space extends several meters out from the sphere: does the sphere then have looks-properties? It is not clear, but it seems reasonable to lean towards a negative answer here, given that the causal medium for things looking ways relative to viewpoints is light, and so light seems necessary for such looks. If that is so, then looks cannot merely depend on the presence of appropriate viewpoints.

What about Light Dependence? It suggests that it is the absence of light that explains our results in Sphere. As above, it seems plausible that this is part of the explanation. But is light sufficient for an object to have a look? This can be ruled out by a variation on the Sphere example.

Consider a modified example according to which there is light in Sphere. Suppose that the sphere is composed of continuous, opaque, luminescent matter. I do not think that this changes our intuitions concerning whether

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<sup>19</sup> McGrath, "A Metaphysics."

the sphere has a look. It still does not look any way.

The light-dependence and viewpoint-dependence options are not mutually exclusive. Viewpoint alone is not sufficient: just imagine Sphere and imagine the space around the sphere extending significantly: intuitively, the sphere doesn't have a look then either.<sup>20</sup> But light is not sufficient sans viewpoint, as in the luminescent sphere example. If that is right, then it suggests that a viewpoint and the presence of light are not independently sufficient for looks. Indeed, spatial relations and light will not be jointly sufficient for the presence of looks: we must include environmental conditions. Consider a luminescent sphere world in which space is extended to include viewpoints, but in which an opaque object completely occludes the sphere from all viewpoints. Intuitively, the sphere still does not have a look.<sup>21</sup> But, if the object were not occluded from the viewpoints it becomes very plausible that the sphere has a look. This suggests that instantiation of a viewpoint-relative looks-property depends

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<sup>20</sup> Biographically, this has the phenomenology of an intuition, but perhaps it is a considered judgment, given that it constitutes a reversal of my initial intuitions concerning the case.

<sup>21</sup> One might object that the sphere does have a look. After all, we could see it in the absence of the occluder. I think there are two lines of response. First, it's plausible that the sphere in the original example doesn't have a look, but similar counterfactuals are true of it: we could see it if there were light, a viewpoint, and the like. Our intuitions should not then differ in this case. Second, the example can be modified. Perhaps the example can be constructed such that the occluding object necessarily occludes the sphere. If the sphere exists, it is occluded (to make sense of the other examples, let us say the sphere has a different nature from the original sphere). Then the counterfactuals would be false, the sphere could not be seen, and would have no look. The upshot would be the same: there is a dependence on environmental conditions for an object to have a look. Another objection might be that the sphere emits light if it's luminescent. If it emits light, then it looks light rather than dark. But if it looks light rather than dark, then it looks some way. So it has looks. I would respond that it does not follow that the sphere looks light rather than dark, just as it does not follow from the fact that a stick is straight that it looks straight when immersed in water.

on spatial relations, the presence of light, and the holding of certain environmental conditions.

Consider environmental conditions that affect the character of light emitted to a viewpoint from an object. Here, let us take “environmental conditions” very broadly. Environmental conditions will be facts concerning what objects and light sources are present in the environment, what the nature of the light coming from the light sources is, as well as properties of the secondary objects in the environment, such as size, shape, position relative to viewpoint and object, and relations such as relative speed and direction of movement. A star moving rapidly away will appear to shift into the red part of the visible spectrum, while a rapidly-approaching object will shift into the blue. Such conditions and their kind I will include under the heading of “environmental conditions.” What do these conditions affect with respect to the looks of things? It’s obvious in the case of relative speed and motion: light is shifted into the red or blue part of the spectrum, so relative direction of motion and speed affect the nature of light coming from an object to a viewpoint. It is almost as clear that other objects in the environment and the presence of light sources, as well as the nature of the light from the sources, affect the character of light coming from the object to the viewpoint. The white table in red light looks red *because* of the red light source. An object B occluding another object O relative to a viewpoint V causally prevents light from O from reaching V. A lens positioned between O and V magnifies the light coming from O to V, thus

causing O to look larger. So, in paradigm cases, environmental conditions causally affect the character of light emitted to a viewpoint.

Of course, intrinsic properties of objects have effects on the character of light coming from the object to the viewpoint. Perhaps the clearest is that of surface reflectance properties. If an object is made of material that absorbs one hundred percent of incident light, it will look much different from an object that is made of a highly reflective or normal material. But, perhaps less obviously, shape and size will affect the character of light. Consider shape: surface reflectance plus, say, whether a surface is concave or convex will affect the character of light. If this were not so, then it would be hard to see how we would be able to perceive the three-dimensional shape of such objects--i.e. whether the object was concave or convex.

We now have the resources for adequately explaining the intuitions in the sphere examples. Once we modify sphere to include viewpoints, light, and the holding of certain negative environmental conditions, it is plausible that the sphere has a look. We need only specify looks as a property that varies with and is dependent upon intrinsic properties of objects, spatial relations, and environmental features. I will turn to that project shortly, but first perceiver dependence has yet to be addressed.

### **7. Perceiver Dependence**

Historically, looks have generally been taken to be perceiver-dependent, so perhaps one will resist the intuition that the sphere has a look even in

the absence of a perceiver. If one shares the intuition that sphere has a look in cases sans perceiver, then that constitutes a good reason to reject perceiver-dependent views generally. For those who are resistant, I will examine two generic views of this sort and argue that both should be rejected.

First, we can rule out one previously plausible candidate for looks-properties: dispositions to affect classes of perceivers in certain ways in certain conditions. This view does not explain why the sphere has no look. Objects can have dispositions to affect perceivers even if there are no perceivers. So sphere could have the necessary dispositions. But if the sphere had the necessary dispositions, it would have a look *ex hypothesi*, which is intuitively false. So, the dispositional perceiver-dependent view is ruled out by Sphere.

A second sort of perceiver-dependent view is less easily dispensed with. On this sort of view, the relevant class of perceiver is typically that of “normal” perceivers, to account for concerns about the veridicality of perceptual content. Further, since even to normal perceivers, an object might look different because of conditions obtaining when the object is perceived, these sorts of theories typically appeal to “normal” or “optimal” conditions. The idea might be that, since one cannot have a relation without all of the relata, the sphere cannot have a look, because looks are relations to perceivers, which don’t exist in Sphere.

For those who do not share the intuition that the sphere has a look

when Sphere is modified to include light, viewpoints, and environmental conditions and thus resist the direct argument against perceiver-dependence, I will argue that there is an indirect argument against the truth of such views because perceiver-dependent views are ideologically unparsimonious relative to the view I will offer below. So, my argument against perceiver dependent views here is that the view I will offer below is ideologically more parsimonious than perceiver-dependent views, while doing the same explanatory work with respect to facts concerning looks I have considered here. I now turn to explaining why perceiver-dependent views are ideologically unparsimonious.

Here I am thinking of ideological parsimony as a measure of the complexity of a theory concerning its primitive elements.<sup>22</sup> An ideologically unparsimonious theory will contain more kinds of primitives than its otherwise equally virtuous and explanatorily adequate rivals. My view is that the more *kinds* of primitives involved in a theory, the less ideologically parsimonious that theory is and, if such parsimony is properly related to truth, then *ceteris paribus* the less likely such a theory is to be true. This calls for a brief defense.

First, I take it that more ideologically parsimonious theories are *ceteris paribus* more truth-conducive than rivals. Where there is some data D to be explained and two theories T1 and T2 that are otherwise equally theoretically virtuous, if T1 is more ideologically parsimonious than

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<sup>22</sup> This line of reasoning is inspired by the argument for mereological nihilism from ideological parsimony in Sider (2013), though I do not restrict the virtue of simplicity to application in the domain of the fundamental.

T2, T1 is more likely to be true than T2. Such claims are commonplace both in the metaphysical literature and with respect to scientific inquiry, but it is notoriously hard to say *why* ideological parsimony is supposed to be truth conducive without reducing the virtue to a pragmatic one. It may be that it is not possible to justify the claim that ideological parsimony is truth-conducive. If it is not, my position would be that the truth of the claim is so compelling we ought to accept it anyway.<sup>23</sup>

Now we're in a position to understand why the first sort of perceiver-dependent view suffers theoretical vice in the way of ideological complexity. Such views must appeal to at least one of two problematic notions: normality (of perceivers) and optimality (of conditions). I will focus on problems for normality, since optimality will likely need to be defined in terms of normality of perceivers.<sup>24</sup> According to Jonathan Cohen, the need to appeal to normal perceivers comes up for color ontology when we are concerned with specifying, non-stipulatively, which of a variety of differing experiences of color is veridical. Experiences caused by light of the same character can vary between persons, within persons, and between species.<sup>25</sup> Thus, if we are to say that some experiences of color have veridical content while other experiences do not, the only clear available strategy is to identify the veridical experience as the sort of experience by

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<sup>23</sup> It seems to me that Brenner (2016) is right concerning simplicity. Simplicity is a theoretical virtue in science and it would be unacceptably arbitrary to deny that it is a virtue in metaphysics.

<sup>24</sup> Whatever the optimal conditions are, they have to be optimal relative to the perceptual capacities of perceivers. If we're relativizing to normal perceivers, then we'll need to relativize to whatever conditions are optimal for normal perceivers. Thus, the relevant sense of optimality depends on the relevant sense of normality.

<sup>25</sup> See: Cohen, *The Red and the Real*, Ch. 2.

normal (or in Cohen's words "standard") perceivers of one's kind.<sup>26</sup> Cohen considers various proposals for how we may analyze "normal" or "standard" here, rejecting them as inadequate.<sup>27</sup> It should come as no surprise that "normal" defies analysis. If we're remaining at all close to the commonsense notion of normality it is another bit of commonsense that the notion is quite slippery (consider the common refrain: "what's normal anyway?"). On that basis we should thus have fairly low confidence that any notion close to that will be easily analyzed.

But suppose that Cohen is right and that no non-stipulative account of normality can be given. Theories making use of the notion are not conclusively ruled out. For it's quite open to those who would defend such views to treat "normal" as a theoretical primitive. Of course, such a move comes at a cost. Such theories introduce primitives (needlessly, if my later account works) and it follows that such accounts are *ceteris paribus* theoretically vicious, being ideologically complex relative to other theories that do not invoke them. If ideological parsimony is a genuine theoretical virtue, then perceiver-dependent views that appeal to normal or standard perceivers are theoretically vicious and should be rejected unless no more parsimonious theory can be found. If one considers ideological parsimony a virtue that increases the truth-aptness of a theory, one has good reason to want to avoid normal-perceiver-dependent views. Thus, if there is a competing objective account that does the same explanatory work and it is

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<sup>26</sup> Ibid., 30-1.

<sup>27</sup> Ibid., 31-2.

granted that ideological parsimony contributes positively to a theory's truth-aptness, there are good reasons to reject theories that invoke the notion of a normal perceiver. I will now develop such an account.

### **8. The Positive Account**

So far, then, the holding of external spatial relations, the presence of light, and the holding (or failing to hold) of certain environmental conditions is necessary and sufficient for the instantiation of looks-properties. We have learned that ways things look vary with respect to viewpoint, intrinsic properties, and environmental conditions. But it's plausible that what covaries with those conditions is the character of light at viewpoints. All of these factors causally affect the character of light projected from the object to the viewpoint. If we are to explain why conditions for objects having looks are such as they are and the variation we've noticed, a natural candidate for looks-properties presents itself: looks-properties are properties of objects concerning the character of light emitted to a viewpoint from an object, given intrinsic properties of the object, various relations, and environmental conditions.

I will refer to the properties I take to be looks-properties as e-properties and the specific shape, size, and color properties as e-shape, e-size, and e-color.<sup>28</sup> Note that Noë uses similar terminology to refer to the perspectival properties of things. My proposal here will differ from Noë's in important respects. For example, for Noë, the p-size and p-shape of an object are the size of a patch on a plane perpendicular to the line of sight

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<sup>28</sup> Here I will focus only on e-size and e-shape.

needed to perfectly occlude that object.<sup>29</sup> Noë's proposal faces issues concerning conflicting appearances that we'll see later, but it also raises worries of arbitrariness. For example, where is the plane that is perpendicular to the line of sight supposed to be fixed? Depending on the distance of the plane from the viewpoint, the perspectival size will vary. Fortunately, I think that there's another proposal in the very proximate neighborhood that avoids this arbitrariness. The e-size and e-shape of objects should be understood as dependent upon, but not identified with, the objective size and shape of an image of an object projected onto a plane centered on the viewpoint and perpendicular to the line of sight. Defining e-shape and e-size in this way captures, I think, much of Noë's intended view of perspectival shape and size.<sup>30</sup> Understanding e-shape and e-size in terms of retinal images, we could say that the e-size and e-shape of an object are dependent upon the objective size and shape of the image of the trees projected from them onto the retina.<sup>31</sup> Let us turn to the problems with Noë's view, which will help us pin down exactly how we should understand looks-properties.

Noë's view encounters at least two sorts of troubles. The first arises when we attempt to specify what perspectival distance might be. Søren Overgaard argues that Michael Tye and Noë's views, which involve the

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<sup>29</sup> Noë, 83.

<sup>30</sup> In fact, my view is similar to that of Gibson (1979), whose account appeals to the sorts of features of light I am concerned with, and whose account Noë claims to be developing. My account differs primarily in my identification of the apparent size and shape with properties of objects concerning the size and shape of occluders, rather than identifying apparent size and shape with the size and shape of the occluders themselves.

<sup>31</sup> The retinal image is upside down, which Søren Overgaard exploits in a paper I will discuss in the sequel.

presence of conflicting appearances, are unacceptable on those grounds. The issue is how we make sense of objects presenting themselves in seemingly contradictory ways. Consider two trees of the same height at different distances. We may take the trees to look two ways: first, they look the same size, but one is farther away than the other; second, the background tree looks smaller than the foreground tree, which entails that the foreground tree looks larger. But then, in the latter case, there is no depth and we're describing the trees as located on a plane perpendicular to the viewpoint. Both trees are represented as being in the same place, but one is smaller than the other. In the former case, we see the trees as the same size, but one is farther away, so we see the background tree represented as located behind the foreground tree relative to the viewpoint. So, if the trees look both ways, then the same tree looks to be in two different spatial locations. In the case of the trees looking different sizes, we don't have the appearance of depth--it is not clear what would count as a representation of depth in the two-dimensional manner of appearing. The only recourse seems to be to say that, if there are conflicting appearances, they represent the smaller, or background tree, as being in two different places; Overgaard thinks that this is an unacceptable inconsistency.<sup>32</sup> It seems Noë can't get out of this problem by appealing to size and p-size. The p-size of the trees are the sizes of the patches needed to perfectly occlude the trees on a plane perpendicular to

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<sup>32</sup> Søren Overgaard. "On The Looks Of Things." *Pacific Philosophical Quarterly* 91, no. 2 (2010): 267-69.

the viewpoint, but this p-size is not, in Noë's understanding, a property of the object, so that the relevant looks-properties are no longer properties of the trees.<sup>33</sup> To the extent that it's more plausible that looks are properties of the distal scene, rather than proximal, Noë's view is implausible.

The second problem for Noë's view is raised by Robert Briscoe, who gives us good reason to think that, contrary to Noë's view, looks-properties are not occlusion properties. Briscoe provides various empirical evidence to the effect that when we see the apparent properties of objects, the objects of our perception are not patches that would occlude the object. However, the most decisive objection, in my estimation, is that such patches are *hypothetical*.<sup>34</sup> The object of actual perception cannot be hypothetical, since hypotheticals do not enter into causal relations. Since Noë's patches are hypothetical, they are not the objects of perception.

The lesson to be learned from Overgaard's and Briscoe's objections is that we should not take the object of our perception to be either the hypothetical or actual 2D image projected onto a plane or onto the retina. We should not think, then, that the e-size and e-shape of objects are identical to the size and shape of the image of an object projected onto a plane centered on the viewpoint and perpendicular to the line of sight, as I proposed above. Rather, e-size and e-shape are the properties objects have of projecting an image of a certain size onto such a plane. So, the objects of perception are objective properties of objects,

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<sup>33</sup> Ibid., 274.

<sup>34</sup> Robert Briscoe, "Vision, Action, and Make-Perceive." *Mind and Language* 23, no. 4 (2008): 477.

which are instantiated relative to the intrinsic properties of the object, spatial relations, and environmental conditions.

But not even this is quite right. Overgaard's critique highlights the importance of depth in perception, and Briscoe argues convincingly that our perception of two-dimensional layout depends on our perception of three-dimensional layout.<sup>35</sup> If that is true, then understanding looks-properties in terms of two-dimensional projections is not nuanced enough, since it will not capture the three-dimensional nature of perception. Fortunately, Briscoe provides the way forward. As he says, ". . . there is ample empirical evidence for the view that an object's [three-dimensional] shape is adequately specified by information in the light reflected from the object's visible surfaces and transduced by the eyes."<sup>36</sup> This suggests that the size and shape of the image projected are important only in being part of the informational content of the light projected onto the viewpoint-centered plane that has a part in indicating the three dimensional properties of the object.

Bringing in the notion of information raises an important objection. Information seems to be a good candidate for something that is perceiver-dependent. If the notion of information at play here is perceiver-dependent, then looks-properties will be perceiver-dependent as well. So, here it will be useful to say something about how we should think of the information contained in light. There are at least two ways we can talk

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<sup>35</sup> Briscoe, "Make-Perceive," 481-88.

<sup>36</sup> *Ibid.*, 473.

about information that will render it perceiver-independent. First we can understand “information” by reference to perceivers, but in such a way that it’s nature doesn’t depend on perceivers. Information, as I understand it, will be identical to certain of the features of light at a viewpoint. Certain features of the light at a viewpoint will be processed and transduced by the visual system. Certain sorts of transformations will be applied to the features of the light and other transformations to others. Thus, the reference of “information” and the individuation of individual sorts and bits of information can be fixed descriptively as being those features of the light to which various sorts of such processing, transduction, and transformation, respectively, are applied. So, the information carried by light concerning the e-size of an object is just the features of the light at the viewpoint that enter into the relevant constancy transformations and the like. Similarly for e-shape and e-color. The specified features of light are features the light would still have if there were no perceivers, so “information” understood in this way is perceiver-independent. The second option is to say that “information” should be understood as features of the light which reliably indicate the relevant features of the object. Information in the light concerning an object’s three dimensional properties would then be features of the light that are reliable indicators of the object’s three dimensional properties. I do not know which option to choose, nor are they mutually exclusive. Both, however, are perceiver-independent ways of understanding the nature of information I am concerned with.<sup>37</sup>

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<sup>37</sup> If one is inclined to think that this does not capture the ordinary notion of information,

On the preceding, I suggest as a final account of looks-properties the following: for  $x$  to look  $F$  from  $V$  is for  $x$  to be such that the light projected from it to  $V$  has a certain informative character (i.e. contains certain information). The object of visual experience is the corresponding property of the object of being such that it projects light of that character to that viewpoint. Whether the object has that property will depend upon the intrinsic features of the object, relations holding between the object and viewpoint, and the holding of certain environmental conditions. Looks-properties are, then, relational properties holding between objects and viewpoints relative to certain properties and conditions. The resulting view is quite similar to Hill's and McGrath's with respect to looks' concerning the character of light at a viewpoint. While the properties are situation-dependent in something like Susanna Schellenberg's sense--that is, the properties are objective properties of objects instantiated relative to the elements of a "situation" which includes intrinsic properties, relations, and environmental conditions.<sup>38</sup> This view avoids the problems of the views examined earlier. V-properties were out of the question, because looks-properties could vary when v-properties did not, and Martin's attempt to explain the problem away failed. However, if look-properties are as I have said, their instantiation is relative to situational features, so that the mug's looking different as its orientation changes is not problematic, since the same property may be instantiated relative to different situational features.

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then "information" here should be understood as a technical term.

<sup>38</sup> Susanna Schellenberg. "The Situation-Dependency of Perception." *Journal of Philosophy* 105, no. 2 (2008): 57..

J-complex views were inadequate because J-complexes could differ where looks did not. On my view, the forced-perspective drawing can instantiate the same property concerning the character of light emitted to the viewpoint as the ordinary cube does. The point can be put by saying that, on my view, looks-properties depend on (something like) J-complexes for their instantiation, but distinct J-complexes can be the dependence base for the same looks-property. The view is also compatible with intuitive judgments concerning the variations on Sphere. Finally, the view deals with Overgaard and Briscoe's objections. On my view, looks-properties are not to be identified with-dimensional occlusion patches on a plane perpendicular to the line of sight, though there is an easy route to understanding what they are through that characterization.

We might wonder if the view I have offered can be extended to other than visual sense modalities. Structurally, I think that it can. If we think that smells and sounds, for example, are distal or proximal, we may identify them in the same way I have identified looks. Consider sounds, for example. There are variations in how things sound to us as relations and environmental conditions vary. Then we can identify an object's sounding some way in some conditions or from some point with the an object's having the property being such that the character of the pressure waves that the object causes (given environmental conditions and the like) at a spatial point have a certain character. If, as is plausible, sounds are proximate phenomena, however, it would be wrong-headed to

characterize sounds in the way I have characterized looks. This is not, I think, a problem. It stands to reason that metaphysical accounts of sensed properties will vary according to whether they are distal or proximate.

Rather, it is an advantage of the offered theory that, structurally, it can be extended to sensed distal properties in other sense modalities, but does not plausibly extend to sensed proximate phenomena.

### **9. Conclusion**

My argument here should be taken as somewhat restricted in intended force. I have rejected perceiver-dependent views on the grounds that my offered view explains the details of Sphere, variation without change in intrinsic properties and lack of variation with change in J-complexes. I have not discussed illusion and hallucination and it remains open whether we must take the perceiver-dependent route because of those considerations. The restriction in force then amounts to this: on the considerations I have discussed, the perceiver-independent view I have offered is a better explanation for those considerations than perceiver-dependent views. The argument above, then, provides only some reason to believe that the view I have offered is the right view of looks-properties.

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