

Shoemaker on Phenomenal Content

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Introduction

In a series of papers and lectures, Sydney Shoemaker has developed a sophisticated Russellian theory of phenomenal content (1994, 2000, 2001, 2003). It has as its central motivation two considerations. One is the possibility of spectrum-inversion without illusion. The other is the transparency of experience.

Consider the possibility of spectrum inversion. It might be that the color experience Jack has when viewing a red thing is phenomenally identical to the experience Jill has when looking at a green thing. It is conceivable that there could be two subjects who are spectrum inverted relative to each other.¹ In fact, it has been argued that it is *likely* that there are actual cases of behaviorally undetectable spectrum inversion (Nida-Rumelin 1996).

Suppose that Jack is looking at a strawberry and that Jill is looking at a lime. The strawberry and lime could be such that, due to their being spectrum inverted relative to each other, Jack and Jill are having phenomenally identical color experiences.² It seems also that neither Jack nor Jill need be misperceiving the color of the fruit. After all, the

¹ Sometimes spectrum inversion is put forth as a challenge for functionalism or for physicalism. There it is claimed that functional or physical duplicates could be spectrum inverted. Here I need take no stand on that issue.

² Their experiences will presumably differ in other respects, such as with respect to the shape and size of the fruit they are viewing. Here I am only concerned with the color content of their experiences. One might instead suppose Jack and Jill are looking at inflated balloons, one green and the other red, which are identical in shape and size.

having of an experience with a certain phenomenal character in response to the strawberry or lime is not simply a product of the nature of the fruit. It is in large part a product of Jack and Jill's subjective constitutions: the way that their eyes work, the way that information received from the eye is processed in their brains, etc. There seems to be no grounds for saying that Jack's way of perceiving red things, or instead Jill's way, is the only correct way for red things to appear.

This can be made more vivid by imagining that half the human population is like Jack, and the other half is like Jill. By what criterion can it be rightly said that one half of the population misperceives the colors of things? Both those like Jack and those like Jill get around in the world just fine. And there does not seem to be anything about the relationship between physical colors and either group's color experiences that would ground the claim that one group, rather than the other, accurately represents color. In considering the possibility of spectrum inversion, we seem to be confronted with a visual analogue to the case of something that tastes bitter to some and sweet to others (Shoemaker 1994b).

What follows from cases of inversion without illusion? An anti-representationalist, such as Ned Block, might describe such cases by simply appealing to non-intentional features of experience—qualia (1996). On such an account, qualia determine the phenomenal character of an experience. Jack and Jill have experiences with different phenomenal character when looking at a ripe tomato in virtue of tokening qualia of different types. Neither Jack nor Jill need misrepresent the tomato, since the tomato is not represented as having this feature of their visual experiences. It might be

that Jack and Jill both represent the tomato as being red—but the phenomenal characters of their respective experiences are not fully determined by this representational fact.

Shoemaker, too, is a believer in qualia. But the anti-representationalist account of spectrum inversion without illusion is not available to him because of his allegiance to a second doctrine—the transparency thesis. The transparency thesis has been articulated in various ways and with various strengths.³ Here I will confine myself to Shoemaker’s way of understanding transparency. Shoemaker agrees with advocates of transparency that the phenomenal character of an experience is a matter only of the way things appear to a subject. In the visual case, it is a matter of how things look. When Jill looks at the ripe tomato, the phenomenal character of her visual experience is nothing over and above the way the tomato looks to her.

From the fact that the way tomatoes look to Jack differs from the way tomatoes look to Jill, Shoemaker concludes that the property Jack visually represents tomatoes as having is a different property than the one Jill visually represents tomatoes as having.⁴ Shoemaker takes the phenomenon of transparency to show that sameness of phenomenal character entails sameness in represented properties. This makes Shoemaker’s view a version of what I will call “Russellian Representationalism”. According to Russellian Representationalism, for any experience with phenomenal character r , there is some property p_r such that necessarily if an experience has phenomenal character r then it attributes p_r .

In line with his acceptance of the possibility of spectrum inversions without illusion, Shoemaker thinks that Jack and Jill both perceive the tomato veridically. This

³ See Harman (1990), Tye (2000), Martin (2002), Stoljar (forthcoming).

⁴ Shoemaker (forthcoming) calls this the “Ways = Properties” view.

entails that the properties Jack and Jill represent the tomato as having cannot be color properties (such as red and green), under the plausible assumption that an object cannot be both red and green all over. In the first instance at least, Jack and Jill must represent the tomato as having two different properties, both of which the tomato does in fact have. These properties Shoemaker calls the “appearance properties”.

In the following, I will argue that there is no successful way to individuate appearance properties such that it is plausible that they are represented by color experiences. I will argue that Shoemaker’s theory faces a dilemma—either it makes misperception too difficult, or it does not truly accommodate veridical spectrum inversion. I will then examine some alternative Russellian theories of phenomenal content that might be consistent with Shoemaker’s motivations, including a different sort of proposal recently suggested by Shoemaker (forthcoming). I will argue that these views are also lacking, for similar reasons as the appearance property view. Finally, I conclude that in order for a representationalist theory to properly accommodate spectrum inversion without illusion, phenomenal content must include an indexical element. Such a view requires the adoption of a broadly Fregean theory of phenomenal content, according to which sameness of phenomenal character does not entail sameness in extension. What phenomenally identical experiences have in common is not *what* they represent, but *how* they represent.

Standard Representationalism

Most representationalists who are motivated by the transparency thesis have adopted a Russellian view that Shoemaker calls “Standard Representationalism”.⁵ According to Standard Representationalism, color experiences attribute mind-independent physical properties to their objects, which in turn are typically identified as the colors of things. As a form of representationalism, Standard Representationalism entails that any two experiences that have the same phenomenal character will have precisely the same phenomenal content. It follows that inverted spectrum cases without illusion are impossible according to Standard Representationalism. To see this, consider again our inverted Jack and Jill. Suppose again that Jack is looking at a strawberry and Jill is looking at a lime, such that they are having phenomenally identical color experiences. According to Standard Representationalism, since the phenomenal characters of Jack and Jill’s respective experiences are precisely the same, the two experiences must attribute the very same mind-independent physical property to their respective objects. But there does not seem to be any mind-independent physical property that both the strawberry and the lime share, and which is a plausible candidate for being what the two experiences represent. They do not, for example, have the same surface spectral reflectance properties.⁶

Indeed, there is an “in principle” barrier to a Standard Representationalist theory that accommodates spectrum inversion without illusion. Suppose that a Standard Representationalist did find some property that both the strawberry and the lime share,

⁵ Standard Representationalists include Byrne and Hilbert (2003), Dretske (1995), Gilbert Harman (1990), Lycan (1996), and Tye (1995, 2000). Elsewhere, I have called such views “Standard Russellianism” in order to emphasize that such views offer a Russellian theory of phenomenal content (Author’s work).

⁶ Byrne and Hilbert (1997) and Tye (2000) identify the represented color properties with SSR properties.

which is then identified as the property that both Jack and Jill attribute to their respective objects of perception. Now suppose that Jack looks at Jill's lime. He normally has a "greenish" experience when looking at objects with those particular mind-independent physical properties.⁷ But this time, due to some glitch in his visual system, he has a color experience that is phenomenally like the kind he normally has in response to red things (such as strawberries). This is a clear case of misperception.⁸ But Jack, due to the malfunctioning of his visual system, is having a color experience with precisely the same phenomenal character that Jill has when she looks at the very same lime. By hypothesis, we assumed that Jill's experience is veridical. That entails, according to Standard Representationalism, that the lime has the mind-independent physical property that Jack's experience represents it as having. Thus Standard Representationalism entails that Jack's experience is also veridical. But it is not. Either Standard Representationalism is false, or spectrum inversion without illusion is not possible.⁹

Appearance Properties

⁷ I use terms such as "greenish" and "reddish" to characterize the phenomenal character of experiences typically had by actual perceivers in response to green and red things, respectively. This is not to imply that there is a privileged relationship between greenish experiences and the color green, one that is absent between greenish experiences and the color red. Those who accept the possibility of spectrum inversion without illusion explicitly deny such a relationship.

⁸ I take this to be intuitively obvious. But I will return to this issue in more detail below, when discussing Shoemaker (forthcoming).

⁹ One strategy for Standard Representationalism, advocated by Michael Tye (2000), is to accept the conceivability of spectrum inversion without illusion but deny that it is possible. I argue against such responses in [Author's work]. But here I will simply assume, following Shoemaker, that such cases are possible.

Shoemaker seeks to adopt a form of Russellian Representationalism that is compatible with both the transparency thesis and the possibility of spectrum inversion without illusion. His solution is to hold that color experiences attribute mind-dependent properties to their objects. Generically, what Shoemaker calls an “appearance property” is a property something has just in case it appears a certain way. Shoemaker considers different kinds of appearance properties that might be represented by color experiences. An “occurrent appearance property” is the property of causing an experience of a certain sort in a particular perceiver. Types of experiences are here individuated by what qualia are instantiated in them, where qualia are those features which account for relations of similarity and difference among the qualitative characters of experiences. When Jill looks at a ripe tomato, her experience represents the tomato as having a certain occurrent appearance property, the property of causing a green quale.¹⁰ When Jack looks at a ripe tomato, his experience represents the tomato as having the property of causing a red quale. These are both properties that the tomato actually does have when it is being perceived by Jill and Jack, respectively. Thus, if color experiences represent occurrent appearance properties, both Jack’s and Jill’s experiences are veridical despite their being spectrum-inverted with respect to each other.

Shoemaker also identifies another kind of appearance property, what he calls a “dispositional appearance property”. A dispositional appearance property is the property of being disposed to cause an experience of a certain sort in some kinds of observers under certain conditions (such as lighting conditions and the distance and orientation of

¹⁰ Here and elsewhere in the paper, I use color adjectives before “quale” in a way that is not intended to suggest that there is a necessary connection between particular types of qualia and particular physical colors.

the observer relative to the object of perception). Unlike occurrent appearance properties, dispositional appearance properties are properties that objects can have even when they are not seen.

An object's instantiating an occurrent appearance property will also be the manifestation of one of these dispositional appearance properties. But an object will have an enormous number of dispositional appearance properties, and a particular occurrent appearance property could be the instantiation of any number of these dispositional appearance properties.

In more recent formulations of his theory, Shoemaker has identified yet another appearance property, what he calls a "higher-order dispositional appearance property" (2001). This is the higher-order property of having one of the dispositional appearance properties that can manifest itself in the instantiation of a particular occurrent appearance property. For instance, suppose that Jack looks at a ball in mid-day sunlight and has a "greenish experience". Suppose also that Jack is two meters away from the ball and facing it directly. The ball has the occurrent appearance property of causing a green quale. It also has the dispositional appearance property of being apt to cause in Jack or in subjects like Jack a green quale under mid-day sunlight when viewed head on from two meters. And finally, the ball has the higher-order dispositional appearance property of having some dispositional appearance property which can manifest itself in a greenish experience in observers of "one or more sorts" situated "in one or another way" with respect to it (Shoemaker 2001).

A central difficulty in Shoemaker's theory is that of determining which of the appearance properties is to be identified with phenomenal content (and thus also with

phenomenal character). In earlier work, Shoemaker held that phenomenal content consisted in the representation of occurrent appearance properties.¹¹ Later Shoemaker held that experiences represent dispositional appearance properties, and in more recent work Shoemaker claims that phenomenal content consists in the representation of both occurrent appearance properties and higher-order dispositional appearance properties.¹² In what follows I will argue that none of these types of appearance property can meet all the constraints on a correct theory of phenomenal content.

Occurrent Appearance Properties

The idea that phenomenal content consists in representing occurrent appearance properties might seem promising, for these are properties which objects that phenomenally appear the same always have in common. This proposal thus respects Shoemaker's commitment to the transparency thesis, since sameness of phenomenal character would always correspond with sameness of representational content. But this feature is also the source of the proposal's largest problem. If color experiences merely represent an object as having the property of currently causing an experience of its qualitative type, non-hallucinatory color experiences cannot fail to be veridical. Take any color experience. On this view, that experience represents the property of currently causing an experience of that qualitative type in the subject. Assuming that the experience is *caused* at all, something will always really have that property whenever it

¹¹ Shoemaker (1994). At the time they were called "phenomenal properties".

¹² See Shoemaker (2000) and Shoemaker (2001) for these respective positions.

gets represented. It follows that color experiences cannot misrepresent with regard to their phenomenal content, at least with respect to color content.¹³

A further problem, one that has been raised by Tye (2000), is that occurrent appearance properties are properties that objects have only when they are perceived. But it is highly counter-intuitive that color experiences represent such properties. It seems as though the properties our color experiences represent objects as having are properties that they can continue to have when we look away from them.

Dispositional Appearance Properties

It is because of the above problem that Shoemaker (2000) is drawn toward identifying phenomenal content with the representation of *dispositional* appearance properties instead of the occurrent ones. The disposition to appear a certain way to a subject under certain conditions is a property that an object has even when the conditions relevant for its manifestation do not obtain.

Despite this virtue, the proposal that color experiences represent dispositional appearance properties faces additional problems. The phenomenon of color constancy illustrates one of them. Color constancy is that feature of visual perception by which an object will appear to be the same color despite changes in illumination and in the spectral

¹³ It may be that there is still room for the wrong object or location to be represented as having the occurrent appearance property. But this is largely an open question, as Shoemaker has not offered an account of the spatial aspects of experience and spatial content. If the theory of spatial content parallels the theory of color content, the problem will re-emerge. In any case, it remains counterintuitive that the color aspects of experience by themselves cannot fail to be veridical.

distribution of light reaching the eye of the perceiver.¹⁴ Imagine, for example, the visual experience one has while looking at a homogeneously red table on an outside patio in daylight. Some portions of the table might be in partial shade. Other regions of the table might be fully illuminated. There will be phenomenal differences in one's color experiences corresponding to the various portions of the table. But the table will nonetheless look to be the same color across its entire surface. Similarly, if a cloud passes in front of the sun and casts the whole table in shade, the table will not appear to have changed in color.

Shoemaker's theory accommodates this aspect of color constancy in a way that standard representationalism does not. The table, on Shoemaker's view, is represented as being red across its entire surface and throughout changes in illumination conditions. But the table is represented as being red in virtue of being, in the first instance, visually represented as having certain appearance properties. And the table will be represented as having *different* appearance properties depending on how it is illuminated, given that the table phenomenally appears different depending on lighting.

But color constancy nonetheless poses a problem for the idea that color experiences represent dispositional appearance properties. Due to color constancy, two objects that are of different color can, under different lighting conditions, cause color experiences with the very same phenomenal character. For example, imagine looking out the window at the green leaves of a nearby tree, cast in midday sun. One could, in one's fluorescently lighted office, mix some paint so that a portion of a canvas phenomenally appears just like the green leaves.

¹⁴ For empirical details regarding color constancy, see the papers in Walsh and Kulikowski (1998).

Consider two color experiences that are phenomenally identical in this way. One is the experience of the redness of a portion of a cherry seen in full sun. The other is the experience of the redness of a portion of a shirt seen in partial shade. Given that the two experiences share phenomenal character, Shoemaker is committed to the view that the two experiences represent the very same appearance properties. Furthermore, it seems that neither experience need be a misperception of color. Both the cherry and the shirt look the way that they ought to look in their respective lighting conditions. Thus, if color experiences represent dispositional appearance properties, then the cherry and the shirt must share a dispositional appearance property.

Shoemaker's dispositional appearance properties are individuated in part in terms of perceptual conditions, such as lighting and the position of the subject relative to the object.¹⁵ But the lighting conditions are different in these two experiences, and so it is not possible for them to both be veridical representations of the same dispositional appearance property. The two objects may in fact fail to have any dispositional appearance properties in common, since when viewed under the same lighting conditions they might always look different. These two experiences are identical in phenomenal character but cannot both be representations of the same dispositional appearance property. As required by the transparency of experience, phenomenal content is content that supervenes on phenomenal character. For any two experiences that have the same

¹⁵ A "liberalized" notion of dispositional appearance properties, one that does not specify lighting conditions, might avoid the following problem. But the resulting theory of phenomenal content makes misperception far too difficult. See below.

phenomenal character, the two experiences will represent the properties. Thus phenomenal content cannot be the representation of dispositional appearance properties.¹⁶

Another problem arises from the idea that comparisons of phenomenal character can be made across individuals.¹⁷ When Jack looks at a red thing, he has an experience that can be phenomenally identical to the experience Jill has when looking at a green thing. There are different ways of individuating dispositional appearance properties, none of which are plausibly able to accommodate this fact. One might relativize dispositional appearance properties to particular individuals.¹⁸ When Jack has a red experience, he represents the object of his experience as being disposed to produce an experience of a certain qualitative sort under certain conditions in Jack. When Jill has a red experience, she represents the object of her experience as being disposed to produce an experience of a certain qualitative sort under certain conditions in Jill. But this would mean that if Jack and Jill are having veridical perceptions, and the contents of those perceptions consist in the representing of dispositional appearance properties, they must represent different dispositional appearance properties. When Jack veridically perceives a ripe tomato, he represents the tomato as having the property of being disposed to cause a red qualitative experience in Jack under certain viewing conditions. Jill represents the property of being disposed to cause a green qualitative experience in Jill under certain viewing conditions.

¹⁶ In my [reference to author's work], I argue that color constancy also poses a problem for Standard Russellian theories of phenomenal color content.

¹⁷ Shoemaker (1996) endorses the possibility of intersubjective phenomenal similarity, as opposed to the Frege-Schlick view that such comparisons are only possible intrasubjectively. I am in agreement with Shoemaker on this. For arguments in defense of the Frege-Schlick view, see Stalnaker (1999).

¹⁸ This is one view that Shoemaker (1994) considers. He does not settle on a particular view, finding that none of the appearance properties are ideal candidates for what color experiences represent.

Given Shoemaker's commitment to the transparency thesis, this difference in phenomenal content entails a difference in phenomenal character. On this proposal, Jack and Jill can never have experiences with the same phenomenal character since their experiences will always differ in phenomenal content.¹⁹

Not only is this counterintuitive, it conflicts directly with the idea of spectrum inversion. The idea of spectrum inversion is that of two subjects for whom the phenomenal character of experiences had by one of them when viewing objects of a certain color (such as red) is identical to the phenomenal character of experiences had by the other when viewing objects of a different color (such as green). But on the suggestion that phenomenal character is the representing of dispositional appearance properties, two individuals can rarely if ever have experiences with the same phenomenal character. This entails that their experiences cannot be "switched" in the way required to make sense of spectrum inversion. Given the importance of the possibility of spectrum inversion for motivating Shoemaker's theory, this is an especially troubling result.

It might seem that Shoemaker has available to him the following reply.²⁰ Jack and Jill cannot, strictly speaking, have identical truth-conditional content. But the phenomenal contents of their experiences can be the same in a more general or high-level respect. For instance, suppose that a reddish experience had by Jack represents the property of being disposed to cause a red quale in Jack.²¹ And suppose that a reddish experience had by Jill represents the property of being disposed to cause a red quale in

¹⁹ Unless, rather bizarrely, Jill might visually represent the dispositional appearance property of causing an experience of a certain type in Jack (or vice versa).

²⁰ Thanks to an anonymous referee, and to [acknowledgement suppressed for blind review], for raising this possibility.

²¹ For simplicity, I leave aside the matter of viewing conditions here.

Jill. These phenomenally identical experiences had by Jack and Jill have different truth conditions and represent different dispositional appearance properties. But they nonetheless do have a high-level similarity, namely in representing dispositions to cause red qualia more generally. Let's call experiences that are relevantly similar in this respect experiences of the same "content type". In order to allow for shared phenomenal character (and thus the possibility of spectrum inversion), one might hold that sameness in phenomenal character involves sameness in content type, rather than sameness in determinate content.

This is an interesting view, but it is not one that Shoemaker can accept. Due to transparency, Shoemaker is drawn toward accepting a form of Russellian Representationalism, according to which any two experiences with the same phenomenal character will attribute the very same property to their respective objects. What two visual experiences that are phenomenally the same have in common is the "way things appear", where this is understood in terms of what properties things appear to have. On the present suggestion, phenomenally identical experiences had by Jack and Jill will attribute different dispositional appearance properties. They will have in common the fact that they are experiences of the same content type. But the phenomenologically salient features that we are aware of in introspection, those that are appealed to by the transparency thesis, are determinate properties.²²

In some formulations of the notion of a dispositional appearance property, Shoemaker seems to have in mind the idea that they are relativized to *types* of subjects

²² Something in the spirit of this suggestion, but compatible with Russellian Representationalism, might be Shoemaker's proposal that phenomenal content consists in the representation of higher-order dispositional properties (to be discussed below).

rather than to individual perceivers. For instance, he considers a possible dispositional appearance property as the property of being apt to produce an experience of a certain sort under particular conditions in creatures “having the sorts of sensory apparatus, or sensory constitutions, Jack and Jill have” (1994). But this alteration will not help with the problem. Shoemaker is committed to the possibility of spectrum inversion without either invert being systematically deluded. Either inverted subjects belong to the same relevant category of perceivers (as in the above) or they do not. If they are of the same type, then cases of misperception will count as accurate on the proposal. If Jill has an experience like Jack’s when she looks at a ripe tomato, this should be counted as a *misperception*. But suppose that, per the current suggestion, that her experience represents the tomato as having the property of being disposed to cause red qualia in subjects like either her or Jack. The tomato *does* have this property, since it is in fact disposed to cause experiences of that type in Jack. But this would mean that her experience is in fact veridical, which is the wrong result.

Nor would it help to identify dispositional appearance properties with the property of causing experiences of a certain sort in Jack *and* Jill (and in other creatures like them in some relevant respect). There are no objects, save perhaps black, white, and grey objects (and objects viewed in very low lighting) that present the same appearance to both Jack and Jill under the same conditions. And so this modification of the proposal would have the result that Jack and Jill both systematically misrepresent the colors of things.

What if we propose instead that Jack and Jill belong to different categories of perceivers? This only relocates the initial worry. Surely Jack and Jill can have

phenomenally identical experiences despite belonging to separate subclasses of perceivers. Not only does this violate the intuition that comparisons of phenomenal character across individuals are possible, but it again eliminates the sense in which Jack and Jill can rightly be said to be spectrum inverted with respect to each other. Jack's experience when looking at a ripe tomato will not be phenomenally similar to Jill's experience when looking at a lime.

In "Phenomenal Character Revisited", Shoemaker suggests that phenomenal properties could be thought of as dispositions to produce an experience of a certain qualitative sort in creatures with visual systems of "one or more sorts". This is proposed as a middle-ground between individuating phenomenal properties too finely (relativizing them to creatures of a particular sort of visual system, which ruled out certain inverted spectrum cases) and too coarsely (in terms of *all* perceivers--there are no such properties).

Is "one or more sorts" to be understood as simply an existential quantifier, or as short hand for a description of one or more particular kind of visual system? Either way of understanding the proposal leads to problems similar to the other two ways of defining phenomenal properties. Consider the first suggestion. On this view, the proposal is that color experiences represent that there is a visual system such that the object of perception is disposed to produce an experience with a certain phenomenal character. This suggestion will allow that two subjects with different types of visual systems who are spectrum inverted can represent two objects with different colors as having the same phenomenal property. That is, it sustains the idea of there being shared phenomenal content among phenomenal duplicates.

But the proposal is clearly too liberal. It does not handle the problem raised earlier concerning misrepresentation. Suppose that on a particular occasion Jill looks at a lime and has an experience like the one Jack normally has. Jack and Jill are spectrum inverted with respect to each other. She will, on this proposal, be representing the lime as having a property that it actually has. The lime does have the property of being disposed to produce an experience of that type in perceivers with visual systems of one or more sorts (such as those with visual systems like Jack's). But the lime does not appear the way that green things normally do for Jill. Jill's experience ought to count as a misperception, but this proposal entails that it is a veridical perception. And given that there might be creatures with all kinds of visual systems that differ from our own, the current proposal threatens to make it *very difficult* for color experiences to misrepresent with regard to the phenomenal properties.

The point can be made more obvious if one considers an experience of one's own. Suppose I were to look out at the Pacific Ocean and have what I would describe as a "yellowish experience"—the kind of experience that I normally have when looking at lemons. Normally I have what I would describe as a "bluish experience" when viewing the ocean. Assume also that nothing out-of-the-ordinary is occurring in the ocean—it is physically just like it normally is. My yellowish experience is clearly a misperception—I am representing the ocean as being other than the way it actually is. The fact that there is another creature for whom the ocean is disposed to typically cause experiences of this sort—yellowish experiences—does not make *my* experience veridical. And if it did, it seems that it would be very difficult indeed to identify any color experiences that

misrepresent.²³

Given the implausibility of the above interpretation of Shoemaker's proposal in "Phenomenal Character Revisted", I think it is pretty unlikely it is the intended interpretation. Instead, we might understand the phrase "one or more sorts" to be shorthand for a specification of some particular range of visual systems, understood disjunctively. Now the question will be, which visual systems are in the domain of a particular subject's phenomenal content? This proposal collapses into the former proposal if we take the disjunction to include all possible visual systems. If we take the disjunction to be limited, it will make shared content too difficult. It isn't clear that there is any principled line to be drawn between listing all possible visual systems (making misrepresentation too difficult) or listing only one (making shared content too difficult). Inverted spectrum cases make it clear (as seen earlier) that the disjunction must be restrictive enough to exclude inverts. That is, Jill's color experiences cannot be made veridical by the fact that Jack would have an experience of the same phenomenal character under the same perceptual circumstances. But in excluding inverts, we have already abandoned the idea that Jack and Jill can share phenomenal content.

Tye (2000) characterizes Shoemaker (2000), partly based on correspondence, as the view that phenomenal character, and thus the property represented by a color experience, is "the disposition to produce an experience with a certain intrinsic quality in normal lighting conditions in any creature having a visual system capable of producing

²³ This is especially true if, as seems reasonable, we take the domain of the existential quantifier to include not only actual visual systems but also merely possible ones. I say that this is reasonable, from the point of view of this proposal, because Shoemaker holds (as do I) that the need to accommodate inverted-spectra is not driven by their actuality, but by their mere possibility.

experiences with that intrinsic quality” (p. 102). Here Shoemaker’s phrase “creatures of one or more sorts” is understood as requiring that all creatures of that sort have experiences of that phenomenal character under those conditions. I don’t know that this is a correct description of the view in Shoemaker (2000), but it faces a problem noted by Tye (2000). Experiences that ought to count as veridical for Jill, such as a greenish experience while viewing a ripe tomato, will count as misperceptions. That is because the tomato will not have the disposition to cause experiences of that phenomenal character in *Jack*. Shoemaker might respond by holding that Jack is not a creature with a perceptual system like Jill’s. But on the present interpretation, this amounts to saying that Jack and Jill are incapable of having color experiences with the same phenomenal character. And then it will no longer be the case that Jack and Jill are spectrum inverters. Spectrum inverters are subjects for whom color experiences with the very same phenomenal character are caused by an object with opposing color properties. The line of response disallows the possibility of spectrum inversion, which undermines the motivation for adopting Shoemaker’s theory of phenomenal content rather than simpler non-dispositional forms of Russellianism.

Higher-order Dispositional Appearance Properties

In a more recent discussion, Shoemaker has suggested that phenomenal content consists in representing higher-order dispositional appearance properties (Shoemaker 2001). Recall that these are the higher-order properties shared by all things which are disposed to appear a certain way under some circumstances or other to some range of

observers under some viewing conditions or other. This is a more coarse-grained property than a dispositional appearance property. It is the property of having any one of the many dispositional appearance properties of which a given occurrent appearance property can be the manifestation. This proposal falls victim to problems raised earlier for the occurrent appearance properties. The content on this view is so “loose” that it makes illusory perception virtually impossible. If something appears some way or other, it is bound to be true that the object which is causing that appearance is disposed to appear that way to *someone* under *some conditions*. For instance, suppose that due to a temporary disruption of the normal functioning of my visual system, I have a green experience when looking at a red fire hydrant. This is an experience that ought to be considered a case of misrepresentation. But if the content of this experience is that the object that is causing the experience is disposed to appear that way to someone under some conditions, the experience is veridical. The fire hydrant is disposed to cause a greenish experience in my spectrum inverted twin under a wide variety of conditions.

Shoemaker on Hallucinations

My criticisms so far of Shoemaker’s theory of phenomenal content have frequently centered on the problem of accommodating the possibility of illusory color experience. I have not discussed the possibility of hallucinatory color experiences. Shoemaker introduces an additional element into his theory in order to allow for hallucinations, as opposed to illusions. He says in Shoemaker (2003) that it is part of the notion of an appearance property that an experience be caused *in the right way*. For

example, a red experience might represent an object as causing or being apt to cause an experience of that type in the ordinary visual way (involving the reflection of light, activity in the eye, and perhaps visual pathways in the brain). This would rule out as a misperception a red experience that is caused by direct brain stimulation, for instance.

But this seems to me to be an illegitimate way of accounting for hallucination. To see this, we can consider creatures who have visual experiences that are precisely like our own, but in whom those experiences are caused in a different way than in us. For instance, we can imagine that the creatures do not have eyes, and that their color experiences are thus not caused by light reaching the eyes. We might even imagine that those experiences are not caused by variations in light radiation at all. Imagine, for example, that the creatures perceive the world through echolocation, like bats do. It might be that through echolocation they come to have experiences of color. There doesn't seem to me to be any barrier to our rightly saying that these creatures can have color experiences that are phenomenally like our own, and also veridical, but caused in a very different way than human color experiences.

If this is right, then the burden is on Shoemaker to give a specific account of *being caused in the right way* that counts these creatures' color experiences as being caused in the right way while nonetheless excluding hallucinations. And it is difficult to see how such an account could be given, short of saying (circularly) that veridical color experiences must be caused in one of the ways that can lead to veridical content.

Other Russellian Options

Are there other options for Shoemaker, compatible with his motivating assumptions? In adherence to the transparency thesis, Shoemaker holds that sameness of phenomenal character entails sameness in *what* is represented. His way of accounting for this is to identify some type of property, appearance properties, that could be represented veridically by both Jack and Jill. An alternative is to find some other property, or something other than a property, that can be a candidate for what is represented by color experiences.

Michael Thau has recently offered a view according to which color experiences do not represent colors, but instead represent nameless properties of external objects (Thau 2002). These properties are irreducible intrinsic properties distinct from the colors. Phenomenally identical color experiences represent the same nameless properties.

But as Shoemaker (forthcoming) points out, Thau's view does not really allow for spectrum inversion without illusion. It allows for the veridical perception of color by both Jack and Jill. But colors do not enter into the phenomenal content of color experiences. Rather, a subject may judge that an object has a certain color based on his or her representation of the nameless intrinsic properties of the object. On Thau's view, an object cannot have both the intrinsic "greenish" property that Jack experiences an object as having and the intrinsic "reddish" property that Jill experiences the very same object as having. Instead, one of the inverts misperceives the nameless properties. With regard to the possibility of spectrum inversion without illusion, Thau's view has no advantages over Standard Russellianism. Some Standard Russellians also allow that

inverts can both form veridical color judgments, despite one of them necessarily being a misperceiver at the level of phenomenal content.²⁴

Shoemaker himself has recently suggested that, instead of appearance properties, color experiences represent what he calls “qualitative characters” (Shoemaker, forthcoming). Qualitative characters are not properties, but instead aspects of color properties. Qualitative characters are essential to the properties of which they are an aspect. A color can have more than one qualitative character, corresponding to each of the many ways that the color can appear to a perceiver who is not misperceiving. And the qualitative characters that one color has can overlap with the qualitative characters that another color has. It is this last feature that allows for the possibility of spectrum inversion without illusion. When Jack looks at the strawberry and Jill looks at the lime, they have veridical experiences with the same phenomenal character, despite viewing objects of different colors. This is because the qualitative character that Jack represents the red strawberry as having is the same qualitative character that Jill represents the green lime as having. It is a qualitative character that both redness and greenness possess, thus allowing both Jack and Jill to be veridical perceivers.

This new view successfully accommodates spectrum inversion without illusion. And it avoids the problem raised above concerning Shoemaker’s earlier view—that of allowing Jack and Jill to share phenomenal content when they have identical color experiences and are not misperceiving. Qualitative characters, unlike appearance properties, are not individuated in terms of perceivers. The problem of specifying the relevant class of perceivers for appearance properties thus does not arise on this view.

²⁴ See, for example, Tye (2000).

Despite these virtues, the new view faces the “in principle” objection to Standard Russellianism discussed before. Suppose that Jack looks at Jill’s lime but, due to a malfunctioning of his visual system, he has an experience with the same phenomenal character that Jill normally has. This experience ought to count as a misperception. But on Shoemaker’s new view, the experience’s phenomenal content is veridical. For in order to accommodate spectrum inversion without illusion, Shoemaker holds that the greenness of the lime actually has the qualitative character that Jack is experiencing it as having. This is what makes Jill’s experience veridical. But this way of accommodating spectrum inversion has the unpleasant result that Jack’s experience is also veridical.

The new view in fact makes it extremely difficult to misperceive at the level of phenomenal content. Given the indefinitely large number of possible visual systems different from our own, for any ostensibly mistaken color experience one might have, there may be a creature who ordinarily has an experience like that in response to the relevant external properties. It follows that the experience, despite being atypical for the perceiver, will count as a veridical perception.

Shoemaker’s new view does allow for misperception of a certain sort in the cases above. Jack will likely, for example, mistakenly infer from the fact that he is having an experience with a certain phenomenal character (a reddish experience) that the fruit that he is perceiving is red. It is in fact green, and so he will be making a false judgment. And it is open to Shoemaker to hold that there is an additional perceptual representation (but not part of the phenomenal content), according to which colors rather than

qualitative characters are represented (and misrepresented).²⁵ But at the level of phenomenal content, there is no perceptual error.

One might think that Shoemaker could insist that Jack's experience represents a certain qualitative character as being an aspect of redness (since his experiences with that particular phenomenal character, unlike Jill's, are normally experiences of a qualitative character of redness rather than of greenness).²⁶ But this is not an available position for Shoemaker. To say this is to say that phenomenally identical experiences had by Jack and Jill are not in fact the same in phenomenal content. And if they are not the same in phenomenal content, then Jack and Jill are not really spectrum inverters. As argued before, if there can be no genuine spectrum inversion, then the motivation for adopting a view like Shoemaker's over some version of Standard Russellianism is lost.

Shoemaker's new view does not allow for error at the level of phenomenal content, except perhaps in cases of hallucination. This seems to me to be a serious problem for the view. The possibility of spectrum inversion without illusion serves as a strong motivation for abandoning Standard Russellianism. But it does so only because there seems to be no grounds for considering only subjects like Jack, nor only subjects like Jill, as having veridical phenomenal color content. By contrast, it is not intuitive to think that when Jack has an experience just like Jill's, due to a glitch in his visual system, he is having veridical phenomenal color content. As I argued in discussing a variant of Shoemaker's older view, the presence of an observer who normally has yellowish

²⁵ Shoemaker (forthcoming) suggests a view like this. But he does not give a detailed account of what makes it the case that one represents a certain color, in addition to a qualitative character. He also indicates that a color need not always be represented at all. In correspondence, he has suggested that in poor lighting conditions, one might not represent a color at all, despite representing a qualitative character.

²⁶ This is not, however, the view about phenomenal content in Shoemaker (forthcoming).

experiences when looking at the Pacific Ocean does not plausibly make it the case that when I have an experience with that phenomenal character (despite normally having bluish experiences), my experience is veridical. On Shoemaker's new view, the veridicality of my invert's experience is accounted for by holding that the blueness of the Pacific Ocean has the qualitative character that grounds the yellowish experience of my invert. But then when I have a yellowish experience I am attributing a qualitative character to the color of the Pacific Ocean that the ocean does in fact have.²⁷

The "in principle" problem for Standard Russellianism applies to any view that attempts to find some similarity in content, at the level of extension, between Jack and Jill's experience. Any similarity in content between Jack's experience of the strawberry and Jill's experience of the lime that could ground the phenomenal similarity of their experiences must be such that, were Jack to have an experience like Jill's while viewing the same lime, his experience will not share this intentional feature. Otherwise, Jack's experience will also count as veridical, when in fact it is a misperception. But if Jack's experience does not share this intentional feature, despite being phenomenally like the experience Jill has, then there does not seem to be any grounds for saying that they are spectrum inverted relative to each other.

The only solution that seems available, one that would properly accommodate inverted spectra without illusion, is to incorporate some type of indexicality into the

²⁷ Denying that such experiences have nonveridical phenomenal content also has the unfortunate consequence that the ways different colors appear to us, even within a single subject and under standard lighting conditions, are not mutually exclusive. Having red experiences versus green experiences does not inform the subject about the respects in which red things differ from green things, since the qualitative characters that such experiences represent are shared by red and green. And given that these qualitative characters are essential to the colors of which they are aspects, this failure of the respective color contents to be exclusive of each other is necessary.

phenomenal content. It needs to be the case that phenomenally identical experiences had by Jack and Jill can attribute different properties to their external objects. Otherwise, we face the problem of accounting for misperception in the case of erroneous inversion (as when Jack, due to a malfunction of his visual system, has experiences that are like Jill's). But phenomenal content is content that is shared by phenomenal duplicates. To hold that Jack and Jill's phenomenally identical experiences have entirely different content is to abandon representationalism and the view that there is such a thing as phenomenal content. What is needed is a sort of indexical content, a content that, given different perceivers, picks out a different property. This feature makes indexicality a matter of *how* something is represented, not *what* is represented.²⁸

Fregean Representationalism

Views that identify phenomenal content not with purely extensional content but with an intension or mode of presentation that determines an extension can be considered

²⁸ Andy Egan (forthcoming) develops an interesting view that attempts to incorporate indexical features within a purely Russellian theory. He does so by holding that phenomenal content involves the representation of what he calls a "centering feature". Centering features are not properties, but rather features that characterize a centered-worlds proposition (such as the feature of "being nearby"). The resulting theory of phenomenal content is something very analogous to a Fregean theory, except that it is one-dimensional. Only centered-worlds propositions are represented, and they do not in turn determine a possible-worlds proposition as part of the content of experience. I do not think, however, that such a view should be considered attractive to those motivated toward a Russellian theory by the transparency thesis. The phenomenal properties that we are directly aware of in perception are genuine properties. They have distinctive natures. A full objective characterization of the world as it is would be incomplete if it did not specify what these properties are. By contrast, Egan's centering-feature view identifies what we are aware of in perceptual experience with something that is abstract and is not nature-determining. Thus the view seems to be metaphysically inadequate.

broadly Fregean theories of phenomenal content.²⁹ The idea that color content involves modes of presentation need not be seen as abandoning representationalism. Nor does it conflict with the idea that there is such a thing as phenomenal content—intentional content that supervenes on phenomenal character such that any two phenomenally identical experiences will share phenomenal content. Instead, phenomenal content can be thought of as a kind of Fregean content, involving modes of presentation of represented properties and objects.³⁰

Modes of presentation can be thought of as conditions on reference. For example, consider “Evening Star” and “Morning Star”. These two expressions refer to the very same object, Venus. But they do so under distinct modes of presentation. The “Evening Star” refers to the first star to appear in the evening, the “Morning Star” to the last star to disappear in the morning. Venus is the actual object that satisfies these two conditions on reference.

Likewise, Jack and Jill both visually represent ripe tomatoes as being red. But on the Fregean proposal, they do so under distinct modes of presentation. Understood as a condition on reference, Jack’s red experience picks out the property that typically causes red experiences in Jack. Jill’s green experience picks out the property that typically causes green experiences in Jill. The very same property, physical redness, satisfies these two conditions.

²⁹ I include among such views those that would treat phenomenal content as involving something like a Kaplanian character (Kaplan 1989). I follow Chalmers (2002) in calling views that introduce something like an intension or character in addition to extension broadly “Fregean”.

³⁰ I present and defend a Fregean theory of phenomenal content in detail in my [reference to author’s work]. There I also argue that the transparency thesis, as it is typically understood, is mistaken.

One of the difficulties that arises for Shoemaker is that of identifying some *property* that all red experiences represent. But the difficulties raised above can be handled if, instead of there being some property that phenomenally identical color experiences all represent, such experiences instead share an indexical mode of presentation. Color experiences can be thought of as placing conditions on reference that involve indexicality. For instance, a red experience might pick out the property that typically causes such experiences in the subject. Had by Jack, this mode of presentation would pick out physical redness. Had by Jill, the very same mode of presentation would pick out physical greenness.

A Fregean theory of phenomenal content thus allows for spectrum inversion without illusion. And it is also consistent with the idea that phenomenally identical experiences have the same phenomenal content, understood as a kind of Fregean content. But it does not lead to the difficulties concerning misrepresentation that plague Shoemaker's theories. If Jill, looking at a ripe tomato, has the sort of experience that Jack normally has, she will have misrepresented. The tomato does not have the property that typically causes experiences of that qualitative type in her.

The Fregean approach has one final virtue over Shoemaker's. One unattractive feature of Shoemaker's theory over standard versions of Russellian representationalism is that it denies that color experiences, in the first instance, represent colors. The Fregean view retains the intuitive idea that color experiences simply represent colors. The dispositional and subjective elements involved in phenomenal color content concern the nature of the modes of presentation, rather than, implausibly, the matter of what is represented by color experiences.

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