Centered Worlds and the Content of Perception

Berit Brogaard

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0. Relativistic Content

In standard semantics, propositional content, whether it be the content of utterances or mental states, has a truth-value relative only to a possible world. For example, the content of my utterance of 'Jim is sitting now' is true just in case Jim is sitting at the time of utterance in the actual world, and the content of my belief that Alice will give a talk tomorrow is true just in case Alice will give a talk on the day following the occurrence of my belief state in the actual world. Let us call propositional content which has a truth-value relative only to a possible world 'non-relativistic content'. Non-relativistic content can be treated as either structured or unstructured. On the unstructured-content view, non-relativistic content is a set of possible worlds and bears the truth-value *true* just in case the actual world is a member of that set. For example, the content of my utterance of 'Jim is working now' at time t is the set of worlds in which Jim is working at t, and this content is true just in case the actual world is among those worlds. On the structured-content view, non-relativistic content is a set or conglomeration of properties and/or objects, where properties are features which objects possess relative only to a possible world, rather than, say, relative to a possible world and an individual. Such properties are said to be (or represent) functions from possible worlds to extensions. Relative to a possible world they determine a set of objects instantiating the property. For example, relative to the actual world the property of being human determines the set of actual humans.

Not all content is non-relativistic. Let us say that propositional content is relativistic just in case it possesses a truth-value only relative to a centered world. A centered world is a possible world in which an individual and a time (and perhaps other features) are marked, where the marked individual could be the speaker or the bearer of the mental state or someone

considering the content of the utterance or mental state for truth. Relativistic contents contain properties (or features) which objects possess only relative to a particular individual and time (including aspects of the individual and her community such as the individual's location or preferences or a texture scale or viewing condition). Let us call such properties (or features) 'centered properties'.

Some prefer to reserve the term 'relativistic content' for content which has a truth-value only relative to a centered world in which the individual in the center is someone evaluating the content for truth (see e.g. MacFarlane 2009). However, I shall here use the term more broadly to include contents which have a truth-value only relative to a centered world, where the individual in the center can be any individual, for example, the speaker, the bearer of the mental state, or someone who evaluates the content for truth.

There is a lot of controversy about whether our utterances ever have relativistic contents (see e.g. Kölbel 2002, MacFarlane 2003, Lasersohn 2009). One frequently discussed case is that of predicates of personal taste. On the view that utterances of sentences containing predicates of personal taste have relativistic contents, my utterance of 'this chili is tasty' has a content that contains the centered property *being tasty*. When *being tasty* is construed as a centered property, whether or not the demonstrated chili possesses the property of being tasty depends on who considers the quality of the chili. For example, the chili might possess the property of being tasty relative to me but not relative to you. This is so if I like the chili but you do not. Whenever an object possesses a centered property relative to a centered world, there is a corresponding relational property which the object possesses relative to a corresponding uncentered world. For example, if this chili instantiates the centered property *being tasty* only relative to an assessor, and the chili is tasty relative to assessor E_1, then it instantiates the uncentered property *being-tasty-relative-to-assessor-E_1* relative to the world as a whole. Let us call the relational properties which correspond to the centered properties that figure in relativistic contents 'situation-dependent properties' (the term is borrowed from Schellenberg 2008). Situation-dependent properties are properties instantiated by objects relative to possible worlds. They are situation-dependent in the sense

that they are relations to situations, individuals or perspectives but an object can possess a situation-dependent property relative only to a possible world. This chili has the centered property of being tasty only relative to someone who considers the quality of the chili but it has the situation-dependent property being-tasty-relative-to-me relative to the world as a whole. So, while objects have centered properties only relative to individuals (and/or other marked features), objects have situation-dependent properties from a God's eye point of view.

Here we will not focus on the debate about whether our utterances sometimes have relativistic contents. Instead we will focus on the case for thinking that the content of perception is relativistic (for a discussion of what it means to say that perception has content see e.g. Siegel 2008, forthcoming a, forthcoming b, Pautz 2009). I will discuss four arguments in favor. Where the first two have been widely discussed in the philosophy of perception literature, the last two have received considerably less attention.

1. The Argument from Primitive Colors

The first argument for the thesis that the content of perception is relativistic is the argument from primitive colors, and it runs as follows. When we look at objects, our color experience seems to reveal the colors of objects to us directly. But the colors thus revealed do not appear to be disjunctive properties, dispositions to reflect light or dispositions to give rise to certain phenomenal effects in us. They appear to be primitive colors: the representational equivalents of phenomenal color properties, or what David Chalmers (2006) calls 'perfect colors'. Yet science tells us that objects do not possess primitive colors (if they possess colors at all). They possess physical color properties, for instance, surface spectral reflectance properties: dispositions to reflect certain proportions of the incident light, or more plausibly, equivalence classes of these, for instance, disjunctions of reflectances that give rise to certain phenomenal effects in normal perceivers in normal circumstances. But if our experiences represent objects as having primitive colors, and objects do not possess primitive colors, then it would seem that our color experiences are systematically illusory: they systematically attribute to objects properties which the objects do not have.

This is problematic for two reasons. First, illusions are cases of perception that has gone wrong. If a white chair is lit by bright blue light, I might see it as blue in spite of the fact that it really is white. But the defect is attributable to non-standard and misleading lighting conditions. Likewise, if I take a hallucinatory drug, I might see the coke can as bent in spite of the fact that it is perfectly straight. But in this case the defect is attributable to the abnormal function of my perceptual system. If, on the other hand, color perception is systematically illusory, the illusion is not attributable to non-standard lighting conditions or the abnormal function of our perceptual systems. Our color perceptions are illusory in spite of the fact that there is no defect in the function of our perceptual systems or in the viewing conditions under which our experiences take place.

Second, it is plausible that the content of our color experiences at least in some cases just is the content of our color judgments. For example, if I look at my blue chair and judge that it is blue, then it is plausible that the content of my judgment just is the content of my perceptual experience. But if this is so, and the content of color experience is systematically false, then a large number of color judgments are systematically false too. This, however, seems quite implausible. Judging from how we treat color judgments, it seems that our color judgments are to a large extent true. (This objection, of course, is just one of the standard objections to error theories for these sorts of judgments).

There are three ways one might go about responding to this problem. One is to deny that color experiences represent objects as possessing primitive colors. One could, for example, say that objects visually seem to possess primitive colors but deny that the visual appearance determines representational content. Suppose, for example, that the representational content of visual experience is composed of physical properties and/or objects. The content of my experience as of there being a blue car in front of me might then represent the car as instantiating the reflectance type blue. Of course, the car does not look as if it instantiates this property – it looks as if it instantiates the primitive color blue. But one could say that how the car visually looks reflects only the phenomenal character of the experience, not the representational content.

However, this sort of response is not very plausible. It is highly plausible that the phenomenal character of perceptual experience determines at least part of the content of perceptual experience. That is, it is highly plausible that at least part of the content of perceptual experience supervenes on the phenomenology of perceptual experience. But then how things visually seem should determine what (part of) the content of perceptual experience is like.

A second way to solve the problem of primitive colors is to turn to a form of irrealism about primitive colors (also sometimes called 'subjectivism'). The irrealist holds that, strictly speaking, objects do not possess the primitive colors which are revealed in color experience. Though the irrealist holds that, strictly speaking, our color experiences fail to be perfectly veridical, it is open for her to say that, when the primitive colors revealed in color experience are relevantly causally connected to the reflectance types instantiated by the relevant object, our color experiences are imperfectly veridical (see Siegel 2004 for an argument to the effect that imperfect veridicality just is veridicality). This is the view proposed and defended by David Chalmers (2006). Chalmers argues that visual experience has three kinds of content: Edenic, Fregean, and Russellian. Edenic content is composed of perfect properties, for example, primitive color properties. Edenic content reflects the phenomenal character of visual experience directly, and so naturally constitutes at least part of the phenomenal content of experience. The Fregean content is composed of modes of presentation of the object the experience is about and of the physical properties instantiated by the object, and it remains the same regardless of what the environment is like. In a particular environment the Fregean content yields a Russellian content, i.e., a conglomeration of physical properties and/or objects. For example, the Russellian content of my experience as of a blue ball o is constituted by the blue ball o and the reflectance type blue, and the Fregean content consists of the property of being the object that is causing the current experience and the property of being the property that normally causes phenomenally blue experiences. So, in an environment in which I am seeing that o is blue, *being the object that*

is causing the current experience will yield o and *being the property that normally causes phenomenally blue experiences* will yield the reflectance type blue.

The Fregean content of color perception does not reflect the phenomenal character of the experience directly. But it plausibly reflects the inferential role of perceptual experience. If a perceiver is told that the object of her experience does not have the properties that normally give rise to her current phenomenology or she is told that no object is causing her experience, she will judge that her experience is falsidical (erroneous). If the inferential role of perceptual experience is reflected in the content of the experience, then experiences have Fregean contents.

On Chalmers' view, the Edenic content of color experience does not match the instantiated reflectance properties perfectly in our world. But it would have matched them perfectly in Eden. Eden is a world in which objects instantiate perfect properties. Objects which normally look blue instantiate primitive blueness, objects which normally look red instantiate primitive redness, and so on. But our world is not Eden. So, in our world color experiences are not perfectly veridical. However, they are imperfectly veridical. To a first approximation, the Edenic content of perceptual experience is imperfectly veridical just in case it matches the Russellian content of the experience, which it does if it is appropriately causally corrected to the physical properties and objects constituting the Russellian content.

Chalmers' view thus offers a solution to the problem of primitive colors. Our color experiences are not perfectly veridical but they are imperfectly veridical. So, our color experiences are illusory in one sense: objects do not instantiate the primitive colors which our color experiences represent them as having. But there is a sense in which our color experiences are not illusory: the perfect, primitive colors of our color experiences match the imperfect colors: the reflectance properties instantiated by objects.

What counts as an appropriate matching relation will depend on facts about the perceiver. So, whether an experience is (imperfectly) veridical or falsidical will depend on these facts as well. For example, there could be a community of inverted perceivers who, when looking at red objects, have the sorts of experiences we have when we look at green

objects. Relative to an inverted perceiver, primitive green matches the reflectance types which primitive red matches relative to us. So, the inverted perceivers' color experiences are (imperfectly) veridical in spite of the fact that they represent ripe tomatoes as primitively green and spring leaves as primitively red. Likewise, there could be perfectly rational perceivers who upon rational reflection would be inclined to accept color experiences as veridical only if the world is Edenic. Relative to such perceivers it is plausible that color experiences are (imperfectly and perfectly) veridical only if the world is Edenic.

This returns us to the case for centered properties. On Chalmers' view, experiences represent physical color properties under a mode of presentation of the form *being the property that normally causes phenomenally red experiences*. As we have seen, the motivation for positing these kinds of modes of presentation in the content of experience comes from the fact that they reflect the experience's inferential role. But one could equally well take experiences to represent reflectance properties under a mode of presentation of the form *being the property which phenomenally red experiences match*. Content containing this sort of property reflects the inferential role of perceptual experience just as well as the causal content suggested by Chalmers. Given non-Edenic standards, P is the property which phenomenally red experiences match just in case P is the property that normally causes phenomenally red experiences. So, given non-Edenic standards, perceptual contents containing properties of the form *being the property which phenomenally red experiences match* and perceptual contents containing properties of the form *being the property that normally causes phenomenally red experiences* reflect the inferential role of perceptual experience equally well.

On the view that color perception contains a matching relation, the content of color experience comes out as relativistic. Edenic properties stand in the matching relation to instantiated properties only relative to the perceiver. So, the content of color experience has a truth-value only relative to the perceiver, which is to say that the content of color experience is relativistic.

We have assumed that the matching relation has an extension only relative to the perceiver. But one could also hold that it has an extension only relative to an assessor even if the assessor is not the perceiver. However, the former view seems more intuitive. Only the former view yields the intuitively correct result with respect to inverted perceivers. Intuitively, the color experiences of perceivers for whom the reflectance property of ripe tomatoes normally causes phenomenally green experiences are (imperfectly) veridical. But this is not the result we get if we take the matching relation to have an extension relative to an assessor. Relative to perceivers like you and me, primitive red matches the reflectance property instantiated by ripe tomatoes and not the reflectance property instantiated by spring leaves. So, if the matching relation has an extension only relative to an assessor, and you and I assess an inverted perceiver's experiences for veridicality, then the inverted perceiver's phenomenally red experiences come out as falsidical. But this is not the result we want. If, on the other hand, we take the matching relation to have an extension relative to the perceiver, then we get the right result. Relative to inverted perceivers, primitive green matches the reflectance property instantiated by ripe tomatoes. So, the inverts' phenomenally green experiences of ripe tomatoes come out as (imperfectly) veridical, which is as it should be.

Similar considerations carry over to the experiences of rational perceivers with perfect veridicality standards. The standards of matching supervene on the rational judgments of perfectly rational perceivers. So, if a perfectly rational perceiver takes her color experiences to be falsidical upon realizing that the world is non-Edenic, then presumably the perfect colors do not match the imperfect reflectance properties relative to her.

A third way to respond to the problem of primitive colors, not unlike Chalmers', is to take Edenic properties to be centered properties, as suggested in Brogaard (2009). On this view, objects instantiate primitive properties relative to centered worlds in which the perceiver and a publicly appropriate viewing condition are marked. For example, the content of my experience as of R being red is true relative to a centered world whose centered features include me and viewing condition C if R is red, relative to me and C, and the content of your experience as of R being red is true relative to a centered world whose centered

features include you and viewing condition C if R is red, relative to you and C. We can now say that a perceptual experience is veridical or 'accurate' just when its content is true relative to the perceiver and an appropriate viewing condition. So, my experience as of R being red is veridical just in case R is red, relative to me and an appropriate viewing condition, and your experience as of R being red is veridical just in case R is red, relative to you and an appropriate viewing condition.

Treating primitive properties as instantiated by objects relative to centered worlds requires rejecting the hypothesis that physics gives us a complete picture of which properties are instantiated in the world. However, the assumption that physics gives us a complete picture never was very credible to begin with. Presumably physics does not offer an appropriate answer to the question of whether melodies can instantiate sadness or whether people can instantiate attractiveness.

One nice consequence of taking primitive color properties to be centered properties is that it gives us a plausible account of color discourse. On the assumption that the colors simply are the content of color terms, the content of 'red' is primitive red, the content of 'blue' primitive blue, and so on. Assuming this correlation between the colors and color discourse, a treatment of primitive properties as centered yields a non-indexical contextualist semantics for color discourse (Brogaard 2009). It's contextualist, because the truth-values of color utterances depend on the context of utterance, and it's non-indexical, because the content of color terms remains constant across different contexts of utterance (Brogaard 2008a, 2008b and MacFarlane 2009).

The context of utterance determines which centered worlds and hence which perceivers are relevant for the evaluation of color discourse. For first-person uses of color terms, the relevant perceiver is the speaker. So, if I utter the sentence 'that is red', the content of my utterance is true just in case the demonstrated objected possesses primitive redness relative to a centered world whose centered features include me and a publicly appropriate viewing condition.

Color terms may also be used deferentially. Utterances of color attribution sentences containing color terms used deferentially are true just in case their content is true relative to a centered world in which the perceiver deferred to and a publicly appropriate viewing condition are marked. For example, when someone who has only black and white experiences says 'that is red', using 'red' to defer to someone who can perceive red, her utterance expresses a proposition to the effect that the demonstrated object is red, and this is true just in case the demonstrated object is red relative to a centered world in which the perceiver deferred to and a publicly appropriate viewing condition are marked.

Generic uses of color terms are deferential. But the perceiver deferred to is not a particular perceiver but an envisaged average perceiver. Utterances of generic sentences are true just in case their content is true relative to a centered world containing a publicly appropriate viewing condition and an envisaged average perceiver from the speaker's linguistic community. For example, my utterance of 'In Australia, mailboxes are red' is true just in case the content is true relative to a centered world whose centered features include an envisaged average speaker from my linguistic community and a publicly appropriate viewing condition.

Sentential operators can shift the parameters of the circumstance of evaluation. Here are some examples of circumstance-shifting operators: 'As dichromats see things', 'As far as the inverted perceiver is concerned', 'In view of the perceptual perspective of a tetrachromat'. For example, 'as dichromats see things' chooses as a circumstance of evaluation a centered world whose centered features include a dichromat. Thus, my utterance of the sentence 'as dichromats see things, Australian mail boxes are gray' is true just in case the content of 'Australian mail boxes are gray' is true at a centered world whose centered features include a dichromat and an appropriate viewing condition.

The extension of color terms also sometimes shifts when they occur in visual seeming and seeing reports. Consider, for instance, 'It visually seems to John, who is a dichromat, that Australian mailboxes are gray'. The latter can be true even if it doesn't visually seem to perceivers like me that Australian mailboxes are gray. Likewise, the sentence 'John, who is

unable to distinguish red from green, saw the candle change its color from red to green' seems plainly false even if John observed a candle that underwent a change in color properties relative to perceivers like me.

The upshot is this: regardless of whether we treat the content of color perception as containing uninstantiated primitive color properties or primitive color properties which are sometimes instantiated, there is good reason to think the content of color perception is relativistic.

2. The Argument from the Inverted Spectrum

I now turn to the second argument for the thesis that the content of perception is relativistic. The argument rests on the assumption that super-strong representationalism is true. Let *strong representationalism* be the view that for a perceptual experience to have a certain phenomenal character just is for it to have a certain representational content. And let *super-strong representationalism* be the thesis that all of the representational content of perceptual experience determines phenomenal character, and vice versa.

Super-strong representationalism runs into the following sort of problem. When I look at fire engines, cooked lobsters and ripe tomatoes my experiences are associated with phenomenal red. But it seems possible for there to be an inverted perceiver who, when looking at fire engines, cooked lobsters and ripe tomatoes, have phenomenally green experiences. Moreover, we can imagine that my inverted twin and I agree that fire engines, cooked lobsters and ripe tomatoes are red and that spring leaves, uncooked lobsters and unripe tomatoes are green, that we would make identical piles if asked to put green things in one pile and red things in another, and so on. In other words, it is plausible that none of us has experiences which represent the world incorrectly.

However, super-strong representationalists, it would seem, cannot grant that this sort of scenario is possible. For, the super-strong representationalist takes all of the content of perceptual experience to determine phenomenal character. So, if my physical twin and I both

have experiences that represent an object as instantiating a particular physical color property, then we should have experiences with the same phenomenal character. This we do not have.

Sydney Shoemaker (1994, 2000) proposes the following way out for the super-strong representationalist. The super-strong representationalist can deny the assumption underlying the inverted-spectrum argument that my inverted twin and I have experiences which differ with respect to representational content only if they differ with respect to color content. That is, the super-strong representationalist can reject the assumption that my inverted twin and I have experiences that differ in color content and say, instead, that we have experiences that differ in what Shoemaker calls 'appearance properties'. Quite plausibly appearance properties, viz. the properties that make a difference to the representational character of the experiences of my inverted twin and I, should satisfy the following intuitive constraints (from Egan 2006).

Difference: My inverted twin's and my experiences should represent ripe tomatoes as having different appearance properties.

Correctness: My inverted twin's and my experiences should both represent ripe tomatoes correctly.

Novelty: The appearance properties aren't the colors

Sameness: The appearance property which I attribute to ripe tomatoes is the same as the appearance property which my inverted twin attributes to unripe tomatoes.

Contrariness: Correctly representing something as having the appearance property red should be incompatible with correctly representing it as having the appearance property green.

Constancy: The appearance properties should be observer-independent properties of objects.

Shoemaker suggests two candidates to play the role of appearance properties. On the first suggestion, appearance properties are properties of the form *currently producing a*

phenomenally red experience in some observer. Shoemaker, however, dismisses this candidate, because properties of this sort are not properties an object can have independently of being observed. So, they violate Constancy. On the second suggestion, appearance properties are properties of the form *being disposed to cause phenomenally red experiences in some kind of observer*.

However, as Andy Egan (2006) argues, this latter candidate doesn't seem to fit the bill either. There is an ambiguity in Shoemaker's characterization. The property which my experience attributes to ripe tomatoes could be that of being disposed to cause phenomenally red experiences in some kind of possible observer or in some kind of actual observer. However, supposing that the relevant property is that of being disposed to cause phenomenally red experiences in some kind of possible observer leads to trouble. It's too easy to possess this property. Everything is disposed to cause phenomenal redness in some kind of possible observer. Likewise, everything is disposed to cause phenomenal greenness in some kind of possible observer. So, it is necessarily the case that something has the appearance property red iff it has the appearance property green. But then the Difference Constraint fails to be satisfied. My inverted twin and I do not represent physically red objects as having different properties. And so if super-strong representationalism is correct, then there shouldn't be a difference in the phenomenal character of our experiences, which there is.

Suppose then that appearance properties are properties of the form *being disposed to cause phenomenally red experiences in some kind of actual observer*. Here there is also an ambiguity. The relevant property could be that of being disposed to cause phenomenally red experiences in some kind of observer that exists in the actual world, or it could be the property of being disposed to cause phenomenally red experiences in some kind of observer that exists in the world in which the object exists. The first proposal won't work. For the appearance property red and the appearance property green could still turn out to be necessarily co-extensive if there are enough perceivers in the actual world, or the only actual perceivers are like my inverted twin and I.

Suppose instead that the relevant property is that of being disposed to cause phenomenally red experiences in some kind of observer that exists in the world in which the object exists. A similar problem arises. An experience will correctly represent an object as having both the appearance property green and the appearance property red whenever my inverted twin and I both exist at the world in question. So Contrariness isn't satisfied.

Egan argues that we should take appearance properties to be centered properties (he prefers to reserve the term 'property' for properties in the traditional sense but this is merely a terminological difference). The candidate properties Egan suggests are properties of the form *being disposed to cause phenomenally red experiences in me*. An object has this property relative to a centered world in which I am the marked observer just in case the object is disposed to cause phenomenally red experiences in me, and it has the property relative to a centered world in which you are the marked observer just in case the object is disposed to cause phenomenally red experiences in you. If we treat appearance properties this way, Egan argues, then all the intuitive constraints on appearance properties are satisfied. One could question Egan's claim that the candidate appearance properties satisfy Constancy. While it is true that dispositional properties can be had by objects independently of anyone attending to the objects, it is not quite right that objects can have centered properties of the form *being disposed to cause phenomenally red experiences in me* independently of a perceiver. One could, however, reformulate Constancy as the constraint that appearance properties should be properties which objects possess independently of being perceived at the time in question. Egan's centered properties would then satisfy Constancy.

A second way to be a super-strong representationalist, which does not require positing appearance properties in the content of perceptual experience, is to take experiences to have only Edenic content. Phenomenally red experiences then represent objects as instantiating primitive red. Red experiences then are not perfectly veridical unless the world is Edenic but they could be imperfectly veridical. This would be the case if the object the experience is about instantiates a property which primitive red matches relative to the

perceiver in question. One could then take primitive red to match a reflectance property just in case the reflectance property normally causes phenomenally red experiences.

This view, of course, is a version of Chalmers' view outlined earlier. The main difference between this view and Chalmers' is that, on this view, all of the content of experience supervenes on phenomenal character, and vice versa. So, the view is a version of super-strong representationalism. There are two possible versions of this view. On one version, primitive properties are not instantiated by objects. So, the content of perceptual experiences is not relativistic. However, perceptual states are (imperfectly) veridical or falsidical only relative to perceivers. On the alternative version, which was outlined above, primitive properties are centered properties which have an extension only relative to centered worlds (see Brogaard 2009). On this latter view, the content of perceptual experience is relativistic.

One can, of course, also solve the problem of the inverted spectrum by rejecting super-strong representationalism. The inverted spectrum problem does not arise for strong representationalism (see Chalmers 2006). After all, the strong representationalist need not hold that all of the content of experience determines the phenomenal character of the experience. If one takes perceptual experience to have both Russellian and Fregean content, then my inverted twin and I can have experiences with the same Russellian content but with different Fregean contents. When I look at a ripe tomato my perceptual experience normally attributes to the tomato the property that normally causes phenomenally red experiences in me, and when my inverted twin looks at a ripe tomato her experience normally attributes to the tomato the property that normally causes phenomenally green experiences in her. So, my inverted twin and I have experiences with different Fregean contents but with the same Russellian content.

So, where the super-strong representationalist can avoid the inverted spectrum problem by taking experiences to attribute appearance properties to objects, by allowing two kinds of veridicality or by taking the colors to be centered primitive properties, the strong representationalist can avoid the inverted spectrum problem by taking experiences to

represent reflectance properties under a mode of presentation. According to strong representationalism, my experience of a ripe tomato represents a reflectance property shared by ripe tomatoes, cooked lobsters and fire engines under the mode of presentation *being the property that normally causes phenomenally red experiences in me*, and my inverted twin's experience of a ripe tomato represents a reflectance property shared by ripe tomatoes, cooked lobsters and fire engines under the mode of presentation *being the property that normally causes phenomenally green experiences in me*.

Rejecting super-strong representationalism, however, does not undermine the case for centered properties. For, the above considerations carry over to Fregean modes of presentation. For example, one cannot take the Fregean modes of presentation to be properties of the form *being the property that normally causes phenomenally red experiences in some kind of possible perceiver*. For, if there are enough worlds, then every property normally causes phenomenally red experiences in some kind of *possible* perceiver and green experiences in some kind of *possible* perceiver. Nor can we take the Fregean second-order properties to be properties of the form *being the property that normally causes phenomenally red experiences in some kind of perceiver that exists in the actual world*. For, if there are enough perceivers and properties in the actual world, then it could turn out that every reflectance property normally causes phenomenally red experiences in some kind of actual perceiver and normally causes phenomenally green experiences in some kind of actual perceiver. Nor can we take the Fregean properties to be of the form *being the property that normally causes phenomenally red experiences in some kind of perceiver in the world in which the property is instantiated*. For, if there are enough perceivers and properties in the world in which the object exists, then it could turn out that every color property normally causes phenomenally red experiences in some kind of perceiver in that world and normally causes phenomenally green experiences in some kind of perceiver in that world.

The solution, of course, is to take Fregean properties to be centered properties. The physical color property of ripe tomatoes, fire engines and cooked lobsters has the property *being the property that normally causes phenomenally red experiences in me* relative to a

centered world in which I am in the center but relative to a centered world in which my inverted twin is in the center it has the property *being the property that normally causes phenomenally green experiences in me*.

Regardless of whether strong or super-strong representationalism is correct, it seems that a case can be made either for the thesis that the content of perception has a truth-value only relative to the perceiver or for the thesis that perceptual states are veridical or falsidical only relative to the perceiver.

3. The Argument from Dual Looks

I now turn to the third argument for the thesis that the content of perception is relativistic. The argument rests on the plausible assumption that strong representationalism is true, that is, it rests on the assumption that for a perceptual experience to have a certain phenomenal character just is for it to have a certain representational content. The argument runs as follows. When we say that things look a certain way to us, we don't always mean to convey how things look phenomenally speaking. If I look at a proof of Fermat's last theorem and say 'It looks as if Fermat's last theorem is true', I am not conveying what things look like phenomenally speaking. Rather, I am conveying that I have reason to think Fermat's last theorem is true. But plausibly 'looks' reports sometimes do report what things phenomenally look like, for instance, when we say of a certain object that it looks blue or when we say of two objects that they look to have the same size or shape. But in many cases there is more than one way things look phenomenally speaking, and sometimes things look both to be one way and also not to be that way. Here are three examples (for variations on these examples, see e.g. Peacocke 1983: 12 and Sainsbury forthcoming).

The Bracelet

My bracelet looks to me to be circular-shaped. I have a visual experience as of the bracelet being circular-shaped. But as I am situated relative to the bracelet, the bracelet also looks to

me to be oval-shaped. My experience is not illusory. The bracelet veridically looks to be circular-shaped, and it also veridically looks to be oval-shaped.

Two Trees

The trees on the street look to be the same size. I have a visual experience as of the trees being the same size. But one tree takes up more of the space in my visual field. So, the two trees also look to me to be different in size. My experience is not illusory. The trees veridically look to be same-sized and they also veridically look to be differently sized.

And a Pair of Sunglasses

My car, the mailbox and the little kid's shirt look to be a certain shade of blue. I have a visual experience as of my car, the mailbox and the little kid's shirt being a certain shade of blue. As I put on my sunglasses they still look to be the same shade of blue. But everything also looks darker now that I have put on my sunglasses. My experience is not illusory. My car, the mailbox and the little kid's shirt veridically look to be a particular shade of blue and they also veridically look to be a darker shade of blue.

These scenarios should be familiar. Yet common sense tells us that things don't veridically look both to be one way and also not to be that way. For if something veridically looks to be F, then it is F.

There are four natural replies to the dual looks objection. One is to grant that 'looks' reports report looks but deny that the looks reported are *phenomenal* looks. It may be said that one of the two 'looks' reports (either 'the tilted bracelet looks circular-shaped' or 'the tilted bracelet looks oval-shaped') report non-phenomenal looks, for instance, epistemic looks. However, I think the grounds for this judgment are meager. Following Roderick Chisholm (1957), a 'looks' report reflects the phenomenal character of experience if it concerns the intrinsic properties of a presentation of an object. Call 'looks' report of this kind 'P-"looks" reports', and call 'looks' reports that report an invariant phenomenal look of an

object 'S-"looks" reports'. 'The tiled bracelet looks oval-shaped', then, is a P-'looks' report, whereas 'The tilted bracelet looks circular-shaped' is an S-'looks' report.

As P-'looks' reports reflects the intrinsic properties of a presentation of an object, the looks reported by P-'looks' reports are phenomenal looks. But so are the looks reported by S-'looks'-reports. When I report that my bracelet looks circular-shaped, I am not conveying that I believe that my bracelet looks circular-shaped. I am conveying how things perceptually appear to me.

S-looks are of the sort Chisholm calls 'comparative'. We can say that an S-'looks' report of the form 'X looks circular-shaped to A' is true in the comparative sense iff X looks to A the way circular-shaped things look under various different viewing conditions. Comparative looks are not necessarily evidence-bearing but they require for their accuracy that the perceiver have extraneous information about what things look like under different viewing conditions. Despite that, there is good reason to think that the S-looks reported by S-'looks' reports are phenomenal looks. Our viewing conditions constantly change. So, granting that S-'looks' reports report S-looks but denying that S-looks are phenomenal has the consequence that bracelets rarely phenomenally look circular, that two same-sized trees rarely phenomenally look to be the same size and that putting on a pair of sunglasses may completely change the phenomenal look of things in one's surroundings.

However, there is some reason to think strong representationalists should not be happy with this consequence. Strong representationalists hold that how things phenomenally look is determined by how things are represented to be. But at least some strong representationalists will say that perceptual experience represents things as having constant shapes, sizes and colors. So, how things phenomenally look should reflect these constancies.

Of course, some strong representationalists will hold that constancies are represented, not by experience but, for example, by belief. Others will hold that they are represented by experience but not in a way wholly determined by phenomenal character. As for the first possibility, it is at least prima facie implausible that individuals incapable of forming beliefs cannot perceive a tilted bracelet as circular-shaped but can only perceive it as oval-shaped.

As for the second possibility, this does not really help with the dual looks objection, as the experience then still can represent things veridically as F and not-F.

A second reply to the dual looks objection is to deny that P-'looks' reports reflect the representational content of perceptual experience (cf. Lycan 1995: 129). S-'looks' reports, it may be said, reflect the representational content of perceptual experience. If the bracelet phenomenally looks circular-shaped, then the content of my bracelet experience represents the bracelet as being circular-shaped. However, P-'looks'-reports, it may be said, reflect only phenomenal properties of our perceptual experiences. What it's like to see the bracelet is in part to see that it is oval-shaped (or non-circular-shaped), but there is no corresponding property of oval-shapedness in the content of the experience.

However, this reply is not an option for the strong representationalist. For strong representationalism implies that if perceptual experiences differ in phenomenal character, then they differ in content. But if some of the phenomenal properties of my experience are non-representational, then two experiences could differ in their non-representational phenomenal properties. But then they would differ in their phenomenal properties without differing in representational content. But this is squarely at odds with strong representationalism.

A third reply to the dual looks objection is to distinguish between different kinds of veridicality conditions corresponding to S-'looks' reports and P-'looks' reports. If there are two ways things can look, then arguably there are also two kinds of veridicality. Following Mark Sainsbury (forthcoming), we might define two kinds of veridicality as follows: S-looks are veridical just when an object has the apparent property in question, and P-looks are veridical just when the relevant property is present but not necessarily as a property of the object.

This reply has much to recommend it, but it is not one which the representationalist can embrace. The reason for this is that the representationalist takes veridical contents to represent objects and properties instantiated by these objects. But on Sainsbury's solution, my bracelet does not have the property of being non-circular-shaped (or oval-shaped). The

non-circular-shapedness is present to the perceiver but no corresponding property is instantiated by the bracelet. But then the representationalist would say either: that the property is not part of the content of the experience or that the experience is not veridical (see e.g. Tye 1996: 121, 2000: 159).

The fourth reply to the dual looks objection is to distinguish between two kinds of properties corresponding to the two kinds of looks (i.e., P-looks vs. S-looks) and hence to allow that there is, as Michael Tye puts it, 'a whole hierarchy of levels of perceptual representation' (1996: 123). The reply I develop below falls under this category. But let us first consider versions of this reply which have been exposed in the literature. To avoid attributing contrary properties to objects, one might deny that the circular-shapedness and the oval-shapedness of my bracelet are of the same kind. One might, for example, distinguish between viewpoint-dependent and viewpoint-independent properties (see e.g. Tye 1996, 2000: 78, Noe 2004, Schellenberg 2008). The set of viewpoint-dependent properties is a subset of the set of properties Susanna Schellenberg (2008) calls 'situation-dependent properties' (see above). Viewpoint-dependent properties depend on the viewpoint (or standards) of a perceiver, speaker or evaluator, and are the sorts of properties instantiated by colored objects, tasty foods, beautiful people, and fun rides (see e.g. Brogaard 2009, Lasersohn 2009).

Given this distinction between viewpoint-dependent and viewpoint-independent properties, the circular-shapedness of the bracelet may be said to be an intrinsic (and viewpoint-independent) property of the bracelet. The non-circular-shapedness (or oval-shapedness) of the bracelet, on the other hand, may be said to be a non-intrinsic viewpoint-dependent property of the bracelet.

At first glance, this solution is consistent with strong representationalism. Whether the bracelet is viewed from above or from the side makes a phenomenal difference. So, the strong representationalist might say that the content of my experience is composed of both viewpoint-dependent and viewpoint-independent properties, and that both kinds of properties

play a dual role: they represent properties of the bracelet *and* determine the phenomenal properties of my experience.

However, more needs to be said about how objects can have viewpoint-dependent properties. My bracelet isn't intrinsically oval-shaped, it is intrinsically circular-shaped. So, we are owed a story about the nature of viewpoint-dependent properties. One suggestion is to follow Michael Tye and others in treating viewpoint-dependent properties as relational properties (see Tye 2000: 78, Schellenberg 2008). If two trees of the same size appear both to be of the same size and to be of different sizes, this is because our visual experience represents two things of the tree. One is an intrinsic property: its size. The other is a relational property: the amount of visual angle the tree subtends relative to the perceptual perspective P. As Tye puts it:

> The answer, I propose, is that the experience represents the nearer tree as having a facing surface that differs in its viewpoint-relative size from the facing surface of the further tree, even though it also represents the two trees as having the same viewpoint-independent size. The nearer tree (or its facing surface) is represented as being *larger from here*, while also being represented as being the same objective size as the further tree. (1996: 124).

Similarly in the other cases: The bracelet has the intrinsic property of being circular-shaped, *and* it has the relational viewpoint-dependent property of being non-circular-shaped-relative-to-perceptual-perspective-P. The representationalist can thus say that the content of visual experience is (partially) constituted by relational properties of this sort. So, the content of my visual experience of the bracelet represents the bracelet as being circular-shaped and as being non-circular-shaped-relative-to-perceptual-perspective-P.

Though I don't think there is a knockdown objection to this proposal, I think there is good reason to replace relational viewpoint-dependent properties with non-relational ones. Here is one reason. Call it 'the granularity argument'. Suppose John is strongly nearsighted but has forgotten his glasses. John will then fail to see the marks and features of people's faces (including their wrinkles). A wrinkled person may look to have no wrinkles. If the

wrinkled person looks non-wrinkled to John and viewpoint-dependent properties are relational, then the content of John's experience plausibly contains the property of having no-wrinkles-relative-to-perceptual-perspective-P as a constituent, where P is the perspective of someone being nearsighted and wearing no glasses. But suppose now that John loses his glasses, doesn't bother to buy new ones and forgets that he is nearsighted. The viewpoint-relative proposal then predicts that John's visual experience of a wrinkled person (e.g. me) contains the property of having no-wrinkles-relative-to-perceptual-perspective-P. But if strong representationalism is true, then representational content determines phenomenal character. So, non-wrinkledness-relative-to-perspective-P reflects the phenomenal character of John's experience. But given that it visually seems to John that it is a *non-relational property* (as opposed to a relational viewpoint-dependent property) of me that I have no wrinkles, non-wrinkledness-relative-to-perspective-P hardly reflects the phenomenal character of John's experience.

How might Tye respond to this concern? He might say that either the nearsighted person misrepresents an absence of wrinkles, or he represents correctly on a less fine-grained scale than normal-sighted people. An analogy: suppose I have 20/20 vision and see a sheet of plain white paper. At a distance of 2 m the paper looks smooth and featureless. At a distance of 30 cm, it looks textured and fibrous. Is my visual experience veridical at 2 m? If not, then Tye can rightly claim that a nearsighted person's visual experience misrepresents at 30 cm. If my visual experience *is* veridical, then vision only represents things like texture relative to a certain scale: vision represents the paper 2 m away as smooth-at-scale-X and represents the paper 30 cm away as textured-at-scale-Y. But then Tye could say that a nearsighted person's visual experience represents correctly at 30 cm but without precision, as his experience represents the smoothness on a scale that others can use for objects appearing 2 m away.

However, either reply seems problematic. If my experience as of the paper being smooth and featureless is falsidical, then arguably lots of intuitively veridical visual experiences are falsidical. For example, my visual experience as of a certain table top being

rectangular would plausibly be falsidical; for, looking at it through a microscope will reveal lots of irregularities in its shape. The alternative view seems more plausible. That is, it is more plausible to say that a nearsighted person's visual experience at 30 cm represents the smoothness of the paper on a scale that others can use for objects appearing 2 m away. The nearsighted person's experience then is veridical at 30 cm, even if it represents with less precision.

However, treating *smoothness* and *featurelessness* as relational viewpoint-dependent properties reinstates the earlier worry. To the nearsighted person it might well phenomenally look as if the properties of being smooth and being featureless which the paper appears to instantiate are non-relational properties of the paper. It needn't phenomenally look to him as if the paper instantiates the *relational* viewpoint-dependent properties of being smooth-at-scale-X and featureless-at-scale-X. But then if strong representationalism is true, then the content of his experience should not contain the relational viewpoint-dependent properties of being smooth-at-scale-X and being featureless-at-scale-X.

The centered-property approach straightforwardly avoids the dual looks problem and the granularity problem. On a centered-property approach, there is a centered property of being circular-shaped as well as an uncentered property of being circular-shaped. The centered property of being circular-shaped has an extension only relative to a perceiver and a time of perception, whereas the uncentered property of being circular-shaped has the same extension regardless of who the perceiver is and what the time of perception is. My experience as of my bracelet being circular-shaped and oval-shaped thus has something like this content: 'the bracelet is circular-shaped$_u$ and oval-shaped$_c$', where the subscripts indicate that one property is centered and the other uncentered. When the bracelet is tilted relative to my visual perspective, the content of my experience is true, and so my experience is veridical. For, relative to the uncentered world I occupy, the bracelet is then circular-shaped and oval-shaped-relative-to-my-current-perceptual-perspective. When the bracelet is viewed from above, on the other hand, the content is false, for even though the bracelet is intrinsically circular-shaped, it is not oval-shaped-relative-to-my-current-perceptual-perspective at the

uncentered world I occupy. So, my experience is falsidical. Uncentered and centered ovalness thus differ metaphysically, but we can hypothesize (on phenomenal grounds) that uncentered and centered ovalness look (or at least can look) exactly the same way to the perceiver.

It could be argued that on the current view, the apparent ovalness of a bracelet seen obliquely does not phenomenally look like the ovalness of a true oval also seen obliquely. The first will look to be centered-oval but not uncentered-oval. The second will look uncentered-oval but not centered-oval. So they have nothing in common, phenomenologically. One could avoid this problem by talking instead about seeing things as having oval cross-sections. That keeps the same property (ovalness) in both the phenomenology of the bracelet and of the obliquely seen oval. Alternatively, I suppose one can hypothesize (as I do) that uncentered ovalness and centered ovalness are phenomenally indistinguishable even though the former has an extension relative to a world whereas the latter has an extension only relative to a centered world.

The granularity problem can be solved in a similar way. The problem was this. A normal-sighted person's visual experience might represent a piece of regular printer paper viewed at 30 cm as textured, whereas a nearsighted person's visual experience might represent it viewed at 30 cm as smooth. However, both people's experiences, it seems, are veridical. Given the centered-property view, we can say that the normal-sighted person's experience at 2 m is veridical if the paper is smooth relative to a centered world containing that person is in the center, and the nearsighted person's experience at 30 cm is veridical if the paper is smooth relative to a centered world containing that person in the center, etc.

On this proposal, then, it is still true that the paper has the relational property of being smooth at a scale perceivable by a nearsighted person at 30 cm. But the content of the nearsighted perceiver's experience does not contain this relational property. Instead it contains the corresponding centered property of being smooth, which the paper instantiates relative to a centered world that contains the nearsighted perceiver located 30 cm away from the paper.

It may be objected that smoothness is an intrinsic property, and so one that doesn't vary with respect to the sight of an observer. However, it is not clear to me what it is for a piece of paper to be smooth simpliciter. It seems to me that, relative to the world as a whole, the paper is smooth at a scale perceivable by some particular perceiver or a type of perceiver. But we can then say that, relative to a centered world containing a perceiver, the paper instantiates centered smoothness.

The centered-property approach has the nice consequence that the normal-sighted person's experience at 2 m and the nearsighted person's experience at 30 cm could have the same content and hence the same phenomenal character. Of course, the normal-sighted and the nearsighted person's experiences needn't have the same content and character, for it could be that while their experiences both attribute smoothness to the paper, they do not attribute all the same properties to the paper. But it seems intuitively plausible that a normal-sighted person at 2m and a nearsighted person at 30 cm could have experiences with the same content and character. The centered-property approach allows for this possibility. This I take to be a good reason to opt for the centered-property approach.

The upshot is this: If we take the content of visual experience to contain *centered properties* which have extensions only relative to a scale or a perceptual perspective, we have a solution to the dual looks and granularity problems, one which does not take experiences to phenomenally represent relational properties when they ought to phenomenally represent non-relational properties.

4. The Argument from Duplication

The fourth argument for the thesis that the content of perception is relativistic is the argument from duplication. This argument, too, rests on the assumption that strong representationalism is true, and it runs as follows. There would seem to be differences in viewing conditions which ought to have no effect on the phenomenal character of perceptual experience. For example, it seems plausible that my experiences of a blue ball o at different times or locations could have the same phenomenal character. Likewise, it is plausible that an experience of an

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orange sofa and an experience of a perfect replica could have the same phenomenal character. But, on one standard (Russellian) view of content, the content of experience is constituted by properties and/or objects. The content of my experience of a blue ball o at time t_1 contains o and t_1 as constituents. Likewise, my experience of an orange sofa s_1 contains s_1 as a constituent, and my experience of a replica of the sofa s_2 contains s_2 as a constituent. But if strong representationalism is true, then content determines phenomenal character. So, my spatio-temporally distinct blue ball experiences have distinct phenomenal characters, as do my experiences of the orange sofa and the perfect replica. Timothy Schoeder and Ben Caplan put the point as follows:

> There is a problem for [representationalists] who take these singular propositions to be among the contents of [a person S]'s experience. [S] might have been looking at John's qualitatively indistinguishable twin Brian at a different but qualitatively indistinguishable location l* and at a different but qualitative indistinguishable time t*. In that case, the contents of her experience would have included, not the singular proposition that Jon is located at l or that John is pale at t, but rather the singular proposition that Brian is located at l* and that Brian is pale at t* (2007: 10).

To solve this problem the strong representationalist could reject the view that objects can enter into the content of perceptual experience. One could still treat the content of experience as Russellian but insist that it is composed only out of properties. For example, one could say that the content of my blue ball experience is the content of 'there is a blue ball which is to the right of a person with brown hair and green eyes, and which belongs to someone called "James Smith", and which …'.

But this, of course, won't do, as it allows for the possibility of hallucinatory experiences with contents that are much too easy to make true. If I hallucinate a blue ball, then (normally) there is no blue ball within my view. So, intuitively, the content of my experience ought to be false. But if the content of perceptual experience is made up of

properties, then almost regardless of how descriptive we make the content, it is possible for it to be satisfied (by a blue ball elsewhere in the world) and therefore true.

To avoid this new problem, the strong representationalist could now insist that qualitative perceptual contents embody a relation to the perceiver. She could, for example, as John Searle (1983) suggests, take the content of my blue ball experience to be that of 'there is a blue ball which stands in causal relation R to this very experience, and R is the causal relation needed for seeing the blue ball'. This proposal avoids the most questionable cases of veridical hallucination. In far the most cases of hallucinatory experience, no object stands in a causal relation to the experience. So, the content of the experience is false, which is as it should be.

But Searle's approach has limited applicability. Suppose I am looking at two trees in my backyard. I can see that one is further away than the other. What is the content of my experience? It might be suggested that the content is that of 'there are two trees one of which is further away from me than the other and which stand in causal relation R to this very experience, and R is the causal relation needed for seeing the two trees'. However, this won't do. For, if the content of perceptual experience is Russellian, as we have thus far assumed, then I am a constituent of the content of my experience. So, my physical twin and I cannot have tree experiences with the same content. And so, given strong representationalism, my physical twin and I cannot have tree experiences with the same phenomenal character. Yet it seems plausible that my twin and I could have tree experiences with the same phenomenal character (perhaps at different times).

The same problem arises if we take the content of my experience to be that of 'There are two trees one of which is further away from the person having this very experience ….'. For, on the Russellian view, 'this very experience' refers to different events depending on who the perceiver is.

An alternative solution to the tree problem is to say that the content of experience can contain truncated properties such as the property of being further away than. If there are truncated properties, then we can take the content of my tree experience to be that of 'There

are two trees one of which is further away than the other and which stand in causal relation R to this very experience, and R is the causal relation needed for seeing the two trees'. As this content does not contain me or my physical twin, my physical twin and I can have tree experiences with the same content and hence with the same phenomenal character.

However, this proposal too falls short. For, on the standard view of properties, if an object possesses a property, then it possesses this property relative only to a world, not relative to, say, an individual and a world. So, there cannot be such a property as that of being further away than. One thing is further away than a second only relative to a third object.

It is natural to think that the problems just outlined arise because we have assumed that the content of experience is either Russellian or possible-worlds content. One could thus suggest that phenomenal character determine a Fregean content rather than a Russellian or possible-worlds content. On the Fregean view of content, there are no singular contents. Contents are composed of senses which determine a referent. So, there are no Fregean contents which contain me or my physical twin as a constituent. The Fregean content of 'there are two trees one of which is further away from me than the other' contains, not me as a constituent, but a sense of me. So, if the content of experience is Fregean, then my physical twin and I could have tree experiences with the same content and hence with the same phenomenal character. Or so it may seem.

However, whether this reply will work depends on what we take the Fregean senses of indexicals to be. If the Fregean senses of indexicals and demonstratives vary across speakers (cf. Schiffer 1978, 1981), and my physical twin and I both have experiences with the content of 'there are two trees one of which is further away from me than the other and which stand in causal relation R to this very experience, and R is the causal relation needed for seeing the two trees', then our experiences have different contents. One contains a sense associated with me, and the other contains a sense associated with my physical twin. But then if strong representationalism is true, our experiences have different phenomenal characters.

If, on the other hand, the Fregean content of different uses of 'I' is the same, then we have a solution to the problem. My physical twin and I then can both have experiences with the content of 'there are two trees one of which is further away from me than the other and which stand in causal relation R to this very experience, and R is the causal relation needed for seeing the two trees'. As we have seen, Chalmers (2004) offers an account of phenomenal content along these lines. On this account, Fregean modes of presentation are centered properties. They are functions from centered worlds to extensions, for instance, *being the property that normally causes this kind of phenomenal experience in me*.

We can extend this sort of approach to the problem at hand. Suppose I am looking at two trees one of which is further away from me than the other. Intuitively my twin could have an experience with the same phenomenal character. If we take the content of my perceptual experience to consist of the centered content *there are two trees one of which is further away than the other*, then we can accommodate this intuition. As my twin and I can both have experiences with this content, we can have experiences with the same phenomenal character. Likewise, suppose I am looking at a ball two feet away from me, to my right. Intuitively my twin could have an experience with the same phenomenal character. If we take the content of my perceptual experience to consist of the centered content *there is a blue ball two feet away, to the right*, then we can capture the intuition. As my twin and I can both have experiences with this content, we can have experiences with the same phenomenal character. So, the centered-property approach solves the duplication problem.

A further virtue of the centered-property approach is that it leaves open the possibility of treating the content of perception as 'existential' or as bundles of properties. On the centered-property approach, contents are true or false only relative to a centered world that contains a perceiver in the center. So, if the content of 'there is a blue ball two feet away, to the right' is true only if there is a blue ball two feet away from the perceiver, to the perceiver's right, then we avoid the problem of the content being true in virtue of there being a blue ball two feet away from a person at a remote location. The centered-property approach

thus sidesteps the concerns that threaten to undermine standard 'existential' and property accounts of the phenomenal content of visual experience.

The upshot is this. The centered-property approach does away with the duplication problem. So, if we take the content of perception to contain genuinely centered properties, then we can maintain a version of strong representationalism.

5. Conclusion

There are four main arguments in favor of the view that the content of perception is relativistic: the argument from primitive colors, the argument from the inverted spectrum, the argument from dual looks, and the argument from duplication. While these arguments do not show that the content of perception has a truth-value only relative to an evaluator or judge, they do show that the content of perception has a truth-value only relative to a perceiver. So, the content of perception is in an important sense relativistic.[1]

References

Brogaard, B. 2008 a. Moral Contextualism and Moral Relativism", *The Philosophical Quarterly* 58: 385-409.

Brogaard, B. 2008 b. "In Defense of a Perspectival Semantics for 'Know' ", *Australasian Journal of Philsophy* 86: 439-459.

Brogaard, B. 2009. "Perspectival Truth and Color Perception", in C. Wright and N. Pedersen, ed. *New Waves in Truth*, New Waves Series.

Carruthers, P. 2000. *Phenomenal Consciousness: A Naturalistic Theory*, New York: Cambridge University Press.

Chalmers, D., 1996. *The Conscious Mind. In Search of a Fundamental Theory*, Oxford University Press.

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Chalmers, D. 2004. "The Representational Character of Experience", *The Future for Philosophy*, ed. B. Leiter, Oxford: Oxford University Press: 153-81.

Chalmers, D. 2006. "Perception and the Fall from Eden", in *Perceptual Experience*, ed. T. Gendler and J. Hawthorne, Oxford: Clarendon Press: 49-125.

Chisholm, R. 1957. *Perceiving: A Philosophical Study*, Ithaca, NY: Cornell University Press, Chap. 4.

Crane, T. 2007. "Intentionalism", A. Beckerman and B. McLaughlin, ed. *Oxford Handbook to the Philosophy of Mind*, Oxford: Oxford University Press.

Dretske, F. 1995. *Naturalizing the Mind*, Cambridge: MIT Press.

Egan, A. 2006. "Appearance Properties?", *Noûs* 40: 495-521.

Frege, G. 1968. "The Thought: A Logical Inquiry", in *Essays on Frege*, ed. E. D. Klemke, Urbana.

Harman, G. 1999. *Reasoning, Meaning and Mind*, Oxford: Oxford University Press.

Kaplan, D. 1973. "Demonstratives", J. Almog, J. Perry and H. Wettstein, eds., *Themes from Kapl*an, New York.: Oxford University Press, 1989, 481-563. Page numbers refer to the published version.

Kind, A. Manuscript. "Restrictions on Representationalism".

Kölbel, M. 2002. *Truth Without Objectivity*, Routledge: London.

Lasersohn, P. 2009. "Relative Truth, Speaker Commitment, and Control of Implicit Arguments", in B. Brogaard, ed. *Relative Truth*, *Synthese* 166: 359-374.

Lycan, W. 1995. "Layered Perceptual Representation", and "Replies", *Philosophical Issues* 7, ed. E. Villanueva, ed. Atascadero: Ridgeview Publishing: 81-100, 127-42.

Lycan, W. 1996. *Consciousness and Experience*, Cambridge, MA: MIT Press.

MacFarlane, M. 2003. "Future Contingents and Relative Truth", *The Philosophical Quarterly* 53: 321-36.

MacFarlane, M. 2009. "Non-Indexical Contextualism", in B. Brogaard, ed. *Relative Truth, Synthese* 166: 331-250.

McGinn, C. 1989. *Mental Content*, Oxford: Blackwell.

Noë, A. 2004. *Action in Perception.* Cambridge, MA: MIT Press.

Pautz, A. 2009. "What Are the Contents of Experiences?", *The Philosophical Quarterly* 59: 483-507

Peacocke, C. 1983. *Sense and Content.* Oxford: Oxford University Press.

Sainsbury, M. Forthcoming. "A Puzzle about How Things Look".

Schellenberg, S. 2008. "The Situation-Dependency of Perception", *Journal of Philosophy* 105: 55-84.

Schroeder, T. and B. Caplan. 2007. "On the Content of Experience", *Philosophy and Phenomenological Research* 75: 590-611.

Searle, J. 1983. *Intentionality*, Oxford: Clarendon Press.

Shoemaker, S. 1982. "The Inverted Spectrum", *Journal of Philosophy* 79: 357-81.

Shoemaker, S. 1994. "Phenomenal Character", *Nous* 28: 21-38.

Shoemaker, S. 2000. "Phenomenal Character Revisited", *Philosophy and Phenomenological Research* 60: 465-7.

Siegel, S. 2004. "Comments on David Chalmers' 'Perception and the Fall from Eden", Ms. Harvard University.

Siegel, S. 2008. "The Contents of Perception", *The Stanford Encyclopedia of Philosophy (Winter 2008 Edition)*, Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/win2008/entries/perception-contents/>.

Siegel, S. Forthcoming a. "The Contents of Consciousness", *Oxford Companion to Consciousness*, eds. Bayne, Cleermans and Wilken.

Siegel, S. Forthcoming b. "Do Visual Experiences Have Contents?" In *Perceiving the World*, ed. Bence Nanay, New York: Oxford University Press, 2010.

Tye, M. 1996. "Perceptual Experience Is a Many-Layered Thing", *Philosophical Issues*, vol. 7, Perception: 117-126.

Tye, M. 2000. *Consciousness, Color and Content*, Cambridge, MA: MIT Press.

Tye, M. 2007. "Intentionalism and the Argument from No Common Content", *Philosophical Perspectives* 21: Philosophy of Mind, J. Hawthorne, ed.: 589-613.