

## Strong representationalism and centered content

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Published online: 6 October 2009  
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**Abstract** I argue that strong representationalism, the view that for a perceptual experience to have a certain phenomenal character just is for it to have a certain representational content (perhaps represented in the right sort of way), encounters two problems: the dual looks problem and the duplication problem. The dual looks problem is this: strong representationalism predicts that how things phenomenally look to the subject reflects the content of the experience. But some objects phenomenally look to both have and not have certain properties, for example, my bracelet may phenomenally look to be circular-shaped and oval-shaped (and hence non-circular-shaped). So, if strong representationalism is true, then the content of my experience ought to represent my bracelet as being both circular-shaped and non-circular-shaped. Yet, intuitively, the content of my experience does not represent my bracelet as being both circular-shaped and non-circular-shaped. The duplication problem is this. On a standard conception of content, spatio-temporally distinct experiences and experiences had by distinct subjects may differ in content despite the fact that they are phenomenally indistinguishable. But this undermines the thesis that phenomenal character determines content. I argue that the two problems can be solved by applying a version of an idea from David Chalmers, which is to recognize the existence of genuinely centered properties in the content of perceptual experience.

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**Keywords** Strong representationalism · The duplication problem · The dual looks problem · The content of perception · Perceptual content · Phenomenal character · Viewpoint-dependent property · Viewpoint-independent property · Centered worlds · Centered content · Centered properties

## 1 Introduction

Strong representationalism is the view that for a perceptual state to have a certain phenomenal character just is for it to have a certain representational content (perhaps represented in the right sort of way, e.g. consciously).<sup>1</sup> On this view, all or part of the representational content of a perceptual state (when represented in the right sort of way) determines the phenomenal character of the state, and the phenomenal character of the state determines all or part of the representational content.

Strong representationalism, as formulated here, is compatible with impure representationalism, which takes phenomenal properties to be identical to impure representational properties, where an impure representational property is the property of representing a certain representational content in a certain manner, e.g. consciously or visually (see Chalmers 2004). On this view, for the content of a perceptual state to determine a phenomenal character, the content must be represented in the right sort of way. As, for example, unconscious and conscious states do not represent contents in the same manner, it is open to argue that the contents of conscious experiences determine phenomenal character, whereas the contents of unconscious experiences do not.

Strong representationalism is thus a *prima facie* plausible position. There are, however, a couple of serious worries about strong representationalism: the duplication problem and the dual looks problem.<sup>2</sup> I will present the first problem in Sect. I and the second in Sect. II. I will then offer a common solution to both problems.

## 2 The duplication objection

The duplication objection is this.<sup>3</sup> There would seem to be differences in viewing conditions which ought to have no effect on the phenomenal character of perceptual

<sup>1</sup> Strong representationalism has been seriously entertained by e.g. McGinn (1989, p. 75), Dretske (1995), Lycan (1996), Harman (1999, p. 260), Carruthers (2000), Tye (2000, p. 45; 2003, p. 166), Chalmers (2004).

<sup>2</sup> There are other objections to strong representationalism (see e.g. Tye 2000, p. 95; Chalmers 2004; Crane 2006) but I will assume that they can be addressed for the purposes of this paper.

<sup>3</sup> Thompson (2006), Schroeder and Caplan (2007) and Tye (2007, 2008) discuss versions of this problem for strong representationalism. Schroeder and Caplan conclude that strong representationalism is not consistent with a Russellian conception of content. Thompson and Tye argue that the problems give us reasons for rejecting strong representationalism. Tye (2007, 2008) furthermore argues that the correct view of content is the singular (when filled) thesis. He admits that this view cannot account for the representationalist intuition that veridical experiences and hallucinations can have a common content. As he puts it, 'what remains is the singular (when filled) thesis ... it concedes that the content of visual experience in hallucinatory cases is different from the content of visual experience in veridical cases. At

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 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. Schoeder and 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 John 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, p. 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. Michael Tye puts the point as follows:

Suppose there is currently something red, round and bulgy in front of a perceiver in Lithuania even though there is nothing red, round and bulgy anywhere else. Intuitively, my visual experience of a tomato, occurring in

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Footnote 3 continued

the level of content itself, there is indeed no common factor. For each experience, there is only a single admissible content, but this content is different in veridical and in hallucinatory cases' (2008, p. 22). Thompson argues that two objects may differ in surface-spectral reflectance properties and yet have the same phenomenal character. However, this is not an objection to the view defended in this paper, as I do not equate phenomenal-representational color properties with surface-spectral reflectance properties. Nor do I hold that there must be a distinct phenomenal-representational color property for every surface-spectral reflectance property. The view central to this paper is simply that for a perceptual experience to have a certain phenomenal character just is for it to have a certain representational content.

Texas, is inaccurate. Unfortunately, its existential content is accurate, if we suppose that its content is just that there is something red, round and bulgy. It is also accurate if we suppose the content is that there is currently something red, round and bulgy in front of some perceiver (2008, p. 16).

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 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 relevant 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 (for additional problems with this proposal see Tye 2008, p. 4ff). Suppose I am looking at two trees in my backyard. One is further away than the other. 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.

We have thus far assumed that perceptual content is structured content. But nothing hinges on this assumption. For, the duplication problem arises also if we

take content to be non-conceptual, for example, sets of possible worlds.<sup>4</sup> The set of possible worlds in which there are two trees one of which is further away from me than the other, and the set of possible worlds in which there are two trees one of which is further away from you than the other are different sets. So, if contents are sets of possible worlds, then you and I cannot have tree experiences with the same contents. And so, if strong representationalism is true, then you and I cannot have tree experiences with the same phenomenal character.

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 or mode of presentation 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’. Chalmers (2004) offers an account of phenomenal content along these lines. On this approach, Fregean modes of presentation are functions from centered worlds to extensions, for instance, *being the property that normally causes red phenomenal experiences in me*.

I think this is the most plausible of the hitherto considered solutions to the duplication problem. The proposal I offer below is version of this idea. I do, however, have one minor concern about the approach, as it stands.<sup>5</sup> As Chalmers cashes out his proposal, the content of visual experience contains a mode of

<sup>4</sup> Crane (1992), Martin (1992), Peacocke (1992/2003, 1998), Bermudez (1995), Heck (2000), and Tye (2005), among many others, are sympathetic to the thesis that content is non-conceptual.

<sup>5</sup> As an anonymous referee points out, the problem raised is not a problem with centered worlds but a problem with a certain centered-worlds approach. If the content of my experience is that there is a blue ball two feet away, to my right, then the relevant centered worlds are those in which there is a blue ball two feet away from the center’s right. The marked features of centered worlds need not be individuals or times.

presentation of the perceiver, one that the content of my physical twin and my experience have in common (see also Egan 2006). To a first approximation, this mode of presentation is the content of the description ‘some individual’.

But, arguably, the suggestion that the content of our experiences makes reference to some individual or other is phenomenally inadequate. If I see a blue ball, I need not have an experience with the phenomenal content of ‘there is a blue ball two feet away from some individual or other to that individual’s right’. We can put constraints on the individual in the center. For example, we might require that he or she is currently undergoing a perceptual experience. But this won’t help. For, if I have an experience as of there being a blue ball two feet away, I do not have an experience with the phenomenal content of ‘there is a blue ball two feet away from some perceiver’. I have an experience as of there being a blue ball two feet away. My experience does not concern perceivers, let alone perceivers which aren’t identical to me. Below I will propose to solve this problem by taking the content of perception to contain genuinely centered properties.

First, however, let us look at a second problem for strong representationalism: the dual looks problem.

### 3 The dual looks objection

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.<sup>6</sup> Likewise, if I look at your argument and say ‘Premise two looks suspect’ there is no sense in which I am conveying how things look phenomenally speaking. But it is plausible that ‘looks’ reports sometimes report how things phenomenally look, 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 this gives rise to a problem. 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.<sup>7</sup> I intend the phenomenal use of ‘look’ in each case.

<sup>6</sup> Of course, as an anonymous referee points out, ‘looks’ reports might not even be conveying beliefs derived from one’s visual experience. For example, upon being told that the theorem has been proven, one might say ‘it looks like Fermat was right, then’.

<sup>7</sup> For variations on these examples, see e.g. Peacocke (1983, p. 12) and Sainsbury (2007). Sainsbury considers the case of a shirt that is partially lit by bright sunshine. The shirt veridically looks to be orange all over and bi-colored. However, unless the perceiver is casting the shade, shades don’t move as the perceiver moves (they move only when the object that’s creating the shade moves). So, it seems that this case is better accounted for by taking the shadedness of the shirt to be an ordered pair of orangeness and illumination. For discussion of the color constancy cases and strong representationalism, see e.g. Thompson (2006).

### 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.<sup>8</sup> So, it would seem that the bracelet is and isn't circular, that the two trees are and are not same-sized, and that my car, the mailbox and the little kid's shirt are and aren't a particular shade of blue. But this, of course, is nonsense.

There are four natural responses 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 Chisholm (1957), a 'looks' report directly reflects the phenomenal character of experience if it concerns the intrinsic properties of a presentation of an object.<sup>9</sup> 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.

<sup>8</sup> This is not to say that F is, say, a surface-spectral reflectance property but only that it is true to say that the thing has F. For example, in color conversion cases, an object with the surface spectral reflectance property green may perhaps be truly said to be red. In such cases phenomenal *red* represents the surface-spectral reflectance property green. Whether it represents correctly will depend on the application conditions for 'phenomenal red'. For discussion see Tye (2000) and Chalmers (2006).

<sup>9</sup> For discussion see also Jackson (1977) and Alston (2002).

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.<sup>10</sup> 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

<sup>10</sup> Some authors (e.g. Lycan 1995, p. 129) would insist that a circular-shaped bracelet cannot *veridically* look to be oval-shaped. This reply is consistent with denying that P-‘looks’ reports reflect the representational content of experience. If P-‘looks’ reports do not reflect the representational content of experience, then a circular-shaped bracelet can look oval-shaped and one’s experience can be veridical.



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 Sainsbury (2007), 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 of 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.<sup>11</sup>

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, p. 123). The proposal 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 2000, p. 78, Noë 2004, Schellenberg 2008).<sup>12</sup> The set of viewpoint-dependent properties is a subset of the set of properties Schellenberg (2008) calls ‘situation-dependent properties’. 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. Viewpoint-dependent properties are properties instantiated by the objects in question. Moreover, they are supposed to be perceiver-independent. The property of being oval-shaped is not a property my bracelet has in virtue of my perceiving it. It is a property it has relative to a

<sup>11</sup> See e.g. Tye (1996, p. 121, 2000, p. 159).

<sup>12</sup> The terminology is from Tye (1996).

particular perceptual situation (which others might occupy). On this view, then, the bracelet can be circular-shaped and non-circular-shaped as long as the former is viewpoint-independent and the latter viewpoint-dependent.

At first glance, this reply 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 say that perception is a relation among a perceiver, an object (or content) and a perceptual situation. On this proposal, one does not see a bracelet as circular-shaped or oval-shaped or triangular-shaped or whatever. Rather, one sees a bracelet as circular-shaped or oval-shaped or triangular-shaped or whatever relative to a situation. But there is still a problem lurking here. On the version of the viewpoint-relative approach just outlined, the state of seeing is mediated. One sees by seeing relative to a situation. So, I see-relative-to-S that the bracelet is circular-shaped, and I see-relative-to-S that the bracelet is non-circular-shaped. So, assuming strong representationalism, the representational content of my state of seeing-relative-to-S is inconsistent. If my seeing-relative-to-S is veridical, the bracelet is circular-shaped and non-circular-shaped.

Another (and in my view superior) suggestion is to follow Tye and others in treating viewpoint-dependent properties as relational properties (see Tye 2000, p. 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. There really are two different sorts of feature being represented, then, although they both are concerned with physical objects (or surfaces). Moreover, there is an associated difference in levels, at least insofar as the representation of viewpoint-relative features of surfaces is clearly more basic than the representation of viewpoint-independent features of objects like trees (1996, p. 124).

Similarly in the other cases: The bracelet does not have the intrinsic property of being non-circular-shaped. Rather, as Tye puts it, the bracelet is represented as having boundaries 'which would be occluded by an elliptical shape placed in a plane perpendicular to the line of sight of the viewer ... In this sense, the [bracelet]

is represented as being [oval] *from here*. But it is also simultaneously represented as being at an angle and as being itself circular. This is why the tilted [bracelet] both does, and does not, look like the same [bracelet] held perpendicular to the line of sight' (1996, p. 125, fn 10). In my terminology, 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 strong 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 have no knockdown objection to this proposal, I will argue that the strong representationalist has some reason to resist a treatment of viewpoint-dependent properties as *relational*. As Tye points out, his proposal certainly solves the problem of inconsistent contents and it does not 'convict the perceiver of any sort of error. No illusion is present' (1996, p. 124). Nonetheless, for the proposal to offer a fully adequate account of the phenomenology of visual experience, I think we need to replace relational viewpoint-dependent properties with non-relational ones. I will develop an account of non-relational viewpoint-dependent properties below. Here I will offer just one reason in favor of the view that we need *non-relational* viewpoint-dependent properties. Call it 'the argument from granularity'.

Suppose John is strongly near-sighted 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 is reflected by the phenomenal character of John's experience. But given that it 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 is hardly reflected by the phenomenal character of John's experience.<sup>13</sup>

How might Tye respond to this concern?<sup>14</sup> 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

<sup>13</sup> Schellenberg maintains that the content of an experience need not represent situation-dependent properties as relational. However, if this is so, then the situation-dependent properties that constitute the content of experiences cannot have extensions relative to possible worlds (otherwise, the problem of contradictory contents will re-emerge). Rather, they must be construed as centered properties of the sort I consider below.

<sup>14</sup> Thanks to an anonymous referee for offering this response.

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, a version of the original worry remains, at least potentially. If my experience as of the paper being smooth and featureless is falsidical, then arguably lots of intuitively veridical visual experiences will be 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 seems more plausible to think 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 is then veridical at 30 cm, even if it represents with less precision.

So far, so good. However, this reply calls for refinement. In particular more needs to be said about the properties *smoothness* and *featurelessness*. Following Tye's original proposal, it might be thought that these properties are relational viewpoint-dependent properties. The paper is smooth-at-scale-X and featureless-at-scale-X. 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 being-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.

Tye could now deny that the nearsighted person's visual experience represents the paper as having the *relational* viewpoint-dependent properties of being-smooth-at-scale-X and being-featureless-at-scale-X. He could say that the nearsighted person's visual experience represents the paper simply as being smooth and featureless. But if the content of the nearsighted person's visual experience contains the properties *smoothness* and *featurelessness*, and the latter are treated as properties are normally treated, viz. as having extensions relative to possible worlds, then the content of the nearsighted person's experience is false (or without a truth-value). The paper is not smooth and featureless independently of a scale or perceptual perspective. The upshot is this: Unless the content of visual experience is taken to contain *centered properties* which have extensions only relative to a scale or a perceptual perspective (a proposal I will develop below), the envisaged reply to the granularity problem is not entirely happy; it takes experiences to phenomenally

represent relational properties when they ought to phenomenally represent non-relational properties.

My objection to a treatment of viewpoint-dependent properties as relational thus does not turn on what is represented by visual experience but rather on what is *phenomenally* represented, or, in veridical cases, on how the world is presented to one in one's experience. I *do* think that Tye's original solution is near-enough right but I also think that one can improve on its phenomenal accuracy if one takes viewpoint-dependent properties to be non-relational centered properties—properties which objects instantiate only relative to centered worlds. I develop this reply in the next section.

#### 4 Centered properties and the duplication objection

I will now propose a view of phenomenal content which solves both the dual looks problem and the duplication problem. As mentioned above, the view I develop is a natural extension of the centered-content view developed in Chalmers (2004).<sup>15</sup> On the standard approach to properties, properties are (or represent) functions from worlds to extensions. So, objects instantiate properties relative only to possible worlds. Whether or not I have the property of having looked at a particular book depends on my having looked at a particular book, but if I have the property, I have it relative to the world as a whole. I do not instantiate it only relative to a centered possible world in which some observer is marked. Let us call properties which things can have only relative to possible worlds 'uncentered properties'. The properties of being a bachelor and being human are good candidates to be uncentered properties: they are (or represent) functions from worlds to extensions.

But I now want to suggest that we should also recognize the existence of centered properties. Centered properties are (or represent) functions from centered worlds to extensions. So, whether an object has a centered property will depend not only on what the perceiver's world is like but also on what the perceiver's centered world is like. That is, whether an object has a centered property will also depend on where the perceiver is spatio-temporally located, what she is looking at, how the viewing-conditions are as she is looking, what her standards are at the time in question, and so on. Here are some examples of centered properties: being further away than,

<sup>15</sup> My centered properties are at least superficially similar to the constituents of Chalmers' centered contents and Egan's centering features. On Chalmers' view, perceptual content contains centered properties such as *being the object that caused this experience* and *being the property that normally gives rise to phenomenally red experiences in me*. Chalmers does not explicitly recognize centered properties such as *being to the right*, *red*, *being further away than*, and so on. But, as we will see, his approach can easily be extended in this direction. Egan's centering features are dispositions in things to cause certain color appearances in perceivers. Egan argues that the strong representationalist who aims to avoid the problem of the inverted spectrum should take the content of perceptual experience to contain centering features. Chalmers and Egan prefer to reserve the term 'property' for those features which are (or represent) functions from worlds to extensions. However, as I see it, this is merely a terminological difference.

being to the right, turning right, being two feet away, being below, being tilted, hurting, feeling good, being huge, being loud, tasting sugary, tasting too sweet, being exciting, being dangerous, being attractive.<sup>16</sup> There are predicates in English which express these properties but they are typically treated as truncated. For example, the predicate ‘is further away than’ is treated as short for ‘is further away from X than’.<sup>17</sup>

Centered properties yield extensions only relative to a centered world. So, it doesn’t make sense to ask whether at world  $w$ , the blue ball  $o$  is two feet away or whether, at world  $w$ , the diamond is tilted. It does make sense to ask, however, whether, at a centered world in which I am occupying the center, the blue ball is two feet away or the diamond is tilted. For at a centered world at which I am occupying the center, if I am looking at something, then I am looking at it from a particular perspective. Of course, I may not be near a diamond at some centered world in which I occupy the center, and like my cats I may not be able to taste something as being sweet. Relative to a centered world in which I occupy the center but in which I am not near a diamond and in which I am unable to taste something as being sweet, then, there isn’t a tilted diamond, and the desert I am eating is not sweet.

My proposal now is that phenomenal contents are conglomerations of centered and uncentered properties and dummy constituents standing in for perceivers, times and locations (roughly the Kaplanian character of ‘me’, ‘now’ and ‘here’), the importance of which we will consider presently. Just like properties, centered property contents have extensions (i.e., truth-values) only relative to centered worlds. So, relative to a centered world that contains me in the center the content of ‘there is a blue ball two feet away’ is true iff there is a blue ball two feet away from me, and relative to a centered world that contains you in the center, it is true iff there is a blue ball two feet away from you.

As noted above, there is some reason to think that perceptual contents can also sometimes contain what I will call ‘dummy indexical and demonstrative concepts’. I have in mind something like the Kaplanian character of ‘I’, ‘here’ and ‘now’ (see Kaplan 1973/1989). Where the Kaplanian contents of indexicals are individuals, the Kaplanian characters of indexicals are functions from parameters of the contexts to individuals. For example, the Kaplanian character of ‘I’ is a function from context to the speaker of the context, the Kaplanian character of ‘now’ is a function from context to the time of speech, and the Kaplanian character of ‘here’ is a function from context to the location of speech. As the parameters of context form a centered world, we can just say that dummy concepts are functions from centered worlds to individuals. \*I\* is a function from a centered world to the individual in the center, \*now\* is a function from a centered world to the time in the center, and \*here\* is a function from a centered world to the location of the individual in the center, and so on.

<sup>16</sup> Of course, some of these properties might have an extension only relative to a centered world which contains cultural standards.

<sup>17</sup> An exception is ‘hurts’. ‘My legs hurts’ is not typically treated as short for ‘my leg hurts me’. But if my leg hurts, then of course it hurts me not you (for discussion see Crane 2007).

Here are a couple of reasons to think that perceptual contents sometimes contain dummy concepts. Suppose I am in pain. I might then have an experience as of there being some disturbance to the normal function of my body. Intuitively, my physical twin could have an experience with the same content. At the same time, however, the content of my experience concerns me, not you or my twin. The natural thing to say, then, is that the content of our experiences is that of ‘there is some disturbance to the normal function of *\*my\** body’. Relative to a centered world at which I am in the center, this is true iff there is some disturbance to the normal function of my body, and relative to a centered world at which you are in the center, this is true iff there is some disturbance to the normal function of your body.

Here is another example. Suppose I am in my car turning right, and I experience this. What is the content of my experience? It is not that of ‘I am in my car turning right’, where the content of ‘I’ and ‘my’ is the perceiver. For, intuitively, my physical twin could have an experience with the same phenomenal character and hence the same content. Rather, the content of our experiences is that of ‘*\*I\** am in *\*my\** car turning right’. Relative to a centered world at which I am in the center, this is true iff I am in my car turning right, and relative to a centered world at which you are in the center, this is true iff you are in your car turning right. So, with dummy concepts we get the right results in cases in which the content of an experience seems to make reference to subjects, times or locations.

The centered-property view solves both the duplication problem and the dual looks problem. Let us begin by taking a closer look at how the view solves the duplication problem. Suppose I am looking at two trees one of which is further away from me than the other. Then the content of my perceptual experience is the content of ‘there are two trees one of which is further away than the other’.<sup>18</sup> Likewise, suppose I am looking at a ball two feet away from me, to my right. Then the content of my perceptual experience is the content of ‘there is a blue ball two feet away, to the right’.

Given this view, I can, of course, have spatio-temporally distinct experiences with the very same content and hence with the same phenomenal character. Likewise, my twin and I could have experiences with the same content and hence with the same phenomenal character. So, the centered-property view solves the duplication problem.

Moreover, the view is phenomenally adequate. I do not normally experience one tree as being further away than another relative to me or a blue ball as being two feet away from me, to the right of me. I just experience one tree being further away than the other or a blue ball being two feet away, to the right. The content of visual experience leaves the perceiver out of the picture, so to speak.

An objection here arises.<sup>19</sup> Suppose I have an experience that represents a ball being to the right, not to my right, but just to the right. Then its being to anyone’s right would make the experience veridical. Not a satisfactory result. My experience is only veridical if the ball is to *my* right. And similarly for trees and distance.

<sup>18</sup> Of course, the content is more detailed than that. This is a simplification.

<sup>19</sup> Thanks to an anonymous referee here.

Egocentric perceptual experience really is egocentric in its phenomenal quality. Or so the objection goes.

However, I think we can sidestep this concern if we distinguish between how one's experience *phenomenally* represents the world (or in veridical cases: how the world is presented to one in one's experience), and the conditions under which one's experience is veridical. I agree with the objector that my experience as of a ball being to the right is veridical only if there is a ball to the right of *me*. But this is just what the centered-property approach predicts. The centered-property approach predicts that my experience as of a ball being to the right is veridical just in case there is a ball to the right of the person in the center of the world at which the content is evaluated for truth. My point here is simply that my experience as of a ball being to the right need not *phenomenally* represent *me*. It merely needs to represent a ball over there or to the right.

The centered-property view is thus phenomenally adequate. A further virtue of the centered-property view is that it leaves open the possibility of treating the content of perception as 'existential' or as bundles of properties. For, on the centered-property view, contents are true or false only relative to a centered world that contains a perceiver in the center. So, 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. It is not true in virtue of there being a blue ball two feet away from a person at a remote location. The view thus sidesteps the concerns that threaten to undermine standard 'existential' and property accounts of the phenomenal content of visual perception.

## 5 Centered properties and the dual looks problem

I will now argue that the centered-property view also solves the dual looks problem. The problem of dual looks was this. Things sometimes veridically look to have a given property and also not to have that property. But if a thing veridically looks to be F, then it is F. So, if things sometimes veridically look to both have and not have a given property, then they have and don't have that property, which is implausible. For example, my bracelet veridically looks to be circular- and oval-shaped and hence non-circular-shaped. So, it would seem that my intrinsically circular-shaped bracelet is circular-shaped and non-circular-shaped. But that is nonsense.

The most natural solutions to the problem (e.g. defining two kinds of veridicality or denying that the way the bracelet looks reflects the representational content of the experience) are not options for the strong representationalist.

Tye and others treat viewpoint-relative properties as relational properties. For example, the oval-shapedness reflected in the phenomenology of my bracelet experience is to be treated as identical to the viewpoint-dependent property of being oval-shaped-relative-to-perceptual-perspective-P. And, I argued, this proposal is near-enough right, but I think replacing relational viewpoint-dependent properties with non-relational centered properties would mark an improvement in the viewpoint-relative approach. For example, it seems that a treatment of viewpoint-dependent properties as relational attributes the wrong properties in cases where it



does not phenomenally look to the perceiver that the viewpoint-dependent properties are viewpoint-dependent.

Suppose instead that we take viewpoint-dependent properties to be centered properties. There is then a centered property of being circular-shaped as well as an uncentered property of being circular-shaped. The centered property of being circular-shaped will have an extension only relative to a perceiver and a time of perception, whereas the uncentered property of being circular-shaped will have 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<sub>u</sub> and oval-shaped<sub>c</sub>’, 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.<sup>20</sup>

On this view, then, the bracelet really veridically looks to me to be circular-shaped, and it veridically looks to me to be oval-shaped. Given strong representationalism we should expect the phenomenal character of my experience to reflect how the bracelet looks. The centered property view makes exactly this prediction. It predicts that the content of my experience represents the bracelet as being circular-shaped<sub>u</sub> and as being oval-shaped<sub>c</sub>, and that the experience is veridical just in case the bracelet is intrinsically circular-shaped and oval-shaped-relative-to-my-current-perceptual-perspective.

One advantage of this approach compared to the relational viewpoint-relative approach is that it attributes non-relational properties in cases where non-relational properties seem to be the right thing to attribute. The centered-property view thus avoids not only the dual looks problem but also the granularity problem. Suppose again that a piece of paper which appears textured when viewed at 30 cm by a normal-sighted person appears smooth when viewed at 30 cm by a nearsighted person. One could say that the normal-sighted person’s visual experience represents the paper 30 cm away as textured-at-scale-Y, whereas the nearsighted person’s visual experience represents the paper 30 cm away as smooth-at-scale-X. But

<sup>20</sup> As an anonymous referee points out, 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, as the referee suggests, 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.

intuitively, the phenomenal character needn't reflect the relevant scale at which the paper is viewed. So, if strong representationalism is correct, then visual experience shouldn't represent the paper as smooth-at-scale-X or as textured-at-scale-Y. The centered-property approach gives us a way of accommodating this intuition. The normal-sighted person's visual experience represents the paper viewed at 30 cm as textured, and the nearsighted person's visual experience represents the paper viewed at 30 cm as smooth. However, both people's experiences are veridical. The normal-sighted person's experience at 2 m is veridical if the paper instantiates the centered property of being smooth relative to a centered world in which she occupies the center, and the nearsighted person's experience at 30 cm is veridical if the paper instantiates the centered property of being smooth relative to a centered world in which she occupies the center, and so on.

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.<sup>21</sup> 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 a nearsighted perceiver located 30 cm away from the paper.

The centered-property approach thus predicts that the normal-sighted person's experience at 2 m and the nearsighted person's experience at 30 cm could have the same centered 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 centered smoothness to the paper, they do not attribute all the same properties to the paper. The point here is simply that it should be possible for a normal-sighted person at 2 m and a nearsighted person at 30 cm to have experiences with the same content and character. The centered-property approach allows for this possibility without positing *relational* viewpoint dependent properties. This I take to be a desirable consequence of the centered-property approach.

## 6 Conclusion

Strong representationalism, the view that for a perceptual experience to have a certain phenomenal character just is for it to have a certain representational content (perhaps represented in the right sort of way), faces two problems: the duplication problem and the dual looks problem. The duplication problem is that of explaining how spatio-temporally distinct experiences or experiences had by distinct subjects can have the same phenomenal character. Purely qualitative contents of the standard variety cannot capture the object-dependency of experience. Singular contents, on the other hand, will rule out the possibility that subjects who are placed in different

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<sup>21</sup> 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 that perceiver or type of perceiver, the paper instantiates centered smoothness.

(e.g. temporally separated) perceptual environments have experiences with the same contents. And hence, if strong representationalism is true, then it will rule out the possibility that such subjects have experiences with the same phenomenal character, which is highly unintuitive.

The dual looks problem is that of explaining how objects can veridically look to have a certain property and also veridically look not to have that property (e.g. ovalness and circularness). The problem is particularly recalcitrant for the strong representationalist because the strong representationalist holds that how things look, phenomenally speaking, always determines phenomenal content.

I have argued that both problems can be solved if we take perceptual contents to contain centered properties in addition to uncentered ones. The duplication problem can be solved as follows. My experience as of there being a blue ball two feet away from me, to the right of me will have the content of 'there is a blue ball two feet away, to the right'. This sort of content can have a truth-value only relative to a centered world. Relative to a centered world with me in the center the content is true iff there is a blue ball two feet away from me, to the right of me, and relative to a centered world with you in the center the content is true iff there is a blue ball two feet away from you, to the right of you. Centered (non-singular) contents need not vary over times or locations or from subject to subject. So, if we recognize the existence of centered properties, we can explain the intuition that subjects can be placed in different perceptual environments and still have experiences with the same phenomenal character.

Moreover, we have a solution to the problem of how things look. My bracelet looks to be circular-shaped and oval-shaped, but it is not both circular-shaped and oval-shaped relative to a possible world. Rather, my bracelet is circular-shaped relative to an uncentered world I occupy and oval-shaped relative to a centered world in which I am the perceiver. So, it is only relative to my particular perspective that my bracelet instantiates the property of being oval-shaped. The property of being circular-shaped, on the other hand, is instantiated by my bracelet quite independently of any particular perspective. Recognizing centered properties in the content of perception thus does away with the duplication problem and the dual looks problem and allows us to maintain a version of strong representationalism.<sup>22</sup>

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<sup>22</sup> The paper has benefited from comments provided by an anonymous referee, J. C. Bjerring, David Bourget, David Chalmers, Patrick Greenough, Fiona Macpherson, Susanna Schellenberg, Daniel Stoljar and Declan Smithies.

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