

**Mental Paint**  
Ned Block  
New York University

The greatest chasm in the philosophy of mind--maybe even all of philosophy--divides two perspectives on consciousness. The two perspectives differ on whether there is anything in the phenomenal character of conscious experience that goes beyond the intentional, the cognitive and the functional. A convenient terminological handle on the dispute is whether there are “qualia”, or qualitative properties of conscious experience. Those who think that the phenomenal character of conscious experience goes beyond the intentional, the cognitive and the functional believe in qualia.<sup>1</sup>

The debates about qualia have recently focused on the notion of representation, with issues about functionalism always in the background. All can agree that there are representational contents of thoughts, for example the representational content *that virtue is its own reward*. And friends of qualia can agree that experiences at least sometimes have representational content too, e.g. *that something red and round occludes something blue and square*. The recent focus of disagreement is on whether the phenomenal character of experience is **exhausted** by such representational contents. I say no. Don't get me wrong. I think that sensations--almost always--perhaps even always--**have** representational content in addition to their phenomenal character. What's more, I think that it is often the phenomenal character itself that has the representational content. What I deny is that representational content is all there is to phenomenal character. I insist that phenomenal character **outruns** representational content. I call this view “phenomenism”. Phenomenists believe that phenomenal character outruns not only representational content but also the functional and the cognitive, hence they believe in qualia.

This paper is a defense of phenomenism against representationism, hence issues of reduction of the phenomenal to the functional or the cognitive won't play much of a role. First I will briefly discuss an internalist form of representationism, then I will go on to the main topic of the paper, externalist forms of the view.

### **Internalism**

One form of representationism holds that the phenomenal character of experience is its “narrow intentional content”, intentional content that is “in the head” in Putnam's phrase. That is, heads that are the same in ways that don't involve relations to the environment share all narrow intentional contents. A full dress discussion of this view would discuss various ideas of what narrow intentional content is supposed to be. But

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<sup>1</sup> I actually prefer a definition of qualia as features of experience that cannot be *philosophically* reduced to the non-phenomenal, in particular the cognitive, the representational or the functional. (I think that they could be empirically reduced.) But this view will play no role in this paper. Philosophical reduction differs from scientific reduction in the former's “armchair” nature. The extreme case of philosophical reduction is conceptual reduction.

this isn't a full dress discussion. I will simply say that all versions of this view that I can think of that have even the slightest plausibility (and that aren't committed to qualia) are functionalist. They are functionalist in that they involve the idea that narrow intentional content supervenes on internal functional organization as well as physico-chemical configuration. That is, there can be no differences in narrow intentional contents without corresponding differences at the level of causal interactions of mental states within the head. The view comes in different flavors: functional organization can be understood in terms of the interactions of common-sense mental states or in terms of the causal network of computational states. In both cases, there is a level of "grain" below which brain differences make no differences. One functional organization is multiply realizable physico-chemically in ways that make no difference in narrow intentional content. In other words, there is a level of organization above the level of physiology ("mental" or "computational") that determines narrow intentional content. (Tye, 1994 takes this view and I understand Rey, 1992a, 1992b and White, 1995 as endorsing it.)

Of course phenomenists can (and should) be internalists about phenomenal character too. But phenomenists can allow that phenomenal character depends on the details of the physiology or physico-chemical realization of the computational structure of the brain. Of course, there are also dualist forms of phenomenism, but both the physicalist and dualist forms of phenomenism agree that there is no need to suppose that qualia supervene on functional organization.

There is a very simple thought experiment that raises a serious (maybe fatal) difficulty for any such (functionalist) internalist form of representationism. Suppose that we raise a child (call her Erisa) in a room in which all colored surfaces change color every few minutes. Further, Erisa is allowed no information about grass being green or the sky being blue, etc. The result is that Erisa ends up with no standing beliefs that distinguish one color from another. Suppose further that she is not taught color words, nor does she make them up for herself. (There are many languages which have only two words for colors, for example the language of the Dani famously studied by Rosch (1972)). Now we may suppose that the result is that there is little in the way of abiding functional differences among her color experiences. Most importantly, Erisa has no associations or behavioral inclinations or dispositions towards red that are any different from her associations or inclinations or dispositions towards blue. Of course, she responds to color similarities and differences—e.g., she groups blue things together as having the same color, and she groups red things together as having the same color. But her ability to group under the *same color* relation does not distinguish her reaction to red from her reaction to blue. The experience as of red is vividly different from the experience as of blue. But what difference in function in this case could plausibly constitute that difference?

The challenge to the internalist representationist, then, is to say what the difference is in internal intentional content between the experience of red and the experience of blue? The only resources available to the internalist representationist are functional. There is a difference in phenomenal character, so the internalist

representationist is committed to finding a difference in function. But the example is designed to remove all abiding differences in function.

The functionalist can appeal to **temporary** differences. Erisa will say “The wall is now the same color that adorned the table a second ago,” and “For one second, the floor matched the sofa.” But these beliefs are fleeting, so how can they constitute the **abiding** differences between the phenomenal character of her experience of red and green? The differences between these phenomenal characters stay the same (for us) from moment to moment, day to day, and there is no reason to suppose that the same cannot be true for Erisa. The point of the thought experiment is to make it plausible that color experiences can remain just as vivid and the differences between them just as permanent as they are for us even if the functional differences between them attenuate to nothing that could plausibly constitute those differences.

Of course, there is one abiding difference in functional role between the experience of red and the experience of green—the properties of the stimuli. Since we are talking about *internalist* representationism, the stimuli will have to be, e.g. light hitting the retina rather than colored surfaces. But these differences in the stimuli are what *cause* the differences in the phenomenal character of experience, not what *constitutes* those phenomenal differences. I don’t expect diehard functionalists to recant in response to this point, but I really don’t see how anyone with an open mind could take the being caused by certain stimuli as constituting phenomenal characters of color experiences.

Of course, there may be innate behavioral differences between the experience of red and the experience of blue. Perhaps we are genetically programmed so that red makes us nervous and blue makes us calm. In my view it is a bit silly to suppose that the phenomenal character of the experience as of blue is constituted by such factors as causing calmness. But since so many philosophers feel otherwise, I will also note that despite claims of this sort (Dennett, 1991), such assertions are empirical speculations. (See Dennett’s only cited source, Humphrey, 1992, which emphasizes the poor quality of the empirical evidence.). And of course anyone who holds that representationism is a conceptual truth will be frustrated by the fact that we don’t know without empirical investigation whether it is a truth at all.

Perhaps the internalist will say that there would be no differences among Erisa’s experiences. Red would of necessity look just the same to her as yellow. But this is surely an extraordinary thing for the internalist to insist on. It *could* be right of course, but again it is surely an unsupported empirical speculation.

I claim that an Erisa of the sort I described is conceptually possible. The replies I have just considered do not dispute this, but instead appeal to unsupported empirical claims.

But physicalism is an empirical thesis, so why should the representationist be embarrassed about making an empirical claim? Answer: physicalism is a very general empirical thesis having to do with the long history of successes of what can be regarded

as the physicalist research program. Internalist representationism, by contrast, depends on highly specific experimental claims. For example, perhaps it will be discovered that newborn babies hate some colors and love others before having had any differential experience with these colors. I doubt that very many opponents of qualia would wish their point of view to rest on speculations as to the results of such experiments.

The defender of qualia does not depend on a prediction about the results of such experiments. Our view is that even if such experiments do show some asymmetries, there are **possible** creatures--maybe genetically engineered versions of humans, in whom the asymmetries are ironed out. (See Shoemaker, 1981.) And those genetically engineered humans could nonetheless have color experience much like ours. Any view that rests an argument against qualia on the existence of such asymmetries would seem to be committed to the peculiar claim that qualia are possible in creatures which differ from us in ways so subtle that we are not now sure whether *we* are these possible creatures. Further, given the necessity of identity, if phenomenal characters are identical to internal functional states, then there are no creatures, even possible creatures, who have different phenomenal characters which do not differ functionally.

### **Externalism**

That is all I will have to say about internalist representationism. Now I will move to the main topic of this paper, externalist representationism. In this section, I will try to motivate externalist representationism. The consideration I will advance in motivating it will be of use to me later. Then I will advance various considerations that cause one or another sort of difficulty for the view.

Often, when I see water I see it *as* water; that is, my visual experience represents it as water. Most of you have seen water as water all your lives, but I'm different, I'm a foreigner. I was born on Twin Earth and emigrated to Earth at age 18. When I was 15 and looked at the sea on Twin Earth, my visual experience represented the twin-water as twin-water (though of course we didn't call it that). Perhaps you are skeptical about whether visual experience represents such properties, but please bear with me. When I first got here, I saw water as twin-water, just as you, if you went to Twin Earth would see the twin-water in the oceans as water. Now, many years later, my practices of applying concepts are relevantly the same as yours: my practices show that I am committed to the concepts of my adopted home, Earth. Now when I look at the sea of my adopted home, my visual experience represents the water as water just as yours does. (This is controversial but again, let's suppose.) So the representational content of my experience of looking at the sea has changed. But my visual experience is nonetheless indistinguishable from what it was. If you took me up in a space ship and put me down by some sea-side, I wouldn't know whether I was on Earth or Twin Earth. (See Stalnaker's (1996) commentary on Lycan (1996) on Block (1990)) The representational content of my experience has changed, but the phenomenal character has stayed the same. And that shows, someone (but not me) might argue, that there is some sort of gap between representational content and phenomenal character. (I think that there is such a gap, but this case doesn't reveal it.)

One way for the representationist to answer would be to note that though all phenomenal characters are (according to representationism) representational contents, the converse is not true. Not all representational contents are phenomenal characters. For example, the thought content that mu-mesons have odd spin is not a phenomenal character. But how is this point supposed to apply to the issue at hand? The putative gap between representational content and phenomenal character has to do with the representational content of visual experience, not thought. Here is one way of extending the representationist response: the representationist should hold that visual experience has two kinds of representational content: one kind of representational content can be identified with phenomenal character and another kind of representational content is distinct from phenomenal character. The phenomenal character of experience as of what I have called ‘water’ that has remained relevantly the same throughout my life is a matter of the observable or appearance properties of the liquids in oceans, rivers and streams, their color, sheen, motion, taste, smell, etc. It is these properties that my experience has represented liquids as having that have been shared by my experiences of both twater and water. *Those* are the representational contents that make my visual experience of the twin earth ocean at age 15 indistinguishable from my visual experience of the ocean now. (Many representationists go further, saying that these observational representational contents are non-conceptual, but nothing I will be saying here will depend on whether or not this is so.)

Of course, as Burge (1979 and elsewhere) has noted, color concepts and other “appearance concepts” are vulnerable to the same sort of “twin earth” arguments for externalism as is the concept of water (Perhaps only truly phenomenal concepts are invulnerable to such arguments—as is suggested by Burge’s, 1979 remark that in his thought experiment, phenomenal character does not change.) Further, as I will argue later in the paper, a sort of twin earth argument can be run on perceptual contents whether or not they are conceptual. So in my view, the reply just discussed will ultimately fail to sustain the representationist point of view. But for the moment, we can take the representationist reply just given as a success for representationism. We started with an experiential continuity despite representational change that challenged the representationist. But then it turned out that the representationist can give a representational explanation of the difference. The main burden of this paper is to explore some reasons for thinking that the representationist cannot always repeat this success.

Two preliminary issues: First, one might object to my claim that visual experience can ever represent anything *as water*. Perhaps, you might say, visual experience can represent something as round or at least red, but not as water. I use the notion of visual experience representing water as a way of setting up the issue, but it does not play any essential role in my argument. Further, it should be noted that disallowing visually representing water as water has the effect of limiting the resources available to the representationist.

Next, a terminological reminder. I take a qualitative character or quale as a phenomenal property of an experience that eludes the intentional, the functional and the

purely cognitive. ‘Phenomenal character’ is a more neutral term that carries no commitment to qualia. Both the representationist and the phenomenist can agree that there are phenomenal characters, even though the former but not the latter thinks phenomenal characters are wholly representational.

### **Supervenience**

*If* phenomenal character supervenes on the brain, there is a straightforward argument against representationism. For arguably, there are brains that are the same as yours in internal respects (molecular constitution) but whose states represent *nothing* at all. Consider the swampman, the molecular duplicate of you who comes together by chance from particles in the swamp. He is an example of total lack of representational content. How can he refer to Newt Gingrich when he has never had any causal connection with him; he hasn’t ever seen Newt or anyone else on TV, never seen a newspaper, etc. But although he has no past, he does have a future. If at the instant of creation, his brain is in the same configuration that yours is in when you see a ripe tomato, it might be said that the swampman’s state has the same representational content as yours in virtue of that state’s role in allowing him to “track” things in the future that are the same in various respects (e.g. color) as the tomato. It might be said that he will track appearances of Bill Clinton in the future just as well as you will. But this invocation of the swampman’s future is not very convincing. Sure, he will track Bill Clinton if he materializes in the “right” environment (an environment in which Bill Clinton exists and has the superficial appearance of the actual Bill Clinton), but in the wrong environment he will track someone else or no one at all. And the same point applies to his ability to track water and even color. If put on Twin Earth, he will track twater, not water. Of course, you will have the same tracking problems if suddenly put in “wrong” environments, but your references are grounded by the very past that you have and the swampman lacks.

If we can assume supervenience of phenomenal character on the brain, we can refute the representationist. The phenomenal character of the swampman’s experience is the same as yours but its experiences have no representational content at all. So phenomenal character cannot be representational content. And the case of two different swampmen (swamp replica of different people) who have different phenomenal characters but the same (null) representational content shows phenomenal character does not supervene on representational content either. If this point is right, there will be a great temptation for the representationist to deny supervenience of phenomenal character on the brain. And in fact, that’s what representationists often do (Dretske, 1995; Lycan, 1996a, 1996b; McDowell, 1994). This seems to me to be a desperate maneuver with no independent plausibility. The independent arguments against representationism to follow constitute a partial justification of supervenience, since if representationism were true, supervenience would be false.

### **What is the Issue?**

One of the ways that I have been framing the issue is this: Is there more to experience than its representational content? But if experiences are brain states, there will be more to experiences than their representational contents just as there is more to

sentences in English than their representational contents. For example, the size of the font of this sentence is something more than (or anyway, other than) its representational content. So the question is better taken as: is there anything *mental* in experience over and above its representational content? I say yes, the representationist says no.

Harman (1990, 1996) expresses his version of representationism about experience by claiming that in experience we only are aware of properties of what is represented, not the vehicle of representation. When we look at a red tomato, no matter how hard we try to introspect the aspect of the experience that **represents** redness, all we succeed in doing is focusing our attention on the redness of the tomato itself. Harman relies on the diaphanousness of perception (Moore, 1922), which may be defined as the claim that the effect of concentrating on experience is simply to attend to and be aware of what the experience is of. As a point about attention in one familiar circumstance—e.g., looking at a red tomato, this is certainly right. The more one concentrates on the experience, the more one attends to the redness of the tomato itself. But attention and awareness are distinct, and as a point about awareness, the diaphanousness claim is both straightforwardly wrong and misleading. One can be aware of what one is not attending to. For example, one might be involved in intense conversation while a jackhammer outside causes one to raise one's voice without ever noticing or attending to the noise until someone comments on it—at which time one realizes that one was aware of it all along. Or consider the familiar experience of noticing that the refrigerator compressor has gone off and that one was aware of it for some time, even though one didn't attend to it until it stopped. (These and other examples of awareness without attention are discussed in Block, 1995a, and in Tyler Burge's reply to this paper. I am grateful to Burge for discussion of this issue.)

So Harman is wrong about awareness, even if he is right about attention. Further, though Harman is right about attention in one common circumstance, I believe he is wrong about attention in other circumstances. For example, close your eyes in daylight and you may find that it is easy to attend to aspects of your experience. If all experiences that have visual phenomenology were of the sort one gets with one's eyes closed while awake in daylight, I doubt that the thesis that one cannot attend to or be aware of one's experience would be so popular. Another way to appreciate the point: stick your finger in front of your face, then focus on something distant. It does not seem so hard (at least to me) to attend to and be aware of aspects of the experience of the finger as well as of the finger.

The points just made are preliminary. They are just appeals to introspection—mine, and I hope yours—that go against representationism. If you agree, you are ready to reject representationism. But the main purpose of this section is to get clearer on what exactly you would be rejecting.

Harman can allow that there are many properties of experience that we are aware of. For example, we know when an experience happens and how long it lasted. But that will no doubt be glossed by him as a matter of when we looked at the tomato and how long we looked. Harman concludes that introspection gives us no access to anything

whose identity is not given by representational content, no access to mental paint. He argues that the contrary view confuses properties of what is represented, the intentional object of perception, with properties of the vehicle of representation, what is doing the representing. I don't agree with the imputation of fallacy. But my point right now is more preliminary: that if Harman means to define representationism in this way, his definition is too narrow.

He writes as if the issue is whether we can introspect the representational features of the experience, the mental paint that represents the redness of the tomato. But there are two deeper issues.

1. The first is whether there **is** mental paint, even if Harman were right that we cannot become aware of it when we are seeing a tomato. One way--not the only way--of seeing why there is a real issue here is to consider the idea that the possibility of an inverted spectrum shows that there is more to experience than its representational content. According to this argument (Shoemaker, 1982; Block, 1990; see also Block and Fodor, 1972), your experience and my experience could have exactly the same representational content, say as of red, but your experience could have the same phenomenal character as my experience as of green. Shoemaker (1994a, 1994b) agrees with Harman's views about introspection. He agrees that we cannot be aware of mental paint, that when we try to introspect the experience of the redness of the tomato, all we succeed in doing is attending to and being aware of the represented color of the tomato itself. But according to Shoemaker, we have a kind of indirect introspective access to the phenomenal character of the experience via our intuitions about the inverted spectrum. By imagining that things we both call red look to you the same way that things we both call green look to me, we succeed in gaining indirect introspective access to mental paint. Thus there is mental paint. So Shoemaker's view gives us an example of how on certain assumptions it would be reasonable to think that there is mental paint even if we can't be directly aware of it, and that is one way of illustrating the distinction.

Shoemaker's view is highly paradoxical—there there is mental paint but it is a theoretical entity. It is of the essence of mental paint to be something of which we are aware. This view would be less paradoxical if Shoemaker's "phenomenal properties" of objects were really just phenomenal characters of experiences projected onto objects. The phenomenal character of an experience determines what phenomenal property it represents, and the phenomenal property is individuated in accord with and gets its identity from the phenomenal character that determines it. Thus far, Shoemaker's phenomenal properties look like mere projections of phenomenal characters onto the world. But there is one crucial feature of Shoemaker's view that resists this attempt to blunt the paradox, namely that Shoemaker takes phenomenal properties to be causally efficacious, indeed to cause the instantiation of the phenomenal characters that help to individuate them. Shoemaker's view is discussed in more detail in footnote 2.

2. A second issue is whether there are phenomenal features of experience that are not **even** vehicles of representation. For example, according to me, the phenomenal



character of the experience of orgasm is partly non-representational. Such a non-representational mental feature would be (in this respect) like the oil in oil based paint. So we could put the two issues as whether there is mental paint and whether there is mental oil.

To sum up then, we can distinguish three things:

1. The intentional content of an experience. I am currently looking at a tomato and my experience represents the tomato as red.
2. Mental properties of the experience that represent the redness of the tomato. This is mental paint. According to me, the phenomenal character of the experience is such a mental property: it represents the tomato as red. According to me, one can attend to this phenomenal character and be aware of it even when one is not attending to it. Representationists would deny both
3. Mental properties of the experience that don't represent anything. This is mental oil. I don't know whether there are any such properties in the case of a normal experience of a red tomato, but I do claim that such properties are involved in orgasm-experience, pain and other bodily sensations.

These distinctions reveal an ambiguity in 'non-representational'. In the most straightforward sense, if as I claim there are phenomenal properties of orgasm-experience that don't represent anything (the ones that most enjoys about orgasm experience), then those properties are non-representational. But there is also a weaker sense: the phenomenal character of color experience, for example, could be said to be non-representational in that the identity of that phenomenal character is not given by its representational content. In this weak sense, we can agree that color experience *has* representational content while at the same time regarding it as non-representational because that representational content is not the essence—or at least is not the whole essence--of the experience.

As I mentioned, Harman says that we are only aware of what is represented by our experience, the intentional object of the experience, not what is doing the representing, not the vehicle of representation. But what will Harman say about illusions, cases where the intentional object does not exist? Surely, there can be something in common to a veridical experience of a red tomato and a hallucination of a red tomato, and what is in common can be introspectible. This introspectible commonality cannot be constituted by or explained by the resemblance between something and nothing. It would be better for the representationist to say that what is in common is an intentional content, not an intentional object. Disjunctivists like McDowell deny that there is anything introspectible in common. But how can they understand the perceptual situations in which one can be reliably fooled, in which one has no idea whether the perception is veridical or not. "It only *seems* that there is something perceptual in common." But why doesn't whatever mental aspect grounds the seeming constitute the phenomenal similarity?

On the face of it, the disjunctivist has a liability beyond those of the representationist. The representationist can appeal to the intentional content that is

shared by the two experiences, the content that there is a red tomato in front of me. Suppose Harman were to hold that we are aware of the shared intentional content; what would that come to? What is it to be aware of the intentional content that I am seeing a red tomato or that two experiences have that intentional content? I don't see what awareness *of* an intentional content could come to if not awareness *that* some state has that intentional content. And, one might speculate, awareness that two experiences have the same intentional content requires awareness that each has that intentional content. So if Harman were to give this representationist account of the introspectible similarity, he would have to concede that we have introspective awareness of some mental properties of experience, not just of the intentional objects of experience.

The representationist view I've just mentioned is taken by Lycan (1995)--that one can be aware of a family of mental properties of an experience, namely *that* the experience represents something, that it represents a tomato, that it represents the tomato as red, etc. So Lycan can deal with illusions by saying that when one hallucinates a red tomato, there is something introspective in common with a normal veridical perception of a tomato, namely in both cases one is aware that the experience represents a red tomato.<sup>2</sup> And someone who is aware of a commonality of two perceptually identical experiences is aware that both represent, say, that a tomato is red. Though Lycan's position does accommodate common sense better than the disjunctivist, it is nonetheless implausible. A child who has no concept of representation or of intentional content can be aware of what is in common to two experiences that represent that a tomato is red.

Some representationists combine externalism and internalism. For example, Rey (1992a, 1992b) individuates color experience partly in terms of what colors it represents and partly in terms of what he sees as syntactic properties of the vehicle of representation.(There is a similar view in Lycan, 1996b.) I won't try to consider such mixed views here.

Those who deny both mental paint and oil are representationists; those who countenance one or the other are phenomenists. The representationists include Byrne and Hilbert (1997a), Dretske (1995, 1996), Harman (1990, 1996), Lycan (1995, 1996), McDowell (1994), Rey (1992a,b) and Tye (1995, 1996) (See also White (1995) for a representationist view of color experience). The phenomenists include Burge(1997), Block (1990, 1994a), Loar (1990), McGinn (1991), Peacocke (1983) and Shoemaker (1982, 1994a, 1994b).(Shoemaker's view combines aspects of both representationism and phenomenism, though I count him as a phenomenist here.<sup>3</sup>) Shoemaker and I hold

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<sup>2</sup> These mental properties aren't mental paints because they don't represent. However, my definition of mental oil does, unfortunately, count them as mental oils because they are mental properties of experience that do not represent. So let's understand the definition of mental oil as containing a qualification: the property of having certain intentional contents does not count as a mental oil.

<sup>3</sup> Shoemaker (1994a, b) holds that when one looks at a red tomato one's experience has a phenomenal character that represents the tomato as having a certain phenomenal property *and also* as being red, the latter via the former. On his view, the objects have certain phenomenal properties in virtue of standing in causal relations to experiences which have certain phenomenal characters. Each phenomenal property of an object can be defined in terms of its production in certain circumstances of a certain non-representational phenomenal character of experience. The view is motivated in part by a consideration of the inverted

that the inverted spectrum argument and the inverted earth argument make strong cases for phenomenism. (Loar, McGinn and Peacocke have declared doubts about the inverted spectrum arguments; I don't know what they think of the inverted earth argument.) I won't go into the inverted spectrum argument here, and I will only be able to mention inverted earth briefly. I will mention some other considerations which are less effective but which I hope put some pressure on the representationist.

### **Bodily Sensations**

Is the experience of orgasm completely captured by a representational content *that there is an orgasm*? Orgasm is phenomenally **impressive** and there is nothing very impressive about the representational content *that there is an orgasm*. I just expressed it and you just understood it, and nothing phenomenally impressive happened (at least not on my end). I can have an experience whose content is that my partner is having an orgasm without **my** experience being phenomenally impressive. In response to my raising this issue (Block, 1995a, 1995b), Tye (1995a) says that the representational content of orgasm "in part, is that something very pleasing is happening down *there*. One also experiences the pleasingness alternately increasing and diminishing in its intensity." But once again, I can have an experience whose representational content is that my *partner* is having a very pleasing experience down *there* that changes in intensity, and although that may be pleasurable for me, it is not pleasurable in the phenomenally

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spectrum. For concreteness, suppose that George's spectrum is inverted with respect to Mary's. George's experience of the apple represents it both as red *and* as having phenomenal property Q (the former via the latter). Mary's experience represents the apple as red and as having phenomenal property P. (George's experience represents grass as green and P, whereas Mary's experience represents grass as green and Q.) What determines that George's experience represents phenomenal property Q is that it has the non-representational phenomenal character Q\*; and Q gets its identity (with respect to George) from the (normal) production of Q\*. Red can be identified with the production of Q\* in George, P\* in Mary, etc. The phenomenal character Q\* is in a certain sense more basic than the phenomenal property Q, for Q\* is what makes the experience represent Q. Still, it could reasonably be said that there is nothing in Q\* over and above its representation of Q, and so Shoemaker's view qualifies as representationist about phenomenal character Q\* on my definition. However, there is more to Q\* than the representational content *red*. Shoemaker's view could therefore be said to be representationist with respect to phenomenal properties but not colors. If two experiences have representational content Q, then they both have phenomenal character Q\*; so phenomenal character supervenes on the representation of phenomenal properties. But phenomenal character does not supervene on the the representation *of colors*. George and Mary both have experiences that represent red, but one has phenomenal character Q\*, the other P\*. So if inverted spectra are possible, representationism with respect to colors is wrong. It is that kind of representationism that is at issue in this paper (except in the internalism section). That is, the argument against representationism in this paper is directed against the view that the representational content of color experience is *color content*. In my view as well as in Shoemaker's the phenomenal character of an experience as of red is not exhausted by the representation of what is seen as red.

I say that representationists hold that the phenomenal character of an experience is or at least is determined by its representational content. I use the phrase "is determined by" rather than "supervenes on" because I think the supervenience relation as it is normally interpreted is too weak to capture the representationist ideology. Suppose for example, that a dualist agreed that phenomenal character supervenes on representational content, but only because the dualist believes in irreducible phenomenal--representational laws of nature, laws of nature that describe the effect of representational content on the soul. This would fit most definitions of supervenience but would certainly be incompatible with the the doctrine that representationists intend.

impressive way that that graces my own orgasms. I vastly prefer my own orgasms to those of others, and this preference is based on a major league phenomenal difference. The location of “down there” differs slightly between my perception of your orgasms and my own orgasms, but how can the representationist explain why a small difference in represented location should matter so much? Of course, which subject the orgasm is ascribed to is itself a representational matter. But is that the difference between my having the experience and my perceiving yours? Is the difference just that my experience **ascribes** the pleasure to you rather than to me (or to part of me)? Representational content can go awry in the heat of the moment. What if in a heated state in which cognitive function is greatly reduced, I **mistakenly** ascribe your orgasm to me or mine to you? Would this difference in ascription really **constitute** the difference between the presence or absence of the phenomenally impressive quality? Perhaps your answer is that there is a *way* in which my orgasm-experience ascribes the orgasm to me that is immune to the intrusion of thought, so there is no possibility of a confused attribution to you in **that way**. But now I begin to wonder whether this talk of ‘way’ is closet phenomenism.

No doubt there are functional differences between my having an orgasm-experience and merely ascribing it to you. Whether this fact will help to defend representationism depends on whether and how representationism goes beyond functionalism, a matter to be discussed in the section after next.

Lycan (1996c) appeals to the following representational properties (of male orgasm): it is “ascribed to a region of one’s own body”, and the represented properties include “at least warmth, squeezing, throbbing, pumping and voiding. (On some psychosemantics, I suppose, impregnating is represented as well.)” (p. 136) Lycan says that it is “impracticable to try to capture detailed perceptual content in ordinary English words, at least in anything like real time,” but he thinks he has said enough to “remove reasonable suspicion that there are nonintentional qualitative features left over in addition to the functional properties that are already considered characteristic of the sensation”. But Lycan’s list of properties represented seems to me to *increase* the suspicion rather than removing it. **Everything** that matters (phenomenally speaking) is left over.

According to me, there are features of the experience of orgasm that don’t represent anything; so mental oil exists. I don’t expect this example to force representationists to concede that mental oil exists. Appeals to intuitions about relatively unstructured cases are rarely successful. That is why the complex thought experiments such as those involving the inverted spectrum and inverted earth are useful.

Of course, we should not demand that a representationist be able to capture his contents in words. But if we are to try to believe that the experience of orgasm is nothing over and above its representational content, we need to be told something fairly concrete about what that representational content is. Suppose the representational content is specified in terms of recognitional dispositions or capacities. One problem with this suggestion is that the *experience* of orgasm seems on the face of it to have little to do with *recognizing* orgasms. Perhaps when I say to myself “There’s that orgasm experience

again” I have a somewhat different experience from the cases where no recognition goes on. But there is no plausibility in the insistence that the experience *must* involve some sort of categorization. And if you are inclined to be very intellectual about human experience, think of animals. Perhaps animals have the experience without any recognition.

The representationists should put up or shut up. The burden of proof is on them to say what the representational content of experiences such as orgasm are.

### **Phosphene-Experiences**

Harman says “Look at a tree and try to turn your attention to intrinsic features of your visual experience. I predict you will find that the only features there to turn your attention to will be features of the represented tree.” (1990). But the diaphanousness of perception is much less pronounced in a number of visual phenomena, notably phosphene-experiences. (I use the cumbersome ‘phosphene-experience’ instead of the simpler ‘phosphene’ by way of emphasizing that the phenomenist need not have any commitment to phenomenal individuals.) . If all of our visual experiences were like these, representationism would have been less attractive. Phosphene-experiences are visual sensations “of” color and light stimulated by pressure on the eye or by electrical or magnetic fields. (I once saw an ad for goggles that you could put on your eyes that generated phosphenes via a magnetic field.) Phosphene-experiences have been extensively studied, originally in the 19th Century by Purkinje and Helmholtz. Close your eyes and place the heels of your hands over your eyes. Push your eyeballs lightly for about a minute. You will have color sensations.

Can you attend to those sensations? I believe I can. Even if you can't attend to them, are you aware of them? According to the representationist, all awareness of those sensations could consist in awareness of the colored moving expanses that are represented by them. My view is that one can be aware of something more. Again, I don't think this sort of consideration can change anyone's mind, but I hope it will have an impact on the non-committed.

Lycan (1987) says: “...given any visual experience, it seems to me, there is *some* technological means of producing a veridical qualitative equivalent--e.g. a psychedelic movie shown to the subject in a small theater. “ (p. 90) But there is no guarantee that phosphene experiences produced by pressure or electromagnetic stimulation could be produced by light. (Note: I don't say there is a guarantee that phosphene-experiences could *not* be produced by light, but only that there is no guarantee that they could; I have no idea whether they could or not.) I do wonder if Lycan's unwarranted assumption plays a role in leading philosophers to suppose that the phenomenal characters of phosphene-experiences, afterimage-experiences and the like are exhausted by their representational content.

### **Bach-y-Rita**

According to me, in normal perception one can be aware of the mental paint--the sensory quality that does the representing. This idea can be illustrated (this is more of an

illustration than it is an argument) by Bach-y-Rita's famous experiment in which he gave blind people a kind of vision by hooking up a TV camera to their backs which produced tactual sensations on their backs. Bach-y-Rita says that the subjects would normally attend to what they were "seeing". He says "unless specifically asked, experienced subjects are not attending to the sensation of stimulation on the skin of their back, although this can be recalled and experienced in retrospect." (Quoted in Humphrey, 1992, p. 80.) The retrospective attention of which Bach-y-Rita speaks is a matter of attending in retrospect to a feature of one's experience that one was aware of but not attending to when the perception originally happened as with the jackhammer and refrigerator examples mentioned earlier. Of course, the analogy is not perfect. In attending to visual sensations, we are not normally attending to sensations of the eye (Harman, 1996).

I think that the Bach-y-Rita experiment is useful in thinking about the two versions of representationism mentioned above. Let me remind you about the difference. Harman seems to say that all we can introspect in experience are the intentional objects of experience. Lycan, however, allows that we can actually introspect certain properties of the experiences themselves. At first glance, reflection on the Bach-y-Rita experiment provides support for Lycan over Harman. For the ability of Bach-y-Rita's subjects to introspect their tactual sensations helps to remind us that we really can notice features of our own visual sensations. But Lycan's concession, you will recall, was to allow introspection of *the property of having certain intentional properties*. But is that what Bach-y-Rita's subjects were doing? Were they introspecting *that the sensations on their backs represented, say a couch*? Perhaps occasionally, but I doubt it that that's what Bach-y-Rita was talking about. I think he meant that they were attending to the experiential quality of the feelings on their backs. And I think that this case helps to remind us that at least sometimes when we introspect visual experience, we are attending to the phenomenal properties of experience, not the fact that they have certain intentional properties. So although Lycan's version of representationism is superior to Harman's in allowing *the existence of* introspection of something other than intentional properties of experience, it is not true to what that introspection is often like.<sup>4</sup>

Moving now to the orgasm and pain cases, as I mentioned earlier, there is a challenge here for the representationist. Just what is the representational content of these states? In vision, it often is plausible to appeal to recognitional dispositions in cases where we lack the relevant words. What's the difference between the representational contents of the experience of color A and color B, neither of which have names? As I mentioned earlier, one representationist answer is this: The recognitional dispositions themselves provide or are the basis of these contents. My experience represents A as *that* color, and I can *misrepresent* some other color as *that* color. But note that this model can't straightforwardly be applied to pain. Suppose I have two pains that are the same in intensity, location, and anything else that language can get a handle on--but they still feel different. Say they are both twinges that I have had before, but they aren't burning or sharp or throbbing. "There's *that* one again; and there's that other one." is the best I can

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<sup>4</sup> Harman tells me that his view is actually the same as what I ascribe to Lycan.

do. If we rely on my ability to pick out *that* pain, (arguably) we are demonstrating a phenomenal character, not specifying a representational content. (Note the difference between Loar's (1990) proposal of a recognitional view of phenomenal *concepts* and the current suggestion that a recognitional disposition can specify phenomenal character itself. Phenomenal character is what a phenomenal concept specifies or refers to.) The appeal to recognitional dispositions to fill in representational contents that can't be specified in words has some plausibility, so long as the recognitional dispositions are directed outward. But once we direct them inward, one begins to wonder whether the resulting view is an articulation of representationism or a capitulation to phenomenism. I will return to this point.<sup>5</sup>

### **Is Representationism Just a Form of Functionalism?**

Consider what I call "quasi-representationism". Quasi-representationists agree with phenomenists that there are differences between sensory modalities that cannot be cashed out representationally. One modality is flashing lights, another is tooting horns. But quasi-representationists agree with representationists that *within* a single modality, all phenomenal differences are representational differences. (I think that this is the view that Peacocke, 1983, Ch. 1 argues against.)

Some philosophers are attracted to representationism but can't bring themselves to treat the experiential differences between say vision and touch as entirely representational. So they appeal to the fact that visual and touch representations of, say, an edge, function differently. They plug a gap in representationism with functionalism. (Block, 1995c and Robinson, 1998, interpret Lycan, 1996c, in this way.) But they should tell us why they don't reject representationism altogether in favor of functionalism. Some philosophers start with functionalism, but don't see how to handle afterimages (and perhaps other putatively intentional phenomena) functionally (Lycan, 1996a,b). So they add representationism. (Lycan, 1996c). Of course, it may be that both doctrines are wrong by themselves, but there is a third that draws on the resources of both that works.

Many philosophers in the representationist ballpark are rather vague about whether they are pure representationists or quasi-representationists, but Tye (1995b) makes it clear that he is a pure representationist. (Harman tells me he is a quasi-representationist and Lycan (1996c) declares quasi-representationism.

How can we decide whether the anti-phenomenist needs both representationism and functionalism? Suppose I both touch and see a dog. Both experiences represent the dog as a dog, but they are different phenomenally. Representationists are quick to note that the two experiences also differ in all sorts of other representational ways. (See Tye, 1995a, for example.) The visual experience represents the dog as having a certain color, whereas the tactual experience represents it as having a certain texture and temperature. In Block (1995a, b) I tried to avoid this type of rejoinder by picking experiences with very limited representational content. If you wave your hand in the vicinity of your ear,

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<sup>5</sup> As I mentioned earlier, there is also a problem for the recognitional view in the plausibility of the idea that we (or animals) can have an experience without any sort of categorization or recognition.

your peripheral vision gives you an awareness of movement without size, shape or color. You have a visual experience that plausibly represents something moving over there *and nothing else*. And I imagined that there were auditory experiences with the same content. But my expert consultants tell me that I was wrong. There is no auditory analog of peripheral vision. For example, any auditory experience will represent a sound as having a certain loudness. But that does not ruin the point. It just makes it slightly harder to see. Imagine the experience of hearing something and seeing it in your peripheral vision. It is true that you experience the sound as having a certain loudness, but can't we abstract away from that, concentrating on the perceived location? And isn't there an obvious difference between the auditory experience *as of that location* and the visual experience *as of that location*? If so, then there is either mental paint or mental oil. (The ways in which representationally identical experiences might be phenomenally different could involve differences in either paint or oil.)<sup>6</sup>

### Seeing Red for the First Time

Marvin is raised in a black and white room, never seeing anything of any other color. Further, as with Erisa, he never learns that fire engines and ripe tomatoes are red or that grass is green, etc. Then he is taken outside and shown something red without being told that it is red. (I've changed 'Mary' to 'Marvin' so as to emphasize the small differences between this and Jackson's (1982) argument.) He learns what it is like to see red, even though, unlike Mary, he is not told what that color is **called**. He might say: "So *that's* what it is like to see *that* color."

Lewis (1990) (following Nemirow) says that Marvin acquires an ability, some sort of recognitional know-how. But as Loar (1990) notes, this idea can't account for embedded judgements. Here's an example that fits the Marvin case: "If *that's* what it is like to see red, then I will be surprised." (Loar is applying a standard argument against nondescriptivism in ethics. Perhaps followers of Lewis and Nemirow will try to utilize nondescriptivist attempts to deal with the problem by Blackburn (1993) and Gibbard (1990) .)

What does the representationist say about what Marvin has learned? If Marvin is told that what he sees is red, the representationist might say that he has acquired a visual representational concept, the concept of red. But can the representationist say this if Marvin doesn't know *that* it is red? Perhaps the representationist will say this:

He acquires the concept of red without the name 'red'. What Marvin acquires is a recognitional concept. After all, he can say "There's *that* color again". He has a recognitional concept that he applies on the basis of vision, even though it doesn't link up to his linguistic color concepts.

But there is a trap for the representationist in this reply. For what, according to the representationist, is the difference between Marvin's concept of red and Marvin's concept of blue? He recognizes both. When he sees a red patch he says "There's *that*

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<sup>6</sup> See the papers in Crane (1992) for more on this issue.



color again” and when then sees a blue patch he says “There’s *that other* color again”, each time collating his outer ostension with an inner ostension. But what, according to the representationist, is the difference between Marvin’s concept of red and Marvin’s concept of blue? The phenomenist will link the difference to an internal difference, the difference in the phenomenal qualities of the experience of blue and the experience of red. But the representationist can’t appeal to that without changing sides. What else is there of a suitably internal sort for the representationist to appeal to? (Remember, we are supposing, as with Erisa raised in the room of changing colors, that Marvin knows nothing that distinguishes the unnamed colors, no abiding beliefs to the effect that this color has certain properties that that color doesn’t have.) The appeal to a recognitional disposition suggests that the representationist is appealing to the *colors* themselves. What makes his concept of red different from his concept of blue is that he applies the former in recognizing red and the latter in recognizing blue.

In a response to an earlier version of this objection to representationism (Block, 1995c), Lycan (1996c, p. 137) gives an answer to my question about what the difference is between Marvin’s concept of red and Marvin’s concept of blue. “Answer: that the former represents the (or a) physical property of objective redness while the latter represents objective blueness”. This is the version of the representationist view that the inverted earth thought experiment is aimed at.

If the representationist is willing to recognize a color concept that has been cut loose from everything but recognition, why shouldn’t he also recognize such concepts turned inward? Why can’t he have a recognitional concept of his own phenomenal state - “There’s *that* experience again.” (Of course, from the representationist point of view, it would be a recognitional concept of something intentional.) And that would just be a kind of phenomenal concept. (I don’t mean to imply that I think it would be natural for Marvin to invoke such a highly sophisticated concept in recognizing that he is seeing the same color again. Phenomenal concepts, that is concepts of phenomenal characters, are highly sophisticated.) But this raises a puzzle for the representationist: how does Marvin’s recognitional concept work without mental paint? Our ability to recognize our own representation of, say, water, relies on our possessions of the word ‘water’ (or a related word in a language of thought), a word whose content depends on interaction with some specific stuff in the world. (Our twins on twin earth recognize a different content.) But Marvin lacks such a word.

Rey (1992a, 1992b) postulates that color experiences involve the tokenings of special restricted predicates in the language of thought. So he would say that Marvin tokens ‘R’ when he sees red and ‘B’ when he sees blue. Is that a suitable representationist answer? Recall that we are now discussing *externalist* representationism, and Rey’s view would deal with this problem by bringing in an internalist element. Recall my objection to internalism in terms of Erisa, the girl raised in the room in which everything changes colors. Erisa perhaps has more or less normal color experience but may have no abiding asymmetrical associations in her color experience. So what’s the *representational* difference between her ‘R’ and ‘B’? Suppose Rey says: “who needs a representational difference; the syntactic difference is

enough.” Then it becomes difficult to see why he is not just an old fashioned eliminativist. Let me explain. I am a reductionist, a *physicalist* phenomenist. I believe that the difference between Marvin’s experience of red and of blue is a physical difference. I suspect it is a difference in brain events that is not naturally capturable in terms of “syntax”, since talk of syntax in connection with brain processes will most likely apply, if anywhere, to language areas of the brain rather than to visual areas, but I am flexible on this issue. Certainly no position on the syntax issue is an important feature of the physicalist-phenomenist position. I allow that it is an empirical question (of course) what the physical natures of phenomenal qualities are. Perhaps these natures are syntactical or even functional (psychofunctional, that is, in the terminology of Block, 1978). In sum, no doubt the internalist anti-phenomenist can find some physicalistic surrogate for qualia, but a suitable surrogate will be the very item that the physicalist phenomenist will think of qualia as reduced to. And then the difference will be like the difference between the reductionist who says that there is water and it is H<sub>2</sub>O and the eliminativist who says there is H<sub>2</sub>O but no water. And eliminativism about phenomenal character is even less plausible than eliminativism about water.

Jackson uses his “Mary” case to argue against physicalism. Mary knows all the physico-functional facts, but nonetheless learns a new fact, so there are facts that aren’t among the physico-functional facts. I accept the familiar refutation of this argument along the lines of: Mary learns a new concept of something she already knew. She acquires a phenomenal concept of a physical fact that she was already acquainted with via a physical concept.(Loar, 1990) The point of this section is that an adaptation of Jackson’s case is more effective in setting up an argument against representationism (the inverted earth argument to follow) than it is against physicalism.

### **Externalist Memory**

At the beginning of the discussion of externalism, I discussed the thought experiment in which I, a native of Putnam’s Twin Earth, emigrated to Earth. When I first looked at water, I thought it was twater and, we are agreeing to suppose, my visual experience represented it as twater. Much later, after learning everything that I’ve just told you, my allegiances shifted; in effect, I decided to become a member of the Earth language community, to speak English, not Twenglish. Now, when I look at the sea, I take what I am seeing to be water and my visual experience represents it as water (let’s suppose), not twater.

(How could a *conceptual* change affect a *visual* representation? Though nothing here depends on the matter, I will briefly mention the rationale. There is a difference between seeing a group of buildings as a hospital and seeing them as a nuclear reactor. These are conceptual differences but they make a visual difference. *Seeing as* is both conceptual and visual.)

Though my conceptual and visual representation of water has changed during my stay on Earth, in some very obvious sense, water looks the same to me as it did the first time I saw it even though my representational content has changed. If you blindfolded

me and put me down at the sea side, I wouldn't know from looking at the liquid in the ocean whether it was water or twater. My phenomenal character has stayed the same even though the representational content of my visual experience changed. But this doesn't yet show that there is anything non-representational about phenomenal character. For the shared *representational* contents can be appealed to explain why there's no difference in what its like to see water. Here is the representationist picture: experiences have representational properties of two types: the phenomenal character of an experience can be identified with one of those two types. The non-phenomenal type includes the representation of water as water, the phenomenal type includes representations of such "appearance properties" as color. (See Block, 1995a,b and Tye, 1995a.) The visual representation of these appearance properties includes non-conceptual representations according to many representationists, and these are the ones whose representational content is identified with phenomenal character. (This is the view of Dretske, Lycan and Tye.) What I will argue is that there is a twin earth case that turns on a property that does not allow a reply corresponding to the one just made with respect to water. The property is color, which is an "appearance property" if anything is. The upshot, I will argue, is that there is mental paint (but there is no argument here for mental oil). I will illustrate this point with an argument from Block (1990, 1994a) about color. I won't go into this argument in full detail.<sup>7</sup>

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<sup>7</sup> I will make use of Harman's (1983) Inverted Earth example. Block (1980) uses a cruder example along the same lines. (P 302-303 of Block (1980)--reprinted on p. 466 of Lycan (1990) and p. 227 of Rosenthal (1991)). Instead of a place where things have the opposite from the normal colors, I envisioned a remote arctic village in which almost everything was black and white, and the subject of the thought experiment was said to have no standing color beliefs of the sort of "Grass is green". Two things happen to him: he confuses color words, and a color inverter is placed in his visual system. Everything looks to have the complementary of its real color, but he doesn't notice it because he lacks standing color beliefs.

Harman used the Inverted Earth example to make a point orthogonal to the point made here. His conclusion is that representational content does not supervene on the brain. He does not consider someone emigrating to Inverted Earth or a pair of twins one of whom is on earth the other on Inverted Earth. Instead, he describes the Inverted Spectrum thought experiment in the form in which a person puts on color inverting lenses. Then he describes Inverted Earth and notes that the inverting lenses could be donned by someone on Inverted Earth with the upshot that the brain state which in normals represents blue would then represent orange. There is no discussion of sameness or difference of phenomenal character. Here is Harman's complete discussion of the matter:

"Consider Inverted Earth, a world just like ours, with duplicates of us, with the sole difference that there the actual colors of objects are the opposite of what they are here. The sky is orange, ripe apples are green, etc. The inhabitants of Inverted Earth speak something that sounds like English, except that they say the sky is 'blue', they call ripe apples 'red', and so on. Question: what color does their sky look to them? Answer: it looks orange. The concept they express with the word 'blue' plays a relevantly special role in the normal perception of things that are actually orange.

Suppose there is a distinctive physical basis for each different color experience. Suppose also that the physical basis for the experience of red is the same for all normal people not adapted to color inverting lenses, and similarly for the other colors. According to (nonsolipsistic) conceptual role semantics this fact is irrelevant. The person who has perfectly adapted to color inverting lenses will be different from everyone else as regards the physical basis of his or her experience of red, but that will not affect the quality of his or her experience.

Consider someone on Inverted Earth who perfectly adapts to color inverting lenses. Looking at the sky of Inverted Earth, this person has an experience of color whose physical basis is the same as that of a normal

Inverted Earth is a place that differs from Earth in two important ways. First, everything is the complementary color of the corresponding earth object. The sky is yellow, the grass-like stuff is red, etc. Second, people on Inverted Earth speak an inverted language. They use 'red' to mean green, 'blue' to mean yellow, and so forth. If you order a sofa from Inverted Earth and you want a yellow sofa, you FAX an order for a "blue" sofa (speaking their language). The two inversions have the effect that if wires are crossed in your visual system (and your body pigments are changed), you will *notice no difference* when you go to Inverted Earth. After you step off the space-ship, you see some Twin-grass. You point at it, saying it is a nice shade of "green", but you are wrong. You are wrong for the same reason that you are wrong if you call the liquid in a Twin-earth lake 'water' just after you arrive there. The grass is red (of course I am speaking English not Twenglish here). But after you have decided to adopt the concepts and language of the Inverted Earth language community and you have been there for 50 years, your word 'red' and the representational content of your experience as of red things (things that are *really* red) will shift so that you represent them *correctly*. Then, your words will mean the same as those of the members of your adopted language community and your visual experience will represent colors veridically.

Your color words and color concepts shift in meaning and content, and your color experiences shift in representational content, but the explanations are not exactly the same. Concepts shift for reasons familiar from the work of Burge and Putnam. But the representational contents of color experience may be non-conceptual and therefor not linked to the use of concepts in the language community. Still, non-conceptual contents arguably get their content causally. My dog recognizes me and has experiences that represent me even if my dog has no concept of me. If my dog goes to Twin Earth, she will react to Twin Block in just the way she reacts to me. She will mistakenly represent Twin-Block as Block. But a Block-recognitional capacity is not a Twin-Block recognitional capacity, and that has to be because the Block-recognitional capacity involves causal contact with Block rather than Twin-Block. Further, any recognitional capacity can be "swamped" by a new causal source. Suppose that my dog meets Erisa for 10 minutes and develops an Erisa recognitional capacity. Then the dog goes to Twin Earth and meets Twin-Erisa, whom she mis-recognizes as Erisa. Erisa then adopts the dog. After 10 years, the dog's Erisa-recognitional capacity has been replaced by a Twin-Erisa recognitional capacity. Evans introduced the dominant causal source account of reference, but the account covers some aspects of visual representation as well as linguistic representation.

It may be said that whereas the visual or olfactory representation of Erisa has a current causal source, the visual representational of colors has its source in evolutionary history. That issue will be taken up later.

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person on Earth looking at Earth's sky. But the sky looks orange to the person on Inverted Earth and blue to normal people on Earth. What makes an experience the experience of something's looking the color it looks is not its intrinsic character and/or physical basis but rather its functional characteristics within an assumed normal context."

The thought experiment as I have been describing it is slightly different from the one set out in Block (1990). In the old version, you are kidnapped and inserted in a niche in Inverted Earth without your noticing it (your twin having been removed to make the niche). In the new version, you are aware of the move and consciously decide to adopt the concepts and language of the Inverted Earth language community. (See also Stalnaker, 1996.) The change has the advantage of making it clearer that you become a member of the new community. On the old version, one might wonder what you would say if you found out about the change. Perhaps you would insist on your membership in the old language community and defer to it rather than to the new one. Your color concepts might be regarded as indeterminate in reference. Dennett (1991) made objections to the inverted spectrum case which, applied to Inverted Earth, would say that there is no coherent interpretation of the conceptual representational contents of the traveler in the thought experiment. The point concerns conceptual contents, but applies nonetheless to non-conceptual contents. For suppose the traveler's memory images of the sky on his fifth birthday, taken to represent the same color as now, are intimately involved in every identification of the color of any yellow thing on Inverted Earth. We may feel that radical error suffuses all his color representations, non-conceptual as well as conceptual. But thinking of the traveler as knowing all along all we know shows how incoherence can be avoided. The traveler need not take the old memory images at face value. (In Block, 1990, this problem—though with respect to the inverted spectrum rather than inverted earth—is dealt with by changing the thought experiment to involve amnesia for the earlier life. The same idea would work here as well, as Burge hints in his response.)

The upshot is:

1. The phenomenal character of your color experience stays the same. That's what you say, and why shouldn't we believe you?
2. But the representational content of your experience, being externalist, shifts with external conditions in the environment. (Recall that I am now discussing representationists who are externalists; I discussed internalist representationism at the beginning of the paper.)

Your phenomenal character stays the same but what it represents changes. This provides the basis of an argument for mental paint, not mental oil. Mental paint is what stays the same; its representational content is what changes.

What exactly is the argument for mental paint? Imagine that on the birthday just before you leave for Inverted Earth, you are looking at the clear blue sky. Your visual experience represents it as blue. Years later, you have a birthday party in Inverted Earth and you look at the Inverted Earth sky. Your visual experience represents it as yellow (since that's what color it is and your visual experience by that time is veridical let us suppose--I'll deal with an objection to this supposition later). But the phenomenal character stays the same, as indicated by the fact that you can't tell the difference. So there is a gap between the representational content of experience and its phenomenal character. Further, the gap shows that phenomenal character outruns representational

content. Why? How could the representationist explain what it is about the visual experience that stays the same? What representational content can the representationist appeal to in order to explain what stays the same? This is the challenge to the representationist, and I think it is a challenge that the representationist cannot meet.

The comparison with the water case is instructive. There, you will recall, we also had phenomenal continuity combined with representational change. But the representationist claimed that the phenomenal continuity itself could be given a representational interpretation. The phenomenal character of my visual experiences of twater and water were the same, but their representational contents differed. No problem because the common phenomenal character could be said by the representationist to be a matter of the representation of color, sheen, flow pattern and the like. But what will the representationist appeal to in the Inverted Earth case that corresponds to color, sheen, flow pattern, etc.?

## Objections

There are many obvious objections to this argument, some of which I have considered elsewhere. I will confine myself here to two basic lines of objection.

Bill Lycan has recently objected (1996a, 1996b) that the testimony of the subject can only show that the phenomenal character of color experience is indistinguishable moment to moment, and that allows the representationist to claim that the phenomenal character shifts **gradually**, in synch with the shift in the representational content of color experience. (I raised this objection in my 1990, p. 68.) The gradual shift of phenomenal character in synch with the gradual shift of representational content avoids any gap between them. But this objection ignores the *longer term* memories. The idea is that you remember the color of the sky on your birthday last year, the year before that, ten years before that, and so on, and your long term memory gives you good reason to think that the phenomenal character of the experience has not changed gradually. You don't notice any difference between your experience now and your experience 5 years ago or 10 years ago or 60 years ago. Has the color of the American flag changed gradually over the years? The stars used to be yellow and now they are white? No, I remember the stars from my childhood! They were always white. Of course, memory *can* go wrong, but why should we suppose that it *must* go wrong here? Surely, the scenario just described (without memory failure) is both conceptually and empirically possible. (As to the empirical possibility, note that the thought experiment can be changed so as to involve a person raised in a room who is then moved to a different room where all the colors are changed. No need for a yellow sky, a yellow ceiling will do.)

Now a different objection may be mounted on Lycan's behalf-- that the externalist representationist should be externalist about **memory**. According to the first version of my story, the representational contents of the subject's color experience have shifted without his knowing about it. So if my story is right, Lycan (if he is to be an externalist about memory) should say that the subject's color experience has shifted

gradually without the subject's knowing it. And that *shows* that the subject's memory is defective.<sup>8</sup>

Why should we believe that memory is defective in this way? One justification is simply that the nature of phenomenal character is representational (and externalist), so the phenomenal character of experience shifts with its representational content. Since memory is powerless to reveal this shift, memory is by its nature defective.

But this justification is weak, smacking of begging the question. The Inverted Earth argument challenges externalist representationism about phenomenal character, so trotting in an "error theory", an externalist representationism about memory of phenomenal character to defend it is not very persuasive. The idea of the Inverted Earth argument is to exploit the first person judgement that in the example as framed the subject *notices no difference*. The subject's experience and memories of that experience reveal no sign of the change in environment. Yet his representational contents shift. Since the contents in question are color contents, the move that was available earlier about a set of representational contents that capture what stays the same is not available here. And that suggests for reasons that I just gave that there is more to experience than its representational content. The defender of the view that memory is defective must blunt or evade the intuitive appeal of the first person point of view to be successful. It is no good to simply invoke the doctrine that experience is representational. But the reply to the Inverted Earth argument as I presented it above does something close to it. It says that the memories of the representational contents are wrong, so the memories of the phenomenal characters are wrong too. But that is just to **assume** that as far as memory goes, phenomenal character is representational content. For the argument to have any force, there would need to be some independent reason for taking externalism about phenomenal memory seriously.

The representationist may reply that there is no question begging going on, but only thoroughgoing externalism about the phenomenal character of experience in all domains--in both perception and memory. But externalism about phenomenal memory has nothing to recommend it aside from its use in defending externalist representationism about phenomenal character. It is an error theory—it postulates that ordinary memory, e.g. about what it was like to see the sky a few minutes ago is inherently defective. It has the consequence that there can be changes in the phenomenal character of my experience (due to changes in the world) which I am in principle incapable of detecting, no matter how large they are or how fast they happen. The founders of externalism (such as Tyler Burge) should not be pleased by such an invocation of the externalist point of view.

It will be useful to consider briefly a related objection to the Inverted Earth argument. Suppose it is said that the subject's (that is, your) representational contents don't ever switch. No matter **how** long you spend on Inverted Earth, the sky **still** looks

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<sup>8</sup> I took this point to be raised by some of the discussion of Lycan's paper at the meeting of Sociedad Filosofica Ibero-Americano in Cancun in June, 1995. If I had to credit it to anyone, it would be Alan Gibbard.

blue to you. After all, as I have insisted, you notice no difference. So doesn't the sky continue to look *the same*, viz., blue? This line of objection has more than a little force,<sup>9</sup> but it can easily be seen not to lead away from my overall conclusion. For it is hard to see how anyone could accept this objection without *also* thinking that the subject (viz., you) on Inverted Earth has an "inverted spectrum" relative to the other denizens of Inverted Earth. The sky looks yellow to them (recall that the sky there *is* yellow) but blue to you. And you are as functionally similar to them as you like. (We could even imagine that your monozygotic twin brother is one of them.) The sky on earth is blue and looks blue to normal people. The sky on Inverted Earth is yellow and looks yellow to normal residents. But the sky on Earth looked the same to you as the sky on Inverted Earth now looks. So you must be inverted either with respect to Earthians or Inverted Earthians.<sup>10</sup>

### Shifted Spectra

A shifted spectrum would obtain if, for example, things that we both call 'orange' look to you the way things we both call 'reddish orange' look to me. There is an argument for shifted spectra that appeals to the fact that color vision varies from one *normal* person to another. There are three kinds of cone in the retina that respond to long, medium and short wave light. The designations "long", "medium" and "short" refer to the peak sensitivities. For example, the long cones respond most strongly to long wavelengths but they also respond to medium wavelengths. Two normal people chosen at random will differ half the time in peak cone sensitivity by 1-2 nm (nanometers) or more. (More precisely, the standard deviation is 1-2 nm. See Lutze, et. al, 1990.) This is a considerable difference, given that the long wave and middle wave cones only differ in peak sensitivities by about 25 nm. Further, there are a number of specific genetic divisions in peak sensitivities in the population that are analogous to differences in blood types (in that they are genetic polymorphisms, discontinuous genetic differences coding for different types of normal individuals). The most dramatic of these is a 51.5%/48.5%

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<sup>9</sup> Block (1998) gives a different response in terms of the swampman visiting Inverted Earth. The swampman response is also used in Block (1998) to deal with Dretske's and Tye's plausible view (shared by Burge) that color representation is a product of evolution, hence if the sky on Inverted Earth continues to produce the same phenomenal experience in our traveler, it also is represented as blue.

<sup>10</sup> It may be thought that the Inverted Spectrum argument is superior because it is a case of same representational content, different phenomenal character, and that this yields a more direct argument that phenomenal character goes beyond representational content. Inverted earth might be said to provide only the converse, same phenomenal character, different representational content. The upshot, it might be said, is that I have had to resort to a burden of proof argument. I have had to challenge the representationist with a question: what kind of representational content of experience stays the same? This thought, which I have been guilty of, makes a simple error. Both the Inverted Spectrum and Inverted Earth cases involve counterexamples in both directions. Consider the Inverted Earth twin looking at a lemon and compare that with the Earth twin looking at the sky. This is a case of same representational content (both states represent blue, the color of Inverted Earth lemons), different phenomenal character. So we can squeeze both same representational content/different phenomenal character and same phenomenal character/different representational content out of the thought experiment. Similarly, we can imagine an inverted spectrum subject looking at a lemon while his inverted twin looks at the sky. This is a case of same phenomenal character/different representational content, the converse of the usual Inverted Spectrum conclusion.



split in the population of two types of long wave cones that differ by 5-7 nm, roughly 24% of the difference between the peak sensitivities of long and middle wave cones. (Neitz and Neitz, 1998<sup>11</sup>) This characteristic is sex-linked. The distribution just mentioned is for men. Women have smaller numbers in the two extreme categories and a much larger number in between. As a result, the match on the Rayleigh test (described below) **“most frequently made by female subjects occurs where no male matches”** (Neitz and Jacobs, 1986).<sup>12</sup>

These differences in peak sensitivities don't show up in normal activities, but they do reveal themselves in subtle experimental situations. One such experimental paradigm uses the anomaloscope (devised in the 19<sup>th</sup> Century by Lord Rayleigh), in which subjects are asked to make two halves of a screen match in color, where one half is lit by a mixture of red and green light and the other half is lit by yellow or orange light. The subjects can control the intensities of the red and green lights. Neitz, et. al, 1993 note that “People who differ in middle wavelength sensitivity (M) or long wavelength sensitivity (L) cone pigments disagree in the proportion of the mixture primaries required” (p. 117). That is, whereas one subject may see the two sides as the same in color, another subject may see them as different--e.g. one redder than the other. When red and green lights are adjusted to match orange, women tend to see the men's matches as too green or too red (Neitz and Neitz, 1998). Further, variation in peak sensitivities of cones is just one kind of color vision variation. In addition, the shape of the sensitivity curves vary. These differences are due to differences in macular pigmentation, which vary with “both age and degree of skin pigmentation”(Neitz and Jacobs, 1986). Hence races that differ in skin pigmentation will differ in macular pigmentation. There is also considerable variation in amount of light absorption by pre-retinal structures. And this factor also varies with age.

I emphasize gender, race and age to stifle the reaction that one group should be regarded as normal and the others as defective. There are standard tests for defective color vision such as the Ishihara and Farnsworth tests, and it is an empirical fact that most men and almost all women have non-defective color vision as measured by these tests. My point is only that the facts about variation that I have presented give us no reason at all to regard any gender, race or age as abnormal in color vision.

Hardin (1993) mentions a classic study (by Hurvich, Jameson and Cohen, 1968) of the spectral location of unique green in a group of 50 normal subjects. Here is a table of locations:

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<sup>11</sup> Neitz and Jacobs, 1993 report a figure of 62%/38%.

<sup>12</sup> Neitz and Neitz, 1998 explain the result as follows. Genes for long and medium wave pigments are on the X chromosome. Men have a single X chromosome which is roughly equally likely to be each of the two forms, and hence they show a matching distribution with two spikes corresponding to the peak sensitivities of the two kinds of cones. Women have two X chromosomes, and in roughly half the cases, they have different alleles of the long wave gene in the two chromosomes. When this happens, one gene de-activates the other. But that happens independently in each cell, the result being that the average output of the cells in these women is intermediate between the extreme values and so these women have long wave absorption peaks roughly in between the two groups of men.

5 subjects located unique green at	490 nm
11	500nm
15	503nm
12	507nm
5	513nm
2	517nm

As Hardin notes, this is an enormous range, as can be seen in a number of ways. Take a look at a spectrum (such as the one in Hardin's book) and block off the other areas. Or look at the Munsell chips, noting that this range goes from 5 Blue-Green to 2.5 Green. Or simply note that the 27nm span of this group's location of unique green is 9% of the visible spectrum.

The upshot is that if we take a chip that any one subject in this experiment takes as being unique green, most of the others will see it as slightly off. Thus it is reasonable to say that any given chip will look a but different to a randomly chosen subject than to most others. Thus we are justified in supposing that the way any chip looks (colorwise) is unlikely to be exactly the same as the way that chip looks to most other people, especially if they differ in sex, race or age. So now we have the beginnings of an argument against representationism. Jack and Jill have experience that represents red things as red even though they very likely experience red slightly differently.

But the argument doesn't quite work, for as representationists could reply, the representational contents of Jack's and Jill's color categories may differ too, so there is still no proven gap between representational content and phenomenal character. "Color categories?" you say. "I thought the representationist was talking about *non-conceptual* contents?" True, but the representationist has to allow that our visual experiences represent a scarlet thing as red as well as scarlet. For we experience scarlet things as both red and as scarlet. We experience two red things of different shades as having the same color, though not the same shade, so a representationist has to concede a component of the representational contents of experience that captures that fact about experience. The representationist has to allow representational content of both color and shade. Further, pigeons can be conditioned to peck when presented with things of a certain color, as well as of a certain narrow shade. Even if the pigeon lacks color concepts, it has something short of them that involve some kind of categorization of colors as well as shades, red as well as scarlet. Let's use the term 'category' for this aspect of the non-conceptual contents that are concept-like but can be had by animals which perhaps can't reason with the contents. Now we can see why the argument I gave doesn't quite work against the representationist. Jack's and Jill's experiences of a single red fire hydrant may differ in phenomenal character *but also* in representational content, because, say, Jack's visual category of red may include a shade that is included instead in Jill's visual category of orange. Furthermore, because of the difference in Jack's and Jill's color vision, the fire hydrant may look more red than orange to one, more orange than red to the other. So we don't yet have the wedge between phenomenal character and representational content.

Indeed, it is quite plausible that the varying nature of our perceptual apparatuses determines different extensions for common color words. (By 'extension', I don't mean just what they apply or would apply their color words to, but what they would apply their words to in ideal conditions.) Some things that Jack categorizes as "blue" will be categorized by Jill as "green" and it is implausible to regard either as mistaken. A sensible conclusion is that they use the words "blue" and "green" in somewhat different senses, both correctly. The objective nature of color, it might be said, derives from the overlap between persons with normal color perception. There are objects which should be agreed to be "blue" by everyone with normal color vision, and that's what makes them objectively blue. The objects that are not objectively blue, but are said to be "blue" by one normal person but not another are indeterminate in color. I endorse this point of view, though I think that it is of less value to the representationist than might appear at first glance.

The way to get the wedge between phenomenal character and representational content is to apply the argument just given to shades rather than colors. Let us co-opt the word 'aquamarine' to denote a shade of blue that is as narrow as a shade can be, one that has no discriminable sub-shades. If Jack's and Jill's visual systems differ slightly in the ways that I described earlier, then we can reasonably suppose that aquamarine doesn't look to Jack the way it looks to Jill. Maybe aquamarine looks to Jack the way turquoise (a different minimal shade, let's say) looks to Jill. But why should we think that there is any difference between the representational contents of Jack's experience as of aquamarine and Jill's? They both acquired their categories of aquamarine by being shown (let's suppose) a standard aquamarine chip. It is that objective color that their (different) experiences of aquamarine both represent. The upshot is that there is an empirically based argument for a conclusion—what one might call "shifted spectra"—that, while not as dramatic as an inverted spectrum, has much the same consequences for representationism and for the issue of whether there are uniform phenomenal characters corresponding to colors. There probably are small phenomenal differences among normal people that don't track the colors that are represented. Genders, races and ages probably differ by shifted spectra. Thus, if representationism is right, if aquamarine things look aquamarine to men, they probably don't look aquamarine to women. And if aquamarine things look aquamarine to one race or age group, they probably don't look aquamarine to others. In sum: If representationism is right, color experience probably cannot be veridical for both men and women, both blacks and whites, both young and old. Hence representationism is not right.

I mentioned above that there is an objection to my first try at refuting representationism: maybe Jack's visual category that represents red includes a shade that is included in Jill's visual category that represents orange. The present point is that the same argument does not apply to minimal shades themselves.<sup>13</sup>

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<sup>13</sup> Some may wish to try to avoid this conclusion by insisting that colors are not real properties of things, that our experience ascribes phenomenal properties to physical objects that the objects do not and could not have (Boghossian and Velleman, 1989, 91). Recall that representationism as I am understanding it says that the phenomenal character of a visual experience as of red consists in its representing something as red. Are the phenomenal properties (1) colors or (2) phenomenal properties in something like Shoemaker's

This possibility should not disturb the functionalist, however, for even if there are phenomenal differences among representationally identical experiences as just supposed, the phenomenal differences might be revealed in subtle empirical tests of the sort I mentioned. That is, perhaps shifted spectra always result in different matches on a Rayleigh Anomaloscope or other devices. But shifted spectra would still count against representationism.

There is a complication that I can't treat fully here. If you regard a certain mixture of blue and green as matching the aquamarine chip, but I don't, then our categories of aquamarine are applied by us to different things, and in that sense have different extensions. I don't regard this as showing our categories have different representational contents, since representational contents have to do with what objective colors are represented and the example given exploits an indeterminacy in objective color. There is no determinate answer as to whether the color of the mixture of blue and green (that matches aquamarine according to me but not you) actually *is* aquamarine. It is an objective fact that the standard aquamarine chip is aquamarine, but there is no fact of the matter as to whether the two mixtures of blue and green are aquamarine.

### Representationist Objections

I will put an objection in the mouth of the representationist:

Whatever the differences in their visual systems, if Jack and Jill are normal observers, then in normal (or anyway ideal) conditions, the standard aquamarine chip has to look aquamarine to Jack and it also has to look aquamarine to Jill. After all, "looks aquamarine" just *means* that their perceptual contents represents the chip *as aquamarine*, and you have already agreed [above] that both Jack's and Jill's visual experience represent the chip as aquamarine. You have argued that the representational content of their visual experience is the same (*viz.*, aquamarine), but the phenomenal character is different. However, we representationists don't recognize any kind of phenomenal character other than that which is given by the representational content--which is the same for Jack

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(1994a,b) sense? If the latter, the view countenances unreduced phenomenal characters and is therefore incompatible with representationism as I understand it. (See the discussion of Shoemaker's views in the penultimate section of this paper.) The former interpretation is that our experiences represent objects as having colors such as red or orange, but objects do not and could not have those colors. Colors are in the mind, not in the world outside the mind. The point I will be making contains the materials for refuting this view. Briefly, the picture of colors as in the mind rather than in the world has to explain our agreement on which Munsell chip is 4 Red. But how can the Boghossian-Velleman picture on this interpretation of it explain this agreement, given that we have somewhat different experiences, colorwise, when we see that chip? If your experience represents the 4 Red chip the way mine represents the 5 Red chip, how can we explain our agreement on which chips are 4 Red and 5 Red? Perhaps Boghossian and Velleman will say that you and I have different phenomenal characters that represent the same color. But this line of thought only makes sense if phenomenal characters are in the mind and colors are in the world, contrary to the current interpretation of B&V.

and Jill.. The chips look aquamarine to both Jack and Jill, so they look the same to both Jack and Jill, so Jack and Jill have the same phenomenal characters on viewing the chips in any sense of 'phenomenal character' that makes sense. If Jack and Jill have different brain states on viewing the aquamarine chip, that just shows that the different brain states just differently realize the same phenomenal character.

Reply: We phenomenists distinguish between two senses of "looks the same". In what Shoemaker (1981) calls the intentional sense of 'looks the same', the chips look the same (in respect of color) to Jack and Jill just in case both of their perceptual experiences represent it as having the same color. So I agree with the objection that there is a sense of 'looks the same' in which the aquamarine chip does look the same to Jack and Jill. But where I disagree with the objection is that I recognize another sense of 'looks the same', (the qualitative or phenomenal sense) a sense geared to phenomenal character, in which we have reason to think that the aquamarine chip does not look the same to Jack as to Jill. (The same distinction is made in somewhat different terms in Shoemaker, 1981, Peacocke, 1983 and Jackson, 1977.) But the case at hand supports the phenomenist rather than the representationist. For we have reasons to believe that there is a sense in which the aquamarine chip does not look the same to Jack as to Jill. One reason was given earlier: the chip that Jack regards as unique green (green with no hint of blue or yellow) is not regarded as unique green by most other people. So it looks different to Jack from the way it looks to most others, including, we may suppose, Jill. And the same is likely to be true for other chips, including the aquamarine chip. But there is another reason that even functionalists should agree to: Jack and Jill match differently on the anomaloscope. Recall that the match "most frequently made by female subjects occurs where no male matches". If Jack produces a mixture of blue and green which he says matches the aquamarine chip, Jill will be likely to see that mixture as either "bluer" than the chip or "greener" than the chip.

The big division in the ballpark we are talking about is between those who accept and those who reject qualia, that is features of experience that go beyond the experience's representational, functional and cognitive features. In effect, the argument just given uses functionalism against representationism. The functional differences between different perceivers suggest phenomenal differences, but we have yet to see how those phenomenal differences can be cashed out representationally, even if they can be cashed out functionally. So the argument does not show that there are qualia, though it does go part way, by challenging one of the resources of the anti-qualia forces.

Another Representationist Objection:

These empirical facts show that colors are not objective.. A given narrow shade looks different to different groups, so the different groups represent it as having slightly different colors. Thus it *does* in fact have slightly different colors relative to these different groups. Famously, phenylthiocarbamide tastes bitter to many people but not to many others. Phenylthiocarbamide is not objectively bitter, but it is objectively bitter relative to one group and objectively non-bitter relative to

another. Color is the same, though not so dramatically. There are no absolute colors--color is relative, though only slightly so.

Reply: The problem with this objection derives from a difference between our concept of taste and our concepts of at least some colors, or rather shades.. We are happy to agree that phenylthiocarbamide has no objective taste--it tastes bitter to some but not others. But we do not agree that Munsell color chip 5 Red has no objective hue. Its objective hue is 5 Red no matter whether it looks different to people of different genders, races and ages. The whole point of the Munsell color scheme, the Optical Society of America Uniform Color Space and other color schemes is to catalog objective colors. (See Hardin, 1993) Every American grade school child knows the colors named by the Crayola company, despite differences in the way Burnt Sienna or Brick Red probably looks to different children. If you paint your living room wall Benjamin Moore Linen White, it is an objective fact that you have not painted it Cameo White, Dove White, Opal White or Antique White. If you have ordered White 113 but the paint store gives you White 114, you can get your money back. (The pre-mixed colors have names in the Benjamin Moore scheme; the custom colors, of which there are very very many, as anyone who has ever picked out one of their paint colors knows, have numbers.) If the paint dealer says "Hey, color is relative to gender and we are different genders. Your white 113 is my 114, so I didn't make a mistake," he is wrong.

So the problem for the representationist is this: The standard aquamarine chip is objectively aquamarine. If it looks different to men and to women, then at least one gender's visual experience is representing it as some other shade, and that is an unacceptable consequence. Representationism is empirically false.<sup>14</sup>

There is a type of difficulty with the argument presented here which I have not been able to discuss here. Perhaps Jack sees aquamarine as greener than Jill does, so there is a representational difference after all. For example, Jill may see aquamarine as greenish blue whereas Jack sees it as greenish greenish blue. I argue in [Block \(1999\)](#) that given that there are tens of thousands of shades of greenish blue that persons with normal vision can discriminate, it is unlikely that we or our visual systems have available to us (as part of our normal visual competence) representational resources that would distinguish close shades of greenish blue. Alternatively, suppose that Jack and Jill both see aquamarine as greenish blue, but their their visual categories corresponding to the terms 'green' and 'blue' have slightly different extensions. Can their different phenomenal impressions of aquamarine be explained in terms of different representations of green and blue? I argue not. See the discussion of "subjective color" in [Block \(1999\)](#).

Returning to the main argument of the paper, we are now in a position to counter another of Lycan's (1996a, 1996b) arguments. He notes that I concede that our Inverted Earth subject has experiences whose representational contents (on looking at the Inverted Earth sky) shift from *looking blue* to *looking yellow*. And he concludes that this undermines the subject's claim that there is no difference between the way the sky looked

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<sup>14</sup> The shifted spectrum argument is presented in more detail in [Block \(1999\)](#).

to him on earth and the way the sky looks to him now 50 years later on Inverted earth. I have admitted that the sky looked blue to him at the beginning of our story on earth, and that the sky looks yellow to him at the end of our story on Inverted Earth. So how can I (or he) claim that the sky looks the same to him as it always did? Since he can't remember any change, we must conclude that the reason is that the change was gradual. But this argument ignores the distinction made earlier between the two senses of 'looks the same'. "Looks blue" does not express a phenomenal character but rather a representational content! We can all agree that his color representational contents have changed. But it is phenomenal character, not representational content, that is relevant to noticing a difference, and phenomenal character has remained the same. Representational content has changed purely externally without any corresponding change in phenomenal character.

Tyler Burge suggests (see his reply to me in this volume) that commonly, the phenomenal character of color perception is a factor in individuating the sense component of color concepts. He leaves it open whether phenomenal character is literally a part of the sense of color concepts or part of the intentional content of thoughts involving color concepts. For simplicity, let's take phenomenal character to constitute the sense of color concepts. Then inverted spectrum cases fail to show that phenomenal character doesn't supervene on representational content. For if representational content *includes* phenomenal character, any difference in phenomenal character will, *ipso facto*, constitute a difference in representational content. But representationists of the sort I have been talking about here should not be pleased by this Pickwickian victory. They have tried to cash phenomenal character of color experience in terms of the *color represented*. That is, representationists have construed phenomenal character purely referentially. The phenomenal experience as of red is a matter of visual experience representing something as red. My arguments are supposed to show that view is wrong even if we follow Burge in taking phenomenal character to be an individuating factor in the representational content of color experience.

I began the discussion of externalism by discussing a thought experiment involving Putnam's Twin Earth. The idea was that I had emigrated from Twin Earth to Earth and that after many years on Earth the representational contents of my visual experiences of the liquid in the oceans shifted even though the phenomenal character of the experiences stayed the same. I noted that there is no immediate problem for the representationist here, since the constant phenomenal character can be understood in representational terms. However, there is no corresponding move available to the representationist in the case of an emigration to or from Inverted Earth. This is one of a number of reasons given in this paper to resist the identification of the phenomenal character of the experience as of red with representing red.<sup>15</sup>

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<sup>15</sup> I am grateful for discussions with Tyler Burge, Brian Loar, Paul Horwich, Pierre Jacob and Georges Rey and to Bill Lycan and his NEH Summer Seminar, 1995. I am grateful to Burge, Lycan, Rey and to Sydney Shoemaker for helpful comments on an earlier draft. This paper is a descendant of "Mental Paint and Mental Latex" in E. Villanueva, ed., *Philosophical Issue 7*, Ridgeview: Atascadero, 1996.

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