

Colour Inversion Problems for Representationalism

FIONA MACPHERSON
University of Glasgow

In this paper I examine whether representationalism can account for various thought experiments about colour inversions. Representationalism is, at minimum, the view that, necessarily, if two experiences have the same representational content then they have the same phenomenal character. I argue that representationalism ought to be rejected if one holds externalist views about experiential content and one holds traditional externalist views about the nature of the content of propositional attitudes. Thus, colour inversion scenarios are more damaging to externalist representationalist views than have been previously thought. More specifically, I argue that representationalists who endorse externalism about experiential content either have to become internalists about the content of propositional attitudes or they have to adopt a novel variety of externalism about the content of propositional attitudes. This novel type of propositional attitude externalism is investigated. It can be seen that adopting it forces one to reject Putnam's and Burge's externalist considerations about the nature of the propositional attitudes.

1 - Introduction

Representationalism is, at minimum, the view that the representational content of an experience determines its phenomenal character so that, necessarily, if two experiences have the same representational content then they have the same phenomenal character. Many representationalists go further and claim that the phenomenal character of an experience is identical to the representational content of that experience.¹ Phenomenal character refers to the distinctive qualities that perceptual and sensational experiences seem to have for the subjects of those experiences; it is identified with the properties of experience in virtue of which there is 'something that it is like' to undergo experiences and sensations.² Externalist varieties of this view face a prima facie challenge by the Inverted Earth thought experiment, first discussed by Ned Block.³ Many externalist representationalists have, however, defended their view by spelling out more clearly the type of externalism that they wish to embrace.

¹ See Tye (2000) and (1995), Dretske (1995) and Lycan (1996).

² See Nagel (1974).

³ Block (1990).

In this paper I argue that the Inverted Earth thought experiment is more damaging to externalist representationalist views than has previously been thought. I show that if one holds externalist views about experiential content and one holds traditional externalist views about the nature of the content of propositional attitudes, such as that advocated by Putnam and Burge, then the representationalist position should be rejected. Further, I argue that if one is an externalist about the content of experience and one wishes to endorse representationalism then either one has to become an internalist about the content of propositional attitudes or one has to adopt an unusual variety of externalism about the content of propositional attitudes. This variety of externalism is one in which the externalist nature of propositional attitude content is solely derived from the externalist nature of experiential content. This novel type of propositional attitude externalism may have some merits, but it forces one to reject Putnam's and Burge's externalist considerations about the nature of the propositional attitudes. I conclude, therefore, that traditional externalists about content ought to reject representationalism.

First, I explicate the nature of the Inverted Earth thought experiment and why it challenges externalist representationalist views. Thereafter, the structure of the paper is determined by the thought that any reply to the Inverted Earth thought experiment has to claim one of two things regarding the content of the experiences of someone who travels to Inverted Earth: they stay the same or they change. I argue that each option forces the traditional, externalist representationalist to conclude that people can have radically false beliefs about the nature of their current experience and, hence, one ought to be prevented from accepting this view by this unwelcome consequence.⁴ I explicate the kind of externalism about the propositional attitudes that an externalist representationalist is forced to adopt, but urge that representationalism ought to be rejected.

2 - The Inverted Earth Thought Experiment

Throughout this paper I will adopt Byrne and Hilbert's terminology.⁵ I will call an experience 'blue-representing' if it represents the property blue or, equivalently, if has content pertaining to blueness. I will call an experience

⁴ The well known Cartesian position claims that one can never be mistaken with regard to the nature of one's own experience. However, this position is too strong. There are number of ways in which people can make errors about the nature of their current experiences. People are not infallible in this regard. However, the idea that someone could be radically in error about their experiences, that is, both systematically and grossly in error is unpalatable as it allows for the strongest forms of sceptical worry. I say more about the kind of mistakes that we know people can make about their experiences later in this paper and I show that the kind of radical error that I am proposing that certain types of representationalism force us into is not of these kinds. See especially footnote 9.

⁵ Byrne and Hilbert (1997a). This terminology is supposed to provide a neutral, but convenient, way of describing various positions.

'blue-feeling' if it has the phenomenal character of the experiences which we normally have when seeing blue things. Representationalism requires that if someone has an experience that is blue-feeling and blue-representing and an experience that is yellow-feeling and yellow-representing then neither they, nor anyone else, can have a yellow-feeling and blue-representing experience or a blue-feeling and yellow-representing experience because that would contradict the representationalist dictum that experiences which have the same content must have the same phenomenal character.

The Inverted Earth thought experiment asks us to imagine a planet where everything has the complementary colour to that which it has on Earth. Thus, the sky is not blue but yellow, and post-boxes are not red but green. The language spoken on Inverted Earth is similar to English except for the vocabulary of colour words, which are exactly inverted compared to English. Thus, Inverted Earth inhabitants look up at their yellow sky and correctly call it, 'blue' and their green post-boxes are properly described as 'red'. If you were anaesthetised in your sleep, had colour inverting lenses inserted in your eyes, and were taken by Inverted Earth Scientists to Inverted Earth, then it is plausible to think that you would experience no difference. The inverting lenses in your eyes have the consequence that the visual colour experiences you have on Inverted Earth are typical of the type that you had on Earth. Thus, when you look at the yellow sky it appears blue to you and, speaking English, you call the sky 'blue'. This just happens to be the word that in the Inverted Earth language means yellow, so you are apparently in agreement with Inverted Earth inhabitants around you. In fact there will be no apparent disparity between your behaviour and the behaviour of the other people on Inverted Earth. Yet the difference between you and the Inverted Earth inhabitants is that the phenomenal character of your colour experiences is inverted, relative to Inverted Earth dwellers.⁶

Block thinks that the Inverted Earth hypothesis presents problems for externalist representationalist positions because he claims that, as you stay on Inverted Earth, the contents of your experiences will change but the phenomenal character will remain the same, thus showing that the two cannot be identical. Externalists believe that the content that a state has depends cru-

⁶ Some philosophers have worries about the coherence of inverted spectrum thought experiments, particularly those in which the inversion is undetectable. See for example, Dennett (1991) chapter 12, Flanagan (1992) pp. 71-72, Hardin (1988) p. 129, Peacocke (1992) chapter 8 and Shoemaker (1984) chapters 8 & 9. Despite criticisms some philosophers might have about this hypothesis, most representationalists, such as Tye (2000) and (1995), Dretske (1995) and Lycan (1996), do not question the coherence of the example. They are inclined to accept the example, as described thus far, as a metaphysical possibility and they try to account for why this is a correct description of the case by citing facts about representations. Thus, I will not be considering potential responses to this thought-experiment which claim that the description of the case *so far* is incoherent, confused or otherwise misguided.

cially on the relations the state bears to features in the subject's environment and/or the social context or history of that state. For example, Putnam, who is an externalist, has claimed that a person on Earth means H₂O when they use the word 'water' because the clear colourless liquid they are in contact with is H₂O.⁷ On Twin Earth (a place exactly like Earth, save for the fact that the clear colourless liquid on that planet is XYZ) a person means XYZ by 'water'. Block claims that, analogously, on arrival on Inverted Earth, when you think about the colour of the sky, you will think of blueness. Slowly, as you stay longer and longer, the cause of your thoughts about the colour of the sky changes to the colour yellow. You will also defer to your new linguistic community and by the word 'blue' you will mean yellow, as that is what those around you mean.⁸ In short, the belief you will express with the words, 'the sky is blue' changes from being the belief with the content that the sky is blue to the belief with the content that the sky is yellow. You will stop believing that the sky is blue and start believing that it is yellow. Just as the contents of your thoughts and beliefs will change, Block argues that the contents of your experiences will also change. The experiences that you once had when looking at the sky were blue-representing but they change and now your experiences of the sky are yellow-representing. According to Block, this is because the normal cause of such experiences is yellowness and it causes you to believe that something yellow is before you.

Block therefore argues that the content of your experiences changes as you stay on Inverted Earth on the grounds of familiar externalist considerations about what determines content. However, he also argues that as you notice no difference in your experiences as these changes take place it is plausible to believe that the phenomenal character of your experiences stay the same. Your experiences of the sky start out by being blue-feeling, and continue to be so, but these experiences change from being blue-representing to being yellow-representing. Thus, the typical experiences you have in response to the sky after spending some time on Inverted Earth have different representational contents, but the same phenomenal character, to your experiences of the sky when you first arrived.⁹ This conclusion, that experiences with the

⁷ Putnam (1975).

⁸ See Burge (1979) for the relevance of one's linguistic community to the meaning of one's utterances and the content of one's mental states, according to externalism.

⁹ One might think that doubt is cast on the idea that if a person does not notice a change in their visual experience then there has been no change in the phenomenal character of their visual experience by recent findings on the phenomenon of change blindness. For example, Simons, Franconeri and Reimer (2000) report that subjects frequently fail to notice changes from an original to a modified version of a visual scene when a disruption occurs simultaneously with the change between the scenes. Such disruptions include saccades, blinks, 'flickers', or 'mudsplashes'. People also frequently fail to notice changes that happen very gradually. For example, if the colour of an object slowly changes, or an object fades into or out of view, subjects frequently fail to notice the change. Another

same phenomenal character can have different representational contents threatens the strong representationalist thesis that phenomenal character is identical with representational content. By considering the thought-experiment a little more, however, we can see that a further conclusion can be deduced that threatens the weaker version of representationalism too, which holds that, necessarily, if two experiences have the same representational content then they have the same phenomenal character. The blue-feeling and yellow-representing experiences of the sky that you have after spending some time on Inverted Earth have a different phenomenal character to the (yellow-feeling) experiences that you used to have when looking at bananas when you were on Earth. Yet, both these experiences represent the same thing: yellow. Here we have two experiences alike in content but which differ in respect of their phenomenal character and so the weak version of representationalism is also challenged.

type of case of failure to notice changes in one's experience is called 'inattentional blindness' (Simons and Chabris (1999)). In these cases subjects are asked to pay attention to one event in a moving picture. A different surprising event takes place during the moving picture and many subjects fail to notice it. For example, subjects were asked to watch a film of two groups of basket ball players (one group wearing white and the other wearing black) who were passing a basket ball between their respective groups. The subjects were asked to count the number of passes that the white team made to one another. During this time a person dressed in a gorilla suit walked onto and off the court. Approximately fifty percent of subjects failed to notice this unusual occurrence. These change blindness examples do not, however, show that people never notice changes in their experience. Indeed, these experiments identify the special conditions in which people fail to notice changes. If these special conditions do not obtain then the default position is that if people do not notice a change then there is no change in the phenomenal character of their experience. Thus it can be seen that if the conditions in question need not apply to the person in the proposed inversion scenario then we have no reason to doubt that their failure to notice change reflects the fact that there has been no change in phenomenal character. Thus, while the change in the colour of the sky could take place when a person was blinking, it need not. Similarly, a person could be paying attention to the colour of the sky and might not have their attention focused elsewhere. Indeed, it can be seen that the only potentially worrying case for our purposes is the case where people failed to notice a gradual change in the colour of some objects. It might be suggested that this shows such gradual changes pertaining to colour would go unnoticed and hence a person's experiences might undergo a change in phenomenal character without that person noticing. Perhaps it could be argued that the changes in colour experiences on Inverted Earth would be gradual and so we have reason to think that a person might not notice the change in the phenomenal character of their experiences. There are two pertinent responses here. Firstly, the typical colours of *everything* will change for a person taken to Inverted Earth. As far as I know, no change blindness studies have been carried out in which the colours of all the objects in a scene change in the manner required by a complete inversion. It seems hard to imagine that such a change would go unnoticed. Secondly, even if such changes were to go unnoticed, all the relevant changes that I will rely on in my argument are ones that take place suddenly, not gradually. Thus, all the evidence suggests that subjects would and should notice such changes, were they taking place.

3 - The First Representationalist Reply: The content does change

As we have seen, Block claims, on familiar externalist grounds, that the perceptual experiences of a traveller to Inverted Earth would change in respect of their content. If a representationalist accepts this view then, to maintain their representationalism, they have to deny that the phenomenal character of the traveller's experiences stays the same. The problem with this move is that it is then difficult to account for our intuition that a traveller to Inverted Earth would not claim to notice any difference in their experience. Surely, if a traveller to Inverted Earth's experiences of the sky change and become yellow-representing and yellow-feeling then the traveller would be able to remember that their experiences of the sky used to be different—they used to be blue-representing and blue-feeling.

The only way a representationalist might reply here is if they were prepared to claim that a traveller's memory must in some way be malfunctioning, so that the traveller would not be able to notice that their experiences had changed. So is there any reason to think that such a traveller's memory must go awry?

Michael Tye, an externalist representationalist, has claimed that the reason that subjects do not notice the change in their experience is that the contents of their memory experiences are externally individuated.¹⁰ When travellers to Inverted Earth first arrive, their memories of the sky on Earth (both their propositional and experiential memories) have content pertaining to blue but, as time passes, the content of their memories changes from blue to yellow.¹¹ Their memories (mis)represent that the sky that they saw on Earth was yellow. The subjects think that their experiences of the sky have not changed because they misremember what their experiences used to be like.

There are many problems with this reply. One problem concerns whether memories should, in general, be externally individuated, however, I shall not directly question this aspect of Tye's account here.¹² Another problem arises from considering the nature of the change in both the content and the phenomenal character of the person's experiences and memories. I will first raise a version of this difficulty that is specific to Tye's account of representation and then raise a problem of the same type that is more general and applies to any view that is externalist about the memory of someone who travels to Inverted Earth.

¹⁰ Tye claims that a thorough-going externalist should think that the representational contents of all memories are in part determined by one's present environment. See Tye (2000) pp. 127-134 and Tye (1998).

¹¹ I assume here, following Tye, that there are both propositional memories that lack or have no necessary phenomenal character and experiential memories. Experiential memories have phenomenal character and which phenomenal character they have determines which experiential memory they are.

¹² Heal (1998) writes about this problem.

Imagine a person who travels regularly between Earth and Inverted Earth (a frequent flyer), who wears their inverting lenses when and only when they are on Inverted Earth. (We might suppose that travel, and insertion and removal of the lenses, takes place in an environment coloured a mid shade of grey that is unaffected by the inverting lenses.) Tye holds the following theory of representation (where S represents some state of an object x):

S represents that P =_{df} If optimal conditions obtain, S is tokened in x if and only if P and because P.¹³

If one holds this view, one of two alternatives is to hold that the frequent flyer's experiences of the sky are blue-representing and blue-feeling on Earth, because these experiences track (causally covary with) blueness in optimal conditions, and yellow-representing and yellow-feeling on Inverted Earth, for similar reasons. In order to preserve our intuition that the frequent flyer notices no change in their experience of the sky on each planet their memories will have to change content at some point during their travelling period. If we suppose that the travelling period is exceedingly short, and we suppose the person to be constantly thinking of and visualising the way the sky looked to them at their previous destination, then we would have to say that it is possible for there to be sudden changes in the phenomenal character of one's memory experiences that one does not, indeed cannot, notice. One lacks first-person knowledge of one's present experience.

This is a highly unpalatable view and a conclusion that Tye himself wants to avoid. While Tye allows that there can be slow changes to our experiences that happen over a long period of time that are inaccessible to us, he nonetheless wants to hold that 'within a single context, a single external setting, no unnoticeable changes in phenomenal character can occur.'¹⁴ But this is precisely the kind of change that is postulated here—a sudden change in the phenomenal character of a memory that is present to one's mind.¹⁵

One reply to this attack might be to hold the second of the two alternatives pertaining to the nature of the frequent flyer's experiences. One might hold that a frequent flyer from Earth to Inverted Earth does not have experiences with one content on Earth and another content on Inverted Earth. This could be argued on the grounds that the frequent flyer's experiences need to constantly track one feature in their environment to have a particular content and the frequent flyer's experiences do not track any one feature because we should take their environment to include both Earth and Inverted Earth. The problem with this objection is that, if true, then neither the frequent flyer's

¹³ Tye (2000) p. 136.

¹⁴ Tye (2000) p. 134.

¹⁵ Block (1998) suggests thinking about a quick traveller between worlds, but he does not consider their reflecting during this time on their memories.

experiences on Earth nor their experiences on Inverted Earth can have content pertaining to the colours. None of their experiences can represent blue or represent yellow for none track either of those colours in optimal conditions. If causal covariation does not occur do their experiences represent anything? Do their experiences have any phenomenal character or what is the nature of that phenomenal character? They cannot be having blue-feeling experiences or yellow-feeling experiences so what kind are they having?

This same problem arises if one holds that a subject's memory changes (irrespective of the particular externalist theory of representation that one holds) when reflecting on a one-time traveller from Earth to Inverted Earth. Either the nature of the traveller's experience and memory of the sky changes suddenly, in which case they should be able to notice the associated change in phenomenal character, or the change happens gradually. If the former, then our intuitions that a traveller would notice no difference between Earth and Inverted Earth are not explained. If the latter (and the change happens gradually) then there must be a period of time when the traveller's experiences represent neither blue nor yellow, or represent blue as much as yellow, or represent blue or yellow, or something similar. There is, however, no plausible candidate for the phenomenal character of experiences with such unusual content.

The problems with arguing that the content of the traveller's experiences change content and change phenomenal character, lead one to think that this strategy should be rejected. Indeed, the problems that this response face have persuaded Tye to adopt the other strategy that we will now examine. This response does not deny that a person who goes to Inverted Earth would keep having blue-feeling experiences in response to the sky. Rather, it plausibly suggests that the experiences of a person who goes to Inverted Earth would remain both representationally and phenomenally inverted with respect to the experience of their fellow Inverted Earth residents. Since this is the only response left to an externalist representationalist, problems for this view would spell disaster for externalist representationalism more generally. I turn to consider this view in the next section.

4 - The Second Representationalist Strategy: The content does not change

While Block claimed that the content of the experiences of the traveller to Inverted Earth would change their content, it is possible to resist this conclusion whilst remaining an externalist about experiential content. Such a view would apparently provide a neat solution to Inverted Earth. Our intuition is that the phenomenal character of the traveller's experiences of the sky would remain the same—they would remain blue-feeling. If the representationalist can claim that the content of their experiences of the sky also remain blue-

representing then they can account for our intuition that they are blue-feeling also. Phenomenal character and content do not come apart and there is no challenge to the representationalist thesis.

I will argue, however, that if one holds traditional externalism about the propositional attitudes this view also has the consequence that people can be radically mistaken about the nature of their occurrent experiences and, thus, this view is not a good solution to the problem of Inverted Earth. I will argue that one should either reject representationalism, or reject externalism about the content of propositional attitudes, or adopt an unusual variety of externalism about the propositional attitudes. Before doing that, however, I will show that there is at least one plausible externalist view of perceptual content that would predict that the experiences of a traveller to Inverted Earth would not change their content.

4.1 - Externalist Views of Perceptual Content that Predict No Change in Content

Externalist representationalist views come in two varieties: teleological and non-teleological. Teleological views hold that an experience represents that which it has a function to represent. Modern naturalist versions of this view hold that function is bestowed by natural selection. Fred Dretske, for example, claims that experiences represent that which they carry information about, provided that evolution has selected for those states on the grounds that carrying such information is conducive to survival.¹⁶ Such a teleologist would rightly claim that the biological function of experiential states remains constant despite travel from one planet to another. Therefore the blue-feeling experiences that you have when you look at the sky continue to represent blueness no matter how long you stay on Inverted Earth because experiences of that sort (the sort that are blue-feeling) always have the function of representing blue. Dretske accepts that beliefs, thoughts, and propositional attitudes in general, change their content after time on Inverted Earth, as normal externalist theory predicts, but he believes that this is not the case for experiences.¹⁷ This provides an apparently neat solution to Inverted Earth. No matter how long you remain on Inverted Earth, your experiences of the sky remain both blue-representing and blue-feeling. Representation and phenomenal character cannot be prised apart on this view.

¹⁶ Dretske (1995).

¹⁷ Dretske (1995), p. 15: “experiences have their representational content fixed by the biological functions of the sensory systems of which they are states... The quality of a sensory state—how things look, sound, and feel at the most basic phenomenal level—is thus determined phylogenetically... The way a belief represents the world, on the other hand, is ontogenetically determined. We can, through learning, change our calibration. We can change what we see something *as*—what we, upon seeing it, take it to be—even if we cannot, not in the same way, change what we see.”

There is, however, a well-known and particularly unattractive consequence of the teleological account. It appears to countenance the existence of philosophical zombies (creatures that are behaviourally and physically indistinguishable from ordinary humans, but which have no states with phenomenal character—they are not conscious creatures). Accidentally created molecular duplicates of evolved creatures will lack experiences with phenomenal character, even if their evolved counterparts have such experiences. This is because their states have no biological function. While Dretske endorses this conclusion, most philosophers would find this result a *reductio ad absurdum* of this position. In addition, many philosophers hold that such a position entails that, not only can you not tell if others are philosophical zombies, but you would not be able to tell if you yourself were a zombie. The states of philosophical zombies that are the counterparts to the states that we have with phenomenal character have the same causal role as the genuine states with phenomenal character of non-zombies (by definition). Such states will cause beliefs that experiences with phenomenal character are being had. Zombies will therefore believe that they have states with phenomenal character just as you do. According to Sidney Shoemaker, if philosophical zombies are possible then you cannot know, even in your own case, whether or not you are such a creature.¹⁸ A non-teleological view has to be sought.¹⁹

The problems with the response to Inverted Earth, considered in section three, that come from holding that the content of a traveller's experiences do change have led Tye to postulate a second response to the problem of Inverted Earth, which he endorses today and calls the 'counter-factual response'. This response, like the teleological response, holds that the content of the experiences of a traveller to Inverted Earth would not change in either representational content or in phenomenal character.

Recall that Tye's definition of representation was as follows (where S is some state of an object x):

S represents that P =_{df} If optimal conditions obtain, S is tokened in x if and only if P and because P.²⁰

Tye claims that one should take this definition to be a counter-factual definition, designating what a state represents in terms of what that state *would* track, if conditions were optimal.²¹ Further, he now suggests that it is plausible to hold that we should take it that the insertion of inverting lenses into

¹⁸ Shoemaker (1984), chapter 14.

¹⁹ Even if you are not persuaded by this second objection to teleological representationalism (as I am not), perhaps because you think that there can be a special knowledge by acquaintance of experience, the criticism of the third response (the counter-factual response) below applies, *mutatis mutandis*, to this view.

²⁰ Tye (2000) p. 136.

²¹ Tye (2000) p. 136.

a normal human's eyes makes it the case that optimal conditions do not obtain. The relevant conditions for determining what a state of a normal human represents should not include those in which a subject is wearing inverting lenses. Therefore, when a traveller goes to Inverted Earth, their experiences will continue to represent what they did on Earth. This is because, if they took out their lenses, experiences of the sort that they now have (with their lenses in), and have always had, when they look at the sky would track blue things. So experiences of the sky on Inverted Earth, according to Tye, remain blue-representing. As a traveller's experiences continue to represent the same things, so they continue to have the same phenomenal character. This explains why the subject notices no difference as they stay on Inverted Earth.

In addition, Tye claims that a traveller's beliefs would alter, as the familiar externalist reasoning that we have seen previously would suggest, so that after some suitable period of time on Inverted Earth if the traveller uttered the words 'the sky is blue' they would be expressing their belief that the sky was yellow.

Thus, we can see that there is a reasonably plausible externalist view of perceptual experiential content that predicts that the traveller's experiences would not change content.²² I will now raise one problem for this type of response. The problem (again) concerns whether a traveller who travels once from Earth to Inverted Earth, and then stays there, can have knowledge of their current experience.

4.2 - Problems for the Second Representationalist Reply

When a traveller first arrives on Inverted Earth they have blue-representing and blue-feeling experiences when looking at the sky. At this time, they will say and believe that the sky is blue. If we ask them what their experience is like when looking at the sky, they will say that their experience is such that things look blue to them and it seems reasonable to take this to be reflective of the knowledge they have of the nature of their experience, namely, that it is blue-feeling and blue-representing. It is reasonable for three reasons. Firstly, it would explain why the traveller is wrong about the colour of the sky: we suppose they are right about the nature of their experience which misrepresents the colour. Secondly, the typical way we express our knowledge of the nature of our experience is to say how things appear, seem, or look to us. (If the representationalists are right then this expresses our

²² I say that this view of content is *reasonably* plausible because there are still some worries that one might have about this type of theory of content that lie beyond the scope of this paper. For example, one might worry how a state can represent P and not Q if P and Q are always co-instantiated or whether distal, rather than proximal, stimuli can be represented. One might also worry whether the account can explain how misrepresentation is possible. Cummins (1989) provides a good overview of these problems.

knowledge of the content of our experiences and hence the phenomenal character of our experiences for, according to them, phenomenal character either supervenes on content or it is identical with it.) Thirdly, a plausible representationalist view of introspection is that we know what our experience is like by applying phenomenal concepts to it and thus we can say what the nature of our experience is like.²³ Phenomenal concepts are concepts such as ‘shade of blue’ that we can apply both when thinking about the nature of our experience and when thinking about the properties that objects in the world possess. Possession of a phenomenal concept requires that one know what it is like to have an experience of that to which the concept refers.²⁴

Now consider the traveller forty years after they have been on Inverted Earth. Recall that an externalist about belief will hold that a traveller’s beliefs will adjust so that they will come to believe that the sky is yellow. But consider the responses that the traveller will make to the same questions about their experience that we asked before. They will still utter the same words, ‘the sky is blue and looks blue’, but if we take the meaning of these words, and the contents of the beliefs that are expressed by these words, to be externally individuated in the traditional way by their present language community and their present environment then the traveller will mean and believe that the sky is yellow and that the sky looks yellow to them.²⁵ This means that they believe the sky is yellow, which is correct, but they also now seem to believe that their experience is yellow-feeling and yellow-representing (if we take it that they can tell us directly about the nature of their experience by saying how things appear to them). But they are wrong. By hypothesis, their experience is blue-feeling because, according to the view under consideration, it still represents blue. Thus, it appears that the traveller is mistaken about their current experience. According to this representationalist reply the traveller’s experience is blue-representing and blue-feeling, but the traveller seems to have the false belief that it is yellow-feeling and yellow-representing. The traveller seems to be radically in error about the nature of their current experience.

An externalist could respond to this point by holding that when one makes claims about the nature of one’s experience by saying things such as ‘my experience is such that things look to be blue’, one is not thereby *directly* expressing or referring to the content of one’s experience or the phenomenal character of one’s experience. Perhaps one is only saying something like, ‘my experience has the phenomenal character and the content that my other experiences, which are typically caused by blue things, have’. If this

²³ See Tye (2000).

²⁴ Tye (2000) p. 27.

²⁵ This is because those around them mean by those words that the sky is yellow and looks yellow and because the typical cause of their uttering those words is that the sky is yellow.

were so it would allow the traveller to have true beliefs about their experience after they have been there for some time. (It is true that their experience of the sky would then be representationally and phenomenally same type of experience as their other experiences that are now caused by yellow things. It is true that the sky looks to them the way yellow things typically look to them.)

4.3 - Problems for the Indirect Expression of Beliefs About Experience View

I believe that the response that we do not directly express the nature of our experience, in the manner suggested above, is unavailable to an externalist representationalist. In the first place, it is plausible to think that a person who moves to an environment where there is no longer any one typical cause of their experiences that share a phenomenal character could nonetheless have knowledge of, and tell us about, the nature of their experience. To illustrate this point imagine a person who grows up on Earth as we know it. We then transfer that person to a room where the colour of everything changes in quick succession through the various colours of the rainbow, but this is compensated for (so that things look not to be changing colour and look their typical colour) by a succession of various different lenses that are placed in front of their eyes. We should suppose that the person is alone in the room and that we maintain a radio link with the person in the colour changing room, thus ensuring that this person remains a part of our language community. If we asked the person what their experience was like when they were looking at a ripe tomato it is plausible to think that they would reply that 'it is such that things seem red to me'. It appears reasonable to think that the person is accurately telling us about the nature of their experience, and telling us that it is such that things seem red to them, because the lenses in front of the person's eyes are designed to keep the tomato looking red. However, if when the person said, 'my experience is such that things look red to me', they meant by this that their experience was of a type that was typically caused by red things, they would be radically mistaken if they had remained in the room for a long enough time. It would be false that red things typically cause that experience.²⁶

We ought to reject this suggestion about what people mean when they express knowledge about their experiences because it also leads to circum-

²⁶ Moreover, although we could make what the person in the colour changing room said true by taking them to mean that their experience of a tomato was of a type that in optimal conditions (conditions without lenses) would be typically caused by red things, this solution does not help the traveller to Inverted Earth to correctly report their experience. The analogous claim of the traveller who had been on Inverted Earth for some time would be that their experiences of the sky were of a type that would, in optimal conditions (conditions without lenses), be typically be caused by yellow things. But this claim is false.

stances in which a person could be radically mistaken about their experiences. So we have yet to find a plausible solution to Inverted Earth in which the traveller to Inverted Earth is not radically mistaken about the nature of their experiences.

However, the example of the colour changing room presupposes that after a long time in such a room, the person still meant red by the word 'red'. The example was told in such a way that the fact that the person remained part of our language community motivated the thought that by uttering 'red' the person meant red. This, however, might be questioned. One might suppose that the primary determinant of what we mean by our colour words is not our language community but is the property that is the typical cause of those experiences that we label as being of one particular colour, such as 'red' or 'blue'. For example, after a traveller has spent a long time on Inverted Earth, we have seen that an externalist would typically say that by 'blue' the traveller means yellow. An externalist's main reason for holding this might be because yellow is the property that is the typical cause of the people in this vicinity's experiences of the type that they would claim are such that 'things look blue' to them.²⁷ If we took such a view, then it would be plausible to think that, after enough time in the colour changing room, the person did not mean red when they uttered 'red' because red was no longer the typical cause of the type of experiences which, in this vicinity, lead the subjects of those experiences to claim 'things look red to me'.²⁸ If this were so, the reasons we gave for why the person was wrong about the nature of their colour experience no longer apply. But is this new view about the meaning of colour words plausible?

There are two further problems with this view. The first is a general problem for a view of this sort. The second is a problem particular to any representationalist that would like to maintain this view. I will elucidate each problem in turn.

A view of this sort holds that the word 'red' refers to the property that typically causes people in the vicinity to have experiences of a type that they would judge to be such that 'things look red' to them. But when we consider the person in the colour changing room, we can suppose that each of the colours of the rainbow equally causes that person's experiences which are such that they would judge that 'things look red'. And this is true for each of that person's experiences with regard to colour. The only candidate, if indeed there is a candidate at all, for the typical cause of each of these experiences must be the disjunctive property 'red or orange or yellow or green or blue or...' Thus, each of their colour words must refer to the same disjunctive property. But

²⁷ What is to count as the relevant vicinity will, of course, be an important matter.

²⁸ I am assuming, in order to contrast this case of the colour changing room with the previous one, that the relevant vicinity is within the colour changing room.

now, the person in the changing colour room who says at time t_1 'my experience is such that things look red to me' and at a later time t_2 says 'things are such that things look blue to me' is saying the same thing, namely, that things look to them to be 'red or orange or yellow or green or blue or...' But our intuition about the changing room case is that the person is having different experiences at t_1 and t_2 . The lenses are such that they are supposed to compensate for the changing colours. The person entering the changing colour room notices no difference compared with the ordinary world. They can have *different* experiences pertaining to the colours. They do not just have one type of colour experience such that things look 'red or orange or yellow or green or blue or...' Thus, the person is now, in effect, claiming that each of their experiences are the same in respect of colour. They thus lack knowledge, according to this picture, of the changing nature of their present experience. This is good reason to reject this view.

It is still open to someone to claim that, rather than there being a disjunctive cause of the person's experiences, there is no typical cause. They could thus claim that the person in the colour changing room simply becomes confused when entering the room, and does not really make any claim about their experiences and how things look to them, because of the lack of a typical cause. In other words, it might be argued that the changing colour room thought experiment shows only that the person becomes generally confused, is unable to express themselves, or is saying nothing, rather than making a false claim about their experience.

I find this view rather implausible because positing such confusion or lack of power of expression fails to explain the systematic patterns of response that the person in the room makes. There will be a strong correlation between the words the person utters about how things look and what it is reasonable to suppose that their experiences are like. For example, the person will typically say 'that looks red' only when we have reason to think that they are having experiences that are red-representing and red-feeling. Nonetheless, the lack of explanatory power which this view has does not constitute a decisive argument against it, and a representationalist might be willing to defend it. Therefore I turn now to the second problem with this response which representationalists face.

To recapitulate, the view under consideration maintains two theses. The first is that when a person comments on their experience by saying 'my experience is such that things look red to me' they are indirectly telling us about their experience. What they mean could be equally expressed by their saying, 'my experience has the phenomenal character and content that my other experiences, which are typically caused by red things, have'. The second thesis is that the word 'red' refers to that property that typically causes people in the vicinity to have experiences of a type that they would judge to be such that

‘things look red’ to them. It is an important fact about this view that there is a substantial a priori connection between something’s being a certain colour and its causing a certain type of visual experience. To explain, on this view, red is whichever property it is that is the typical cause of experiences of a certain type, namely, ones that subjects in the vicinity judge to be such that ‘things look red’. The property red is being defined in terms of a certain type of experience, which means that there is an a priori connection between something’s having the property red and a type of experience.²⁹ A view which holds that there is such a substantive a priori connection between being a certain colour and causing a certain type of visual experience is a subjective view.³⁰

If it were correct, the subjectivist conception of colour properties would undermine the representationalist theory. To see this we first have to note a complexity in the above account of colour properties. The experiences in terms of which the colours, such as red, are picked out are those of the type that subjects in the vicinity would judge to be ones where ‘things look red’ to them. But what type is this? Is this a type of experience that is individuated in virtue of the content these experiences share or is it a type that is individuated in virtue of the phenomenal character these experiences share? On the one hand, suppose that it is a type of experience that is picked out in virtue of content. In this case, the property red is being defined as the property that typically causes experiences that represent red. This type of definition of red is circular, and it is viciously circular, as Boghossian and Velleman have argued.³¹ They claim it is viciously circular because the definition of red involves reference to a visual experience with a certain content, whose content the definition tries to explicate. Moreover, a visual experience can have that content (red) only if the content satisfies the definition in question and hence only if the specification of the content is itself circular and hence uninformative. The definition of red not only fails to tell us what red is, but also prevents the visual experience telling us what colour an object has. Thus, if colour properties are being defined by the content of colour experiences in this way the view is problematically circular and ought to be rejected.

On the other hand, suppose that the type of experience in question is picked out in virtue of the phenomenal character that those experiences share. A representationalist cannot now explicate their representationalism in a non-viciously circular fashion. This is because a representationalist explains the

²⁹ I am deliberately not stating at this point whether, in picking out a type of experience in this way, as ones that subjects in the vicinity would judge to be ones such that things looked a certain way to them, we are picking out a type of experience in virtue of their phenomenal character or their representational content (or both). This issue will come to the fore in the text below.

³⁰ See Byrne and Hilbert (1997a) p. xxiii.

³¹ See Boghossian and Velleman (1989), pp. 86-90.

nature of experiences that have the phenomenal character associated with seeing a particular colour in terms of experiences that represent that colour. But if one gives an account of what a particular colour property is in terms of the type of phenomenal character that it typically causes, one ends up with a vicious circle. This is a well-recognised fact, for example, Tye says:

On the face of it, colours and other 'secondary qualities' (smells, tastes, and sounds, for example) pose a special difficulty for the theory I have been developing. If these qualities are subjective, or defined in part by their phenomenal character, then what it is like to undergo the experiences of such qualities cannot itself be understood in terms of the experiences representing them. That would create an immediate vicious circle.³²

To illustrate this point, consider the following, more general, statement of a subjectivist view: experiences of objects of one colour, say *r*, typically have a similar phenomenal character. Call experiences with this phenomenal character *Er*. The property *r* is the property of objects that disposes them to produce *Er* experiences (or is the categorical base of such a disposition). The problem arises because the representationalist holds that *Er* experiences are to be analysed in terms of representation of the property *r*, and a vicious circle is produced thus:

Er experiences are those which represent a disposition (or the categorical base of a disposition) to produce *Er* experiences.

In response to this conclusion, the representationalists reject any view of colour that holds it to be a subjective property.

An objectivist view of colour properties is one that does not specify colour properties in terms of experiences. An objectivist view would be that there are no substantive a priori links between colour properties and colour experiences or judgements.³³ This way of picking out colour properties relies on reference-fixing synthetic truths about colours, and these truths (such as, that red is the property that causes experiences of redness) are not held to express meaning equivalencies. For example, Armstrong claims one must cut "all logical links between colours and what happens in the perceivers of colours".³⁴ Similarly, Lycan claims:

my sort of property inheres in an object on its own, regardless of how it is picked out or identified by me or anyone else, regardless of its ever producing sensations in anyone (or being detected by any being at all), and surprisingly, regardless of its actually constituting a disposition to produce sensations in anything. For in principle, it can be specified or defined independently of its doing any of these things. It is as it is, whether or not anyone identifies it or

³² Tye (1995) p. 144. See also Dretske (1995) and Byrne and Hilbert (1997b).

³³ See Byrne and Hilbert (1997a) p. xxiii.

³⁴ Armstrong (1997), p. 45, fn. 13.

refers to it, whether or not it ever produces sensations of any sort, whether or not it constitutes any disposition, and even if none of these were true.³⁵

Colour words, such as 'red' and 'blue', are taken to designate rigidly those physical properties of objects that are identified with colour properties. Colour words refer to those physical properties, even in a possible world where those properties bear no relationship to human (or to any) perceivers. Colour properties are therefore taken to have only contingent, a posteriori links to our colour judgements and experiences. This view is required by the representationalist in order to provide a noncircular account of colour experience.

We can now see that a representationalist cannot maintain the word 'red' refers to the property that typically causes experiences that are such that the subject of those experiences would issue the judgement that 'things look red to them'. This is because holding that there is an a priori connection between colours and the nature of colour experiences leads to a vicious circularity in the explication of the representationalist claim. Therefore the representationalist cannot accept this account of what people mean when they say what their experience is like. We are left with the conclusion that the traveller to Inverted Earth is radically mistaken about the nature of their colour experience.

4.4 - Varieties of Externalism

Is there another reply that a representationalist could give in response to the worry that, on their account, the traveller to Inverted Earth becomes radically mistaken about their experience when they have been there for some time? Problems had arisen for this account because representationalists typically are externalist about the propositional attitudes in the standard way. Thus, Tye claims that the contents of subjects' beliefs about colours will alter after they have been on Inverted Earth for a long time. So when the traveller (who has been on Inverted Earth for a very long time) expresses their belief about their experience by uttering the words 'my experience is such that things look blue', they mean that their experience is such that things look yellow. But, according to the representationalist response under investigation, we are to suppose that the traveller to Inverted Earth's experiences are blue-representing and blue-feeling. The traveller is right about the colours of objects but wrong about the nature of their experience.

Recall that Tye says that you know what the phenomenal character of your experience is like when you apply phenomenal concepts to it, such as 'blue' or 'shade of blue'. Perhaps someone like Tye could argue that these *phenomenal* concepts that apply to experience (as opposed to ordinary colour concepts that apply to mind-independent objects) are not externally individu-

³⁵ Lycan (1996) pp. 73-74.

ated by your present language community and/or by the nature of your present environment. So when the traveller (who has been on Inverted Earth for a very long time) expresses their belief about their experience by uttering the words ‘my experience is such that things look blue’ perhaps they mean that their experience is such that things look blue, and not that their experience is such that things look yellow.

This response would explicitly contradict Tye’s conception of phenomenal concepts. Tye says:

So, how do I conceptualize my present experience when I introspect it? The obvious answer is that I conceptualize it as an experience of *this* shade of red. I bring to bear the phenomenal concepts *shade of red*, and *this*. These concepts are the same ones I bring to bear when I notice a shade of red alone without attending to the fact that I am experiencing it—as for example, when I am not introspecting but simply looking hard at the colour of a red₂₉ object.³⁶

If phenomenal concepts are such that we also apply them when we judge objects to be a particular colour, then Tye does think them to be externally individuated by our present language community and/or the nature of our present environment, for Tye clearly believes that the content of our beliefs about *colour* will change over time and come to be in line with those of the people on Inverted Earth. It does seem right to think that if we have phenomenal concepts of colour that these are the same as the concepts of colour that we apply to objects in the world around us. That is, that we do not have two sets of colour concepts—one phenomenal and one non-phenomenal. Of course, it may be that some people lack phenomenal concepts of colour and merely have non-phenomenal concepts of colour. This might be the case for people who have never seen colour but who are, nonetheless, acquainted with and fluent in the use of colour terms. This latter fact, however, need not detract from the former.

It can now be seen that the only option for a representationalist is to alter their position about colour concepts (and perhaps about some other concepts too). They have to hold that colour concepts are not externally individuated in the manner that Putnam and Burge outline. On Inverted Earth the traveller must keep believing that the sky looks blue and that it is blue if representationalism is to have any plausibility. The traveller is mistaken, and remains mistaken, on Inverted Earth about the colours of objects (as long as they wear the inverting lenses) but is not mistaken about their experience. They do not come to use words the way the Inverted Earth inhabitants do, nor do the typical causes of their beliefs about colours help to individuate the beliefs so caused.

One obvious way to maintain such a position would be to reject externalism about the propositional attitudes and become an internalist about the

³⁶ Tye (1995) p. 167. Red₂₉ is a particular shade of red.

individuation of propositional attitude content. Why one would be an externalist about perceptual content and not about propositional attitudes content though is unclear. In any case, to hold such a view would be to admit that representationalism is incompatible with externalism about content generally, which is the target of this paper.

However, it is possible to remain an externalist about propositional attitude content while, at the same time, holding that the content of the traveller's beliefs would not change, despite the length of time they spent on Inverted Earth. This is because an externalist could reject traditional externalism and appeal instead to one of the following independent externalist factors, which, as we will see, pull in different directions in fixing the content of one's beliefs: one's *initial* language community; what the typical causes of one's beliefs are when one first learns a language; the typical content of one's experience when one forms, or has, the relevant belief. I will look at each of these in turn.

An externalist could hold that the content of the traveller's beliefs about colour do not change on Inverted Earth because they are fixed by their initial language community. Thus, when the traveller to Inverted Earth looks at the sky and says 'the sky is blue and things look blue to me' they are not wrong about the nature of their experience, rather, they are wrong about the colour of the sky. This reply seems to save representationalism, for the content and phenomenal character of perceptual experience do not come apart, and the traveller is not radically mistaken about the nature of their experience.

The reply is no good, however, for the following reason. If a traveller moved to Inverted Earth (and at that time had the inverting lenses inserted into their eyes) after initial ideal conditions for perception had been determined on Earth, but before the person had learned to speak language and had been exposed to language, and if they learned Inverted Earth English on their arrival, what are we to make of their beliefs? In line with the present proposal, we should take it that the initial language community of the traveller, namely that on Inverted Earth, is the one we should look to in order to decide the content of their belief. Thus, we should take the traveller's words 'the sky is blue and looks blue' to express the belief that the sky is yellow and their experience is such that things look yellow. In consequence, the result is that the traveller is grossly mistaken about their current experience. This view should be rejected.

Similarly, if we take the second option outlined above, that what the typical causes of one's beliefs are when one first learns a language is the deciding factor in determining the content of belief, the same difficulty arises. Of course, if one learns English on Earth before one goes to Inverted Earth then at that point the typical cause of your believing that things are blue will be blue. However, if you learned your first language on Inverted Earth then the

typical cause of your believing that things are blue, at the crucial time period, will be yellow things. Thus, as in the previous case, the result is that the traveller is radically mistaken about the nature of their current experience.

This leaves the final option, namely, that the crucial factor in deciding the content of one's beliefs is the typical content of one's experience when one forms or has the relevant beliefs.³⁷ The idea is, for example, that if you form beliefs which you would express by saying, 'the sky is blue today', and the typical content of your visual experiences that cause you to form these beliefs represents that the sky is blue, then the content of your beliefs is that the sky is blue today. If, however, the typical content of your experiences represented that the sky was yellow then the content of your beliefs would be that the sky was yellow.³⁸

Because we are assuming that a move to Inverted Earth does not change the content of a traveller's experience, then, when they formed beliefs about the colour of the sky on Earth by looking at the sky, and when they form beliefs about the colour of the sky on Inverted Earth by looking at the Inverted Earth sky, their experiences will have content pertaining to blueness. Thus, they will come to believe that the sky is blue and that things look blue to them. This reply is a good one for the representationalist to take as it implies that the traveller is right about the nature of their experience. They are simply wrong about the colour of the sky on Inverted Earth.

What are we to make of this novel type of propositional attitude content? The type of content that it ascribes to propositional attitudes is individuated externally if and only if one is externalist about perceptual content. For example, if one takes it that the content of one's perceptual experience is fixed by what one's experiences would track in optimal conditions then the content of your experiences is externally individuated by what your experiences track in optimal conditions. That being the case, the content of your propositional attitudes is determined by that externally individuated content, and thereby would itself depend on features external to yourself. However, if one was an internalist about the content of perceptual experiences then the content of one's propositional attitudes would be determined solely by these internalist factors.

³⁷ This view of propositional attitude content would only apply to the contents of perceptual beliefs that were formed on the basis of one's experience, unless it could be shown that the content of other beliefs was in some way derived from, or dependent on, the content of these perceptual beliefs.

³⁸ Obviously, sometimes when we form the belief that the sky is blue today we may do so because the sky looks another colour but we know that abnormal conditions obtain. For example, we may know that we are looking through sunglasses. Therefore strictly speaking the condition should read: the crucial factor in deciding the content of one's beliefs is the typical content of one's experience when one forms or has the relevant beliefs, only in those situations where one takes one's experience at face value.

Nonetheless, even the externalist version of this view of propositional attitude content is far from the original conception of externalism that was advocated by Putnam and Burge.³⁹ To accept it, not only does one have to reject Burge's externalist considerations regarding how one's *present* language community use words, one has to reject these considerations *wholesale*, for neither do they apply to one's *initial* language community. One may also have to reject externalist considerations concerning what the typical causes of one's beliefs are at the present time, and in one's recent history, and at time one acquires language. This is because, as we saw previously, these would, if taken as the sole criterion for individuating the content of beliefs, suggest that the traveller on Inverted Earth has correct beliefs about the colours of objects in their environment but false beliefs about their experience. But, moreover, according to the novel externalism the content of one's propositional attitudes depends on the content of one's perceptual content and this, in turn, may not depend on any of the aforementioned factors. In short, unless one is prepared to reject, in a potentially radical way, the traditional externalist conception of the content of propositional attitudes, this option should also be rejected.⁴⁰

Further discussion of the correct way to ascribe content to the propositional attitudes if one wishes to be an externalist lies beyond the scope of this paper. If we note that many prominent representationalists today, such as Tye and Dretske, appear keen to accept the traditional externalist view (they accept Putnamian and Burgean reasons for being externalist with regard to propositional attitude content, and they are externalist about the nature of perceptual content) then their response to Inverted Earth, which advocates that the experiences of the traveller to Inverted Earth do not change their content, commits them to a holding that a person who had been on Inverted Earth for a long time would have radically false beliefs about the nature of their current experience. Any view that entails this should be rejected.

5 - Conclusion

There is only one externalist representationalist view of phenomenal character that can provide a satisfactory answer to the problems raised by the Inverted Earth thought experiment. However, this externalist view requires one to think that the externalist nature of propositional attitude content is somewhat limited and is derived solely from perceptual experiential content.⁴¹ Any representationalist that is externalist about the nature of perceptual content and holds an externalist view of propositional attitude content, which takes the

³⁹ Putnam (1975) and Burge (1979).

⁴⁰ We would have to reject it for all terms and beliefs that correspond to that which might feature in the content of experience.

⁴¹ Modulo the considerations in footnote 37.

claims of Putnam or Burge on board, has the unwelcome consequence that people can be radically mistaken about the nature of their current experience.

We saw in section 3 that when a traveller goes to Inverted Earth and has the colour inverting lenses put in their eyes either the content of their colour visual states changes or it stays the same. If it changes then it either changes quickly or it changes slowly. If it changes quickly then the traveller ought to notice a difference in their experience, so one can maintain this view only by denying that people lack introspective knowledge about changes in the nature of their current experience. If the change occurs slowly then there is the problem of what the content and phenomenal character of the person's experiences are during the period of change. It cannot be content and phenomenal character pertaining to any of the colours, so what it might be is rather problematic.

If the content of the traveller's experiences does not change and if one is an externalist about propositional attitudes, then, *prima facie*, one is forced to say that people can become radically mistaken about the nature of their present colour visual experiences. The traveller would claim that their experience is such that things look yellow to them when in fact they are having a blue-feeling and blue-representing experience. This is the case on whatever externalist grounds one holds that the content of the traveller's experience does not change. Thus, we saw in section 4.1 that both Tye's counter-factual theory of representation and the teleological theory of representation, such as that espoused by Dretske, appeared to have the consequence that the content of the traveller's experiences do not change.

I showed that one might try and reject this conclusion by holding that what people mean when they say 'my experience is such that things look red to me' is that their experience is caused by those things that typically cause in them experiences such that they would judge that 'things look red to me'. This view was rejected, however, on the grounds that either there need be no typical cause of experiences that people would judge to be of one type or, that if one questioned this view on the grounds that people in such a situation might be expressing nothing when they spoke, it could nonetheless be shown that any plausible version of this view implied a subjective view of colours. Subjective views of colour are either problematically circular or are incompatible with representationalism and, thus, this response cannot be maintained by the representationalist. These were the conclusions of sections 4.2 and 4.3.

A final response to the Inverted Earth thought experiment was examined in section 4.4 which stemmed from views that claimed that, not only did the perceptual content of the traveller's experiences not change, the content of their beliefs did not change either. It was shown that to hold this view either one has to give up externalism or one has to adopt a limited type of externalism with respect to the propositional attitudes. On this latter view, the con-

content of propositional attitudes is determined by the content of one's perceptual experiences. Only if one is externalist about the content of experience will one hold that the content of the propositional attitudes is externally individuated. One cannot embrace the typical externalist conclusions that one's recent environment and recent (or even initial) linguistic community play a direct part in the individuation of the content of one's propositional attitudes. Unless one were to adopt this novel and limited form of externalism (or reject externalism wholesale about the propositional attitudes) then one should reject representationalism on the grounds that it supposes that we can be grossly mistaken about the nature of our current experience.

The novel form of externalism outlined above may be a good form of externalism for representationalists to adopt. Many representationalists hold that beliefs are formed on the basis of experiences, which are conceived of as the states that directly impact upon the cognitive system. The view that beliefs therefore inherit their externalist nature directly and only from those experiences seems rather intuitive and plausible if one accepts this picture. To this extent, it is surprising that this form of novel externalism has not been outlined and investigated before. Yet, this is rather an odd position to hold in light of the way that externalism was introduced in the history of philosophy. Externalism was introduced by Putnam's and Burge's considerations which were held to apply directly to the propositional attitudes. Only when these externalist considerations were generally accepted were they then extended to cover the content of perceptual experiences. It would be somewhat ironic if someone held that externalist considerations applied directly only to perceptual experiences and that propositional attitudes were merely derivatively externalist. In light of this, it will be interesting to see whether representationalists are willing to adopt novel externalism or whether they will give up representationalism.

To conclude, finding a good naturalist theory of phenomenal character is something worth aspiring to, but finding a plausible theory is very tricky. Representationalism can seem like a promising theory, but when one looks at specific representationalist proposals one often finds unwelcome consequences in the detail. Externalists should look elsewhere for a theory of phenomenal character or reconsider their commitment to externalism.⁴²

⁴² I would like to thank José Luis Bermúdez, Stephen Butterfill, Alan Millar and Agustín Rayo for their helpful comments and discussion of the ideas in paper.

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