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Representational Theories of Phenomenal Character

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Abstract

This thesis is an examination and critique of naturalistic representational theories of phenomenal character. Phenomenal character refers to the distinctive quality that perceptual and sensational experiences seem to have; it is identified with 'what it is like' to undergo experiences. The central claims of representationalism are that phenomenal character is identical with the content of experience and that all representational states, bearing appropriate relations to the cognitive system, are conscious experiences. These claims are taken to explain both how conscious experiential states arise and their nature.

After examining the desiderata for naturalistic explanations, I argue that theories which ascribe nonconceptual content to experiences are the most plausible versions of representationalism. Further, causal covariation and teleological theories yield distinctive and interesting representationalist positions, hence, they become the focus of this study.

To assess representationalism, I investigate whether all differences in phenomenal character can be correlated with differences in content. I claim that a useful distinction can be drawn between implicit and explicit content, which allows one to best describe the phenomena of perfect and relative pitch. I then argue that ambiguous figures show that two experiences can have the same content but different phenomenal character. I explicate the Inverted Earth hypothesis and claim that to identify content and phenomenal character, representationalists either have to condone the possibility of philosophical zombies, or hold that people lack authoritative first-person knowledge of their current experiences. Both these positions are unpalatable.

Finally, I argue that representationalists cannot ascribe contents to experiences of novel colours to account for their phenomenal character. I also question, in light of

dissociation phenomena, whether there is one distinctive relationship that all experiences bear to the cognitive system. I conclude that phenomenal character cannot be identical with the type of content under investigation, and that naturalistic representationalist theories cannot fully explain conscious experience.

Chapter 1 - Realism and Naturalism in Philosophy of Mind

1 - Introduction

A dominant concern of modern analytic philosophy of mind is the ontological and epistemological status of the mental states, properties and events that we purport to refer to in our common discourse describing ourselves, other humans and many animals. Mentalistic vocabulary and explanations pervade our language. We describe human beings and many kinds of animals as having minds. We claim that ourselves and others are the subjects of sensations, perceptions, thoughts, desires and emotions. We often explain and predict, with considerable success, the interactions that occur between a creature and its environment in terms of what the creature perceived, felt, believed and desired. Furthermore, our mental lives are considered to be important and even essential to who and what we are. In light of this, many philosophers have sought to give a realist theory of the mental states and events that we speak of every day and thus to give a place to the referents of folk psychology in their ontology.

At the same time, many philosophers are concerned with whether the professed referents of mentalistic concepts are amenable or recalcitrant to a naturalistic analysis. The central claims of naturalism are that one's ontology, epistemology and explanations should be scientifically respectable and that all events and processes should have a place within the causal domain of the space-time world. If one subscribes to naturalism and one also holds that our discourse about the mental should be realistically construed, then it is incumbent on one to show that mental states, events and properties can be naturalised. Due to the perceived plausibility and attractiveness of both naturalism and realism about the mind, much philosophical work in the last half century has been dedicated to showing that this substantial task is possible. It is also a project that some neurologists, cognitive scientists, psychologists, physicists and biologists are undertaking.

In this thesis I will appraise and critically examine representational theories of the phenomenal character of perceptual experiences and sensations. Representational accounts are, at present, some of the most influential theories of experiences and sensations, and are set firmly within the naturalist and realist traditions. Experiences and sensations have been thought by many to be particularly recalcitrant to naturalistic analysis. This is because intuitively there is a special phenomenology associated with experiences and sensations. 'Phenomenal character' refers to the *prima facie* peculiarly subjective nature of experiences and sensations. This aspect is most commonly explicated by Nagel's phrase, "what it is like", to be the subject of experiences and sensations.¹

I take naturalistic representational theories of perceptual experiences and sensations to be ones that share the following overall structure. Firstly, it is argued that experiences and sensations are states that have representational content. Secondly, it is held that a naturalistic theory can be given of representational content. Thirdly, it is argued that phenomenal character is identical with the content of experience. Lastly, a case is made for the conclusion that any representational state that bears some specified relationship to the cognitive system will be a state that has phenomenal character, and thus will be a conscious experience or sensation, of a type determined by what that state represents. It is held that this account of experiences and sensations and their phenomenal character provides a fully realist and naturalist explanation of the existence and nature of these states.

I will focus on the representational theories of Michael Tye and Fred Dretske. One reason for doing so is that at present their accounts are the two most detailed and comprehensive representationalist theories. Another reason is that their theories have, what I will argue to be, certain attractive features which other representationalist theories lack. One such feature is the claim that the content of experiences, which accounts for phenomenal character, is nonconceptual content. Another feature is that

¹See Nagel (1974). A more precise specification of phenomenal character will be given later.

they give a description of the theory of representation that they believe accounts for the content and the phenomenal character of experience. This allows one to examine and assess the naturalistic claims of these theories at a level of detail which is precluded otherwise. Finally, the kinds of relationship that Tye and Dretske propose that experiences bear to the cognitive system differs from higher-order theories of experience. Some higher-order theories of experience are representationalist theories and some are not. I will argue that representational higher-order theories are less plausible than the theories of Tye and Dretske.

The first aim of this chapter is to examine the precise nature of realism and naturalism and the motivations for these positions. The second aim is to provide a brief account of theories of mind which have been prominent in this century and to assess their naturalistic credentials. This will not only provide a background against which to understand the problem of accounting for the mind, but will also provide further motivation to examine representational theories. An additional aim is to begin a preliminary examination of the nature and taxonomy of mental states, in particular of experiences and sensations.

Chapters two and three contain the main exposition of representationalist theories. I will examine in detail the nature of perceptual and sensational experiences and phenomenal character. I will outline different representationalist theories and argue that Tye and Dretske's theories are the most plausible. In addition, I will identify the fundamental claims which are essential to the representationalist position. Detailed investigation of these key claims will be the work of the remaining chapters that form this critique of representationalism.

2 - The First Stages of Describing the Mind

When thinking about the nature of the mind, it is easiest to begin by considering the typical human adult mind. We appear to know of minds both from our interactions with others and from our own case. Theorising about the mind usually starts with a

classification of different kinds of mental phenomena. We have our senses - sight, hearing, smell, taste, touch and an awareness of the position of our bodies (kinaesthesia). Associated with each of these senses are different types of mental states. Thus, we can classify visual experiences as being the kind of mental states we typically are in when we have our eyes open in the light and see the world, together with similar sorts of mental states such as visual illusions, hallucinations and the perception of after-images. We can do likewise for auditory experiences, olfactory experiences, etc. The experiences associated with each of the senses form the larger class of perceptual mental states.

Another general type of mental state is the propositional attitude. These include thoughts, beliefs, desires, hopes and wishes. This type of state encompasses both the inner occurrent monologue that is often present when we are awake and also non-occurrent states. We often ascribe beliefs and desires to people when they do not consciously have them in mind. For example, most people always believe that they have a mother, even though they are not thinking just that all the time, but would assent to it if asked. At other times we attribute propositional attitudes to creatures to make best sense of, or rationalise, their behaviour, without the need for their verbal confirmation that they have those beliefs and desires. This often is the case, for example, when considering the behaviour of animals and young children. In addition, Freud and other psychoanalysts have postulated that there is an unconscious realm of the mental where people guard beliefs and desires that they have repressed. These propositional attitudes are said to be unconscious and ones that people would not assent to having but which may be evinced by irrational behaviour and psychoanalytic techniques. There is debate as to whether there really are Freudian unconscious beliefs, but one that will not be of concern here.

A third type of mental state are sensations, such as feelings of pain, tickles, tiredness, nausea, hunger and thirst, heat and cold. The delineation of the sensations is a particularly controversial area. It is not clear whether all sensations are generated by

a specific sensory modality. For example, the sensations of tiredness and nausea and those relating to other internal bodily matters often arise from an awareness of a state of our body, but whether we should postulate a specific sense through which such sensations arise is unclear. On the other hand, many of the sensory modalities such as smell and touch are also thought to generate sensations. It is a contested issue, however, whether all do so, especially sight and hearing. Some philosophers hold that there are sensations associated with all aspects of sight and hearing, some that there are sensations associated with particular aspects of these modalities such as experiences of colour, while others question whether this is the right classification of those manifestations of experience at all.

Propositional attitudes, perceptions and sensations are the three principal types of mental state. Often other general types of mental states are thought to be comprised from a mixture of the three fundamental types. Memory is a good example of this. Sometimes a memory can appear simply to be a belief held about the past or learned in the past. This is especially true of propositional memory such as that the Battle of Bannockburn was fought in 1314. Other episodic memories, where we remember past events and experiences in our lives, seem to involve something quite like perceptual experiences and sensations. For example, if you remember your Granny's funeral, you may remember, and to some extent feel again, the sadness and you may recall just how the flowers looked and smelled.

Not all mental occurrences can simply be considered straightforwardly as a combination of the three types so far discussed. Remembering how the flowers looked is not just like seeing the flowers. Imagination also involves perceptual-like experiences, but not so as one would often confuse the two. The emotions of various kinds seem often to involve characteristic feelings along with an object or state of affairs that one takes to be the object of the emotion. Thus, you can long for the love of your life, be annoyed that the milk was spilt and be very afraid of things that go bump in the night. Another general type of mental phenomena that appear quite

distinct from the above are those concerned with agency, such as intending, willing choosing, deciding and acting.

The focus of this work is perception and sensation and thus the discussion will centre on these kinds of mental phenomena. Propositional attitudes will also be considered, however, because it is often through comparing and contrasting these with perception and sensation that theories of the latter are formed. There are many kinds of question that now seem to face us. How are we to classify and characterise perceptual experiences and sensation? How do we come to know the nature of perception and sensation? What is the nature of sensation and perception? Before addressing these questions, however, it is prudent to take a step backwards and ask what it is that we are doing when we philosophise in general, and in particular with regard to theorising about the mind. Moreover, what sort of basic assumptions should govern one's enquiry?

3 - Realism, Naturalism and Methodology

3.1 - Realism

One model of the world, and of our thought and language is informed by a basic kind of realism that is committed to both an ontological and an epistemological claim.² The ontological claim is that there exists a world that is independent from the concepts, thoughts and beliefs that people do or may have. A slightly stronger claim would be that the world has a structure, which thought and belief try to map or represent with more or less success. Thus, with our thought and language we try to refer to objects, properties and events that exist in the world. Some of these do not exist, such as round squares, the fountain of youth and Alice chasing the rabbit in Wonderland. Those that do exist have an existence in the world that is independent from the existence of creatures with minds. The epistemological claim attests to the (at least partial) success of the representation or mapping. We can and do have

²See Haldane and Wright (1993) and Haldane (1993).

knowledge of the world and our discourse about the world can be, and often is, true. Again, a slightly stronger version of this view would hold that not only can we know and speak truly of the world, but either know that we do, or can be justified in supposing that we do.

This basic realism can be held both as a general view of the relation between the world and our thought, or it can be held to apply more locally within a specific domain. Thus, a realist about the mind would take our beliefs and discourse about the mind to be true and to reflect the nature of the mind. But a realist about the mind may reject this view of our moral beliefs and discourse. (It should be noted that while the claim that minds and mental states have a mind-independent existence can initially sound a little paradoxical, it simply means that the nature and existence of mental states is independent of anyone's, thinking, believing or knowing about them.)

One should distinguish basic realism from semantic realism, which concerns theories of truth and meaning. Dummett describes the essential commitments of the semantic realist and anti-realist thus:

the realist holds that the meanings of statements of the disputed class are not directly tied to the kind of evidence for them that we have, but consist in the manner of their determination as true or false by states of affairs whose existence is not dependent on our possession of evidence for them. The anti-realist insists on the contrary, that the meanings of these statements are tied directly to what we count as evidence for them, in such a way that a statement of the disputed claim, if true at all, can be true only in virtue of something of which we could know and which we should count as evidence for its truth.³

While there are certainly links between basic realism and semantic realism, their nature is far from perspicuous, and recent literature is replete with discussion of this point.⁴ A semantic realist is committed to the idea that the truth of statements might

³Dummett (1978) p. 146

⁴See the collection of papers by Haldane and Wright (1993) and sources therein.

be settled by something independent from ourselves, and an independently existing reality would be the obvious choice. But whether a semantic anti-realist is committed to denying basic realism is a contested issue, and some have argued that semantic anti-realism and basic realism are compatible.⁵ In light of this, and given that it is basic realism that concerns us here, we may remain agnostic about the status of evidence-transcendent truth conditions.

Within the basic realist framework, it is the case that whether our beliefs are true, and our discourse successful, in referring to objects, properties and events depends on various factors. One of these is how one takes the world to be. Taking an extreme view as an example, someone might be skeptical of the existence of the world (as we believe it to be) and believe themselves to be a brain in a vat. Consequently, they might take it that very few of our words are successful in referring to objects that exist. Such a skeptic affirms the ontological thesis of basic realism, but affirms the epistemological claim only minimally. If a skeptic denied the epistemological thesis altogether, then the view would cease to be a species of basic realism. The extent to which one allows the epistemological claim to be denied, while still holding that the view is realist, is merely a matter of terminological stipulation. Within a specific discourse, however, such as that regarding mental phenomena, I will take it that a realist should be characterised as holding that at least the majority of our beliefs correspond to a mind-independent reality, in such a way that the structure of our discourse and beliefs reflects the structure of that reality.

Another factor that may determine whether one holds the referring to be successful is the theory of meaning and referring that one subscribes to. An important dimension along which these theories differ is the extent to which they subscribe to internalism or externalism.⁶ (Theories can be internalist or externalist concerning both mental states and meaning itself.) Let us hold that the meaning of a word

⁵Haldane and Wright (1993)

⁶Of course, one could be internalist or externalist without holding the realist conception that I am considering, but I will restrict my attention to broadly realist conceptions here.

determines what it purports to refer to. An internalist view would hold that one's mental states and the meaning of one's words do not depend for the very possibility of their existence on how things are outside one's mind. Furthermore, what one's words mean (and hence what they refer to) is determined solely by one's mental states. One could specify the meaning of a word by giving necessary and sufficient conditions for something's being that thing. If these were not forthcoming, as often they are not, then one could at least provide either necessary or sufficient conditions, or perhaps a list of features, most of which the object in question would have to satisfy, in order to be that thing. This latter view is a form of cluster theory.

One externalist view would hold that while mental states are to be individuated internally, the meaning of words are to be individuated externally. Thus, one's mental states do not determine the meanings of words. A more radical externalism would hold that, in addition, both mental states and beliefs are externally individuated.⁷ Externalist views can also be more or less strong depending on the scope of the view, that is, which terms in the language it is meant to apply to. The terms that are most readily seen to be externally individuated are demonstratives and indexicals, such as 'I', 'now', 'here', 'this' and 'that'. The thought is that, if you and I both believe and utter the sentence 'I am here, now', at different times and locations, then we both believe and mean different things. You believe things about a different person, place and time than I. An externalist would hold that it is possible to conceive of some cases where the only thing that differentiates these beliefs and utterances is the environment. Thus, in the case of belief, two different beliefs could be had by doppelgangers (molecular duplicates) in numerically different but molecularly identical environments.

A more widespread externalism would extend to other terms, in particular, names and kind terms in the language. Putnam, for example, holds that doppelgangers in identical environments, apart from the molecular structure of water, would mean different things by the word 'water'. This is based on his assumption that the word

⁷See Putnam (1975) and Burge (1979).

'water' names a particular kind of stuff that we have contact with. The nature of that stuff is a contingent fact that is determined by the world. We may not know the nature of that stuff, but it can nonetheless contribute to what we mean by the word 'water'. Burge also maintains that facts about the way people in our language community use words can determine what we believe and mean. Imagine two doppelgangers in identical environments, apart from the fact that the experts in one community use the word 'arthritis' to refer to a rheumatoid ailment in the joints, whereas in the other the word is used to refer to any kind of rheumatoid ailment. If the doppelgangers say and believe that they have arthritis in their thigh, then one will believe and say something true and the other something false. According to Burge, this shows that the meaning of the words and the beliefs held by the doppelgangers are different. (Sometimes 'externalism' is used to describe any theory that gives a role to something other than the individual in this way. At other times, 'anti-individualism' is reserved for a theory that gives a role to the behaviour of others, and 'externalism' is reserved for theories that give a role to the environment, excepting others' behaviour.)

Finally, externalisms can vary on the kind of contact with an object in the world that is required in order to refer to or believe something about it. A weak externalism would require only that some causal relation would have to exist between the subject and the item in question. Other varieties would insist that some direct causal contact must have occurred between the subject and the object, while other extreme varieties would insist that causal contact be occurring at the time of reference or belief. This latter view is usually only held about singular beliefs. For example, you might think you glimpsed a cow and come to believe that, 'that cow was an Ayrshire cow'. If you really only glimpsed a rock, then some externalists would claim that you have no such belief as 'that cow was an Ayrshire cow' if there is nothing in your environment that corresponds to the expression, 'that cow', despite your protestations otherwise.⁸

⁸An advocate of this view is McDowell (1986).

As outlined at the beginning of this section, what these often seemingly diverse views can have in common is the idea that when one believes or says something true, there are certain self-standing states of affairs in the world that correspond to the objects, properties and events referred to by the beliefs and assertions. One can therefore inquire about the nature of these states of affairs and about one's knowledge of them. This conception is a central part of basic realism (which, from now on, I will simply call realism).

3.2 - Non-Realist Alternatives

Two main types of theory are opposed to realism. These are idealism and eliminativism. I will briefly outline these positions, in order to gain further insight on the import of realism. I will not, however, assess these positions or argue that realism is a preferable theory.

Idealism is the metaphysical view of the whole world which straightforwardly denies the existence of a mind-independent reality. Nicholas Rescher outlines this alternative conception thus:

The doctrine centres around the conception that reality as such reflects the workings of mind. And it construes this as meaning that the inquiring mind itself makes a formative contribution not merely to our understanding of the nature of the real but even to the resulting character we attribute to it.⁹

Idealism holds that the nature of what purports to be a mind-independent reality is in fact intimately dependent on the nature of our minds.

The second type of theory - various forms of eliminativism - assumes a broadly realist conception of the world but a non-realist conception of a particular domain. The eliminativist about the mental endorses the realist ontological claim that there is a mind independent world that has a structure that we try to represent. Despairing of

⁹Rescher (1995) p. 227

finding anything in the world that corresponds to our conception of the mental, it is held that, strictly speaking, our claims about the mental are false and our ordinary discourse about the mental should be replaced.¹⁰ Thus, the epistemological realist claim - that our discourse is successful and true regarding the mental - is rejected.

Another non-realist view can arise from holding that mental terms do not correspond to anything in the world that is mind and discourse independent. Instead of holding, as the eliminativist does, that our ordinary discourse should be replaced, one can hold that our talk of the mental can nonetheless be maintained. Horgan, for example, claims that our ordinary discourse is both indispensable and useful in prediction of our everyday lives, and therefore states truths. Horgan offers a deflationary view of truth, namely that truth corresponds to correct assertability which, in turn, depends on context sensitive norms. This view is known as preservative irrealism.¹¹

Eliminativist theories result mainly from the conviction that no true naturalistic description of the world will be found that corresponds to our attribution of mental states to living creatures. An eliminativist therefore has to take seriously any realist proposal that claims to have found such a naturalistic description. Therefore to investigate representationalism, without rejecting eliminativism in advance, is not an imprudent methodology. I turn now to consider the nature of naturalism.

3.3 - Naturalism

Representationalists about experiences and sensations not only provide a realist theory of sensations and experiences, they also claim to provide a naturalist theory. Indeed, adherence to naturalism is seen as both a major motivation for providing a representationalist account, and an attraction of the theory. But what exactly is naturalism?

¹⁰Churchland (1981) exemplifies this approach.

¹¹See Horgan (1994).

When one turns to the literature specifically on the topic of naturalism, the situation does not become immediately clear. Consider the following quotations:

What is philosophical naturalism? The term is a familiar one nowadays, but there is little consensus on its meaning.¹²

For all the talk about naturalism in philosophy today there is a remarkable lack of consensus concerning precisely what it is. If you ask n philosophers what naturalism is, you receive *at least* n different answers.¹³

There have been any number of different ways of understanding the term 'natural'. So different philosophers have had very different conceptions of what it is to be naturalist about a given domain, for example, the mental.¹⁴

One might expect definitional problems about naturalism to have received special attention in the literature, but in fact we are largely on our own here. For while professed naturalists abound, they tend hardly to explain themselves. Naturalism is widely taken to be accepted and understood from the start. This, however, is an illusion.¹⁵

A survey of the literature reveals three broad philosophical theses - epistemological, metaphysical and methodological, often intertwined - that form the basis of naturalism.¹⁶ Some naturalists focus on one particular thesis, and it is perhaps possible to hold one or two of these theses, while rejecting a third, but mostly some commitment to all three underlie what is regarded as naturalism. I will begin by explicating the epistemological thesis.

¹²Papineau (1993) p. 1

¹³King (1994) p. 53

¹⁴Tye (1994b) p. 129

¹⁵Wagner (1993) p. 212

¹⁶Dewey, Hook and Nagel (1945), Wagner (1993), Wagner and Warner (1993) and Kornblith (1994) identify two or more different naturalistic thesis. Other naturalists focus on only one aspect of naturalism, but the three different types are well represented in the literature (see below).

3.3.1 - Epistemological Naturalism

The epistemic thesis characteristic of accounts of naturalism addresses the question of what is the best way to achieve knowledge or justified belief. Naturalists hold that the scientific method is epistemically valuable and only beliefs formed in a manner akin to theory formation in the sciences can yield knowledge. For example, the prominent American naturalists John Dewey, Sidney Hook and Ernest Nagel claim:

In maintaining that scientific method is the most reliable method for achieving knowledge, the naturalist means what he says. He recommends that method for acquiring *knowledge*, for achieving *warranted assertions*, but not for acquiring aesthetic or emotional experiences.¹⁷

Similarly, Wagner states:

Naturalism in its epistemological form takes natural science as a paradigm of justified belief. The idea, roughly, is that only scientific beliefs are legitimate or that these have more legitimacy than any others.¹⁸

An appeal to the merits of science forms a major part of not only the epistemological naturalist thesis, but also the metaphysical and methodological theses. The success of science, its explanatory and predictive success, are often cited as reasons to view scientific and scientific-like enquiry as an ideal. Moreover, science is thought to be an objective enquiry in two important ways. Scientific theories are criticizable and refutable, and the methodology and aims of science is to make them so. Scientific theories are also testable by observation. Scientific properties are required to be intersubjectively accessible properties. Their presence or absence can be determined by shareable, public data, despite the possibly indirect nature of testing

¹⁷Dewey, Hook and Nagel (1945) p. 111-112

¹⁸Wagner (1993) p. 212

for such properties. The appeal of science is threefold and the epistemological thesis attests to its virtues.¹⁹

3.3.2 - Metaphysical Naturalism

The metaphysical naturalist thesis is that most closely associated with naturalism. It appears in two closely related forms - an ontological claim about what exists and a claim about explanation. The weakest form of the ontological claim is that the space-time world is the whole world. Objects, properties, events and facts that are spatiotemporal are all that exist. David Armstrong espouses this version of naturalism, claiming:

Naturalism I define as the doctrine that reality consists of nothing but a single all-embracing spatio-temporal system.²⁰

Thus one should eschew the existence of purported entities one thinks to be outside both space and time; these might include God, immaterial minds, the realm of Plato's forms (or similar), timeless propositions, non-existent objects, abstract classes etc. Armstrong's belief in this ontological claim is related to his views on science:

It seems to me that the development of the natural sciences very strongly suggests that Nature, the spatio-temporal system, is a *causally self-enclosed system*. We have rather good scientific reasons to believe that, whatever occurs in this system, if it has a cause at all, is caused solely by other events (processes *etc.*) in the spatio-temporal system.²¹

Thus, Armstrong holds that there is no causal intervention from outside the space-time world. A causal explanatory claim follows from this, namely, that if spatiotemporal events or processes have a sufficient causal explanation, this

¹⁹Of course the virtues of science can be questioned. Not everyone holds that science is objective, and many hold that many scientific concepts are philosophically problematic. See Wagner and Warner (1993) and the essays therein for a critique of scientism and naturalism.

²⁰Armstrong (1978) p. 261

²¹Armstrong (1978) p. 265

explanation need only make reference to other events and processes in the space-time world.

In defining naturalism thus, Armstrong holds that physicalism is a sub-species of naturalism.²² Physicalism is the view that the only entities which exist are physical entities. In giving an account of what 'physical' means here, the entities posited by either all science, or by physics in particular, are taken as paradigmatic. Those who think that one day all the sciences will be reduced to physics give a special place to this fundamental science. Others, less sure of this prospect, will typically include chemistry and biology, and disagreement often exists as to whether disciplines like geology, psychology, economics and anthropology should be included. Thus a physicalist's ontology is often restricted to elementary particles and forces and things composed or constituted from them, together with their connections and arrangements. (I take the term 'physicalism' to cover both reductive and non-reductive kinds of physicalism.²³)

Many philosophers, however, take the ontological claim of naturalism to be the same as that of physicalism. Consider the following quotes:

Underlying the ontological approach is the idea that reality is physical reality. The thrust of naturalism, on this view, is that we should believe only in physical things.²⁴

A second way of characterizing naturalism holds that scientific theories or certain well-established subtheories (e.g. physics) of 'overall science' deliver a certain range of 'privileged' entities. Often additional individuals, properties and relations which

²²See Armstrong (1978) p. 267.

²³Reductionism is the view that everything will be explicable by the laws of physics. Thus, given suitable bridge laws all sciences such as chemistry, biology and geology will be reducible to physics. Studies such as sociology and psychology and their respective laws will either be reducible to physics or alternative explanations of their subject matter will be given showing that they had not discovered 'real' laws at all. Non-reductive physicalism posits a looser relation between physics and higher-level phenomena. Instead of there being bridge laws which show higher-level phenomena to be identical with their lower-level counterparts, it is held that the lower-level phenomena merely constitute the higher-level phenomena. That is to say a weak relation, such as supervenience, holds between the different levels.

²⁴Wagner and Warner (1993) p. 12

are related in specified ways to the privileged individuals are allowed as well. It is then held that there is nothing in the world beyond these 'natural' individuals, properties and relations... Hence any philosophical theory which requires for its truth the existence of additional individuals, properties and relations is non-naturalistic and false. Let us call accounts of naturalism of this sort *ontological naturalism*.²⁵

Similarly, Horgan states his view that naturalism is physicalism by making an explanatory claim:

As a metaphysical naturalist, I believe that all human behavior is susceptible in principle to neurobiological explanation.²⁶

An interesting question regarding physicalism arises when we ask about the fundamental posits of physics. The physics of today posits *fairly* uncontroversially physical entities - fundamental particles and forces.²⁷ Physics, however, is not complete. What will a completed and true physics look like? If it is fairly similar to current physics then this might be unproblematic. But what if a completed physics had to postulate a fundamental mental force? That is to say, what would a philosophical physicalist say if, in order to provide a causal explanation of all spatio-temporal phenomena, or paradigmatically macro-sized phenomena (medium sized dry goods), our science had to postulate an irreducible mental force? Would a physicalist embrace such a theory as physicalist or take it as a refutation of physicalism?

Some physicalists do not wish to assert that physicalism is an analytic thesis, as this would render it a rather trivial position. Substantial and empirical weight is usually given to the thesis by adding a clause to the effect that no mental terms will be among the fundamental postulates of physics. For example, Crane and Mellor write:

²⁵King (1994) p. 54

²⁶Horgan (1993) p. 295

²⁷I say that current physics posits fairly uncontroversial physical entities because the nature of force fields and the dual particle/wave nature of entities as described by quantum theory are not metaphysically unproblematic entities.

One may debate the exact boundary of physical science: but unless some human sciences, of which psychology will be our exemplar, lie beyond its pale, physicalism, as a doctrine about the mind will be vacuous.²⁸

Thus, I will take it that metaphysical naturalism involves ontological claims about the spatio-temporal nature of the world or physicalism, together with the claim that no fundamental mental entities or forces will feature in science. Following from the ontological claim is a claim limiting explanation of all spatiotemporal or physical phenomena to other spatiotemporal or physical phenomena. Particular explanatory claims will be investigated more closely in the next section on methodological naturalism.

3.3.3 - Methodological Naturalism

The idea that naturalism is a methodological commitment receives support from two sources. The first is the statement of naturalism common to American philosophers around the middle of the twentieth century. These authors claim that a scientific or scientific-like methodology is distinctive of naturalism. Sydney Hook claims that naturalism is a commitment to a procedure, not to a theory of metaphysics.²⁹ Similarly, Arthur Murphy writes:

Starting from the acknowledged achievements of scientific inquiry so far, the 'naturalists' intend to show that these same methods, or others essentially 'continuous' with them, are adequate also to those aspects and dimensions of 'the human spirit' which in the past have often been held on philosophical grounds to transcend the methods and aims of science.³⁰

²⁸Crane and Mellor (1990) p. 186. Crane and Mellor think that there is no principled way to distinguish the mental from the physical and thus think that physicalism is vacuous. We do not have to be concerned with this issue here. Many physicalists assert their confidence that physics will not include mental terms.

²⁹Hook (1944) pp. 40-43

³⁰Murphy (1945) p. 639

The observation that many contemporary authors spend little time on giving an account of naturalism, but often only elucidate how a particular entity is to be naturalised also supports the methodological thesis. Typically, such authors identify problematic terms such as value, normativity, and terms relating to the mind. The purported referents of these terms are then explained by reference to what are taken to be naturalistically unproblematic objects, properties, events and relations. The type of explanation that is thought to be sufficient for showing that the referent of a certain term has been naturalised varies greatly. Providing necessary and sufficient conditions for a problematic term in unproblematic language, identifying a problematic object with an unproblematic one, showing that there is causal interaction between a problematic object and other nonproblematic objects, and showing that a problematic object either supervenes on or is realised by unproblematic objects, are common approaches.

3.4 - Some Reflections on Naturalism and Realism

Most naturalists would, I believe, hold some version of all three theses, although one could consistently hold some and reject others.³¹ The three theses are closely related and together form a coherent, unified and congruous view of philosophy. Of course, naturalism is not universally accepted. Critics question whether the naturalistic theses are themselves naturalistic assumptions or could be part of a scientific view. Some question whether naturalism is too narrow and is therefore forced to eschew many areas of enquiry where the scientific paradigm may not be appropriate, such as literature, art and politics. Others ask what we are to do if a naturalistic analysis of some entities is not forthcoming. Would this be a refutation of naturalism, or would it show that the entities in question are spurious? There are other philosophers who hold that empirical work can shed no light on traditional philosophical problems, and that they should be dissolved rather than be taken seriously as naturalists are generally wont to

³¹For example, the metaphysical naturalist thesis has some epistemological implications - one should only believe in spatiotemporal or physical things - but it does not necessarily lead to the adoption of a belief formation method akin to that in science.

do. This last point is emphasised as a characteristic of naturalism by Wagner and Warner:

A signal feature of the debates over naturalism in current American philosophy is that the centrality of classical problems - mind and body, causation, apriority, fact and value, skepticism, and the like - is upheld. This is in sharp contrast to the stances of rival schools, which have held the classical issues to be in some way irrelevant or out-moded - to rest on linguistic error, to admit of some kind of dissolution, or to presuppose fundamental misunderstandings of our position in the world.³²

A thorough investigation of the merits of naturalism would take me too far from my present aim. There are many naturalistic philosophers, particularly in philosophy of mind. Investigation of whether such an account of the mind can be given seems a worthwhile enterprise. Moreover, as modern scientists increasingly claim that their work has an impact on our knowledge of the mind, an approach which recognises the potential fruitful source of scientific enquiry is a particularly attractive and important area of inquiry at present.

The realist view is what one might call the 'default view'. It is usually in response to perceived weaknesses in realism that alternative views are sought. If, therefore, we can find a suitably attractive and plausible realist view of the mental, then this may block the motivation to find alternative theories. This is not decisive, however, because sometimes realism is rejected wholesale, for reasons that lie outside one specific domain of enquiry, such as the philosophy of mind. Nevertheless, a realist view of the mind would provide a simple and neat explanation of our behaviour and discourse, and a plausible version would thus stand as a weighty and significant theory among alternatives. Moreover, while many philosophers and scientists persist in trying to find a realist conception of mental phenomena, appraising such attempts can be seen to be a worthwhile enterprise, if only to identify the limitations of such theories.

³²Wagner and Warner (1993) pp. 2-3

To conclude this section, I hope to have explicated realism and naturalism. The representationalists that I shall consider work within this framework to build theories of the nature of perceptual and sensational experiences. In this thesis, I seek to investigate the representationalist theory while staying within a generally realist, naturalist conception of the mental.

In the next section, I will outline various specific realist naturalist methodologies that have been adopted in recent philosophy of mind, and assess their claims to provide naturalistic theories of mental states.

3.5 - Naturalist Methodologies in Recent Philosophy of Mind

3.5.1 - Identification

One of the main methodologies of the naturalist is to identify a problematic state, process or event with an unproblematic one. There are various strategies for doing so. A classic strategy is conceptual analysis. This involves finding a priori, necessary and sufficient conditions for the application of a particular term or concept. Thus, if the problematic term is P and the unproblematic term is U, a conceptual reduction of the form "for all x, x is P if and only if x is U" is sought. Such reductions are thought not only to identify the referents of P with the referents of U, but also because such reductions are thought to be necessary, that is, applying in all hypothetical situations, they are thought to show what the problematic term means.

It is generally agreed by most philosophers that conceptual analysis of most terms fails. Despite much work by many philosophers, very few a priori reductions have been successfully found. Certainly in the philosophy of mind there has been little or no success in this project.³³

In response to this failure another identification strategy was adopted - empirical (a posteriori) reduction. For example, Place, Smart and other identity theorists in the

³³Among the many who advocate this view, see Fodor (1981), Stich and Laurence (1994) and Botterill and Carruthers (1999).

1950s and 1960s thought that types of mental state could be identified with types of brain state and then mental language could be translated into talk of physical happenings in the brain.³⁴ Thus, in the way that science had claimed to have identified water with H₂O, it was hoped that reductions of the form 'pain is C-fibre stimulation' would be found.

One criticism of type-identity theory is that consideration of identity statements such as 'pain is C-fibre stimulation' reveals that it is unlikely that such statements are true in either this or other possible worlds. Hilary Putnam's reflections on the variable or multiple realisation of the mental clearly show this.³⁵ It is unlikely that all the creatures in this world that experience pain have C-fibres, given that their constitution is so very different. Perhaps octopuses, sheep and humans do not share any physical features, but they can all experience pain. It is also thought to be conceivable that some silicon based, or other inorganically constituted creatures, could feel pain. It is commonly held that the variable realisation consideration shows that the type identity claim cannot be either a necessary or contingent truth, as any given mental state is realized in multiple physical ways.

One might think that in order to accommodate the variable realisation of the mental, token mental states (that is specific occurrences of mental states) could be identified with token physical states. Token identity is the claim that every particular mental state is identical with some physical state, but that there are not necessarily any correlations between mental and physical types. According to such a theory, it is not necessarily true that two physically identical organisms would share the same mental life. Thus, it can be seen that token physicalism is a weaker doctrine than one version of supervenience theory (to be discussed later), which requires that there be no difference in the mental lives of creatures if there is not a physical difference.³⁶

³⁴See Place (1970) and Smart (1970).

³⁵Putnam (1980)

³⁶See Davidson (1980a) and Kim (1996) p58-62.

The main problem with token identity theory arises from the fact that it is such a minimal claim. If supervenience fails and there are no correlations at all between mental and physical states then nothing can be said about how mental properties are physically based or realised, if they are taken to be identical with physical states. If physically identical states can give rise to different mental states, then what accounts for the occurrence of the different mental properties of these states, such as the property of being a pain state or a sensory state? It can be nothing physical by definition. This has led some philosophers to question if token identity really does qualify as being a naturalist position in philosophy. If there are some differences which are not physical but irreducibly mental, then not only can little be said about the nature of mental states, but also what the identity theorist is gaining from saying that ultimately mental states *are* physical states is unclear. I will discuss token identity that incorporates a supervenience claim in section 3.5.3 on supervenience below, but now I turn to functionalism.

3.5.2 - Functionalism

Functionalism is a theory that tries to accommodate the variable realisation of the mental. Not all kinds of functionalism are naturalistic, but it can be used as a strategy to naturalise the mental - as I will outline below. Functionalists claim that what is important in assessing a creature's mentality is not the kind of physical matter which composes it, but the functional role that certain states play. As Jackson and Braddon-Mitchell explicitly show, mental states can then be viewed in one of two ways. The first way is to view a mental state as identical with some physical state (the realiser state) that plays the causal role in question. This view has affinities with identity theory, although the states are held to be the mental states they are in virtue of the functional roles that the states occupy. The second way is to claim that a mental state is a second-order state (a role state), that is, a state of having a particular functional role occupied.³⁷

³⁷See Braddon-Mitchell and Jackson (1996) pp. 96-101.

The precise characterisation of the functional role varies enormously within different species of functionalism. Some describe the functional role in folk-psychological terms, some in physical terms, others in computational terms.³⁸ Another large difference between theories is the boundary within which the functional role is delineated. Some theories restrict the theorising to inputs and outputs occurring within the brain, others include the whole body, and yet others include the environment surrounding the subject. This yields, at the former end of the spectrum, internalism and/or individualism, and at the latter, externalism and/or anti-individualism.³⁹

Most functionalists claim to maintain adherence to naturalism using the doctrine of mental supervenience. There are various forms of supervenience but a weak version, which is all that is required to make the point here, is that no two possible worlds can be alike physically but have different mental properties, and there can be no change with respect to the mental properties of a world without a corresponding change in the physical properties. While most functionalists are naturalists, there is logical space for being a nonnaturalist functionalist and rejecting this supervenience claim. For example, one could hold that a mental state was identical with a state playing a certain functional role but that this state could be a state of a Cartesian immaterial spirit.⁴⁰

One challenge to functionalist accounts comes from a demand for explanation. To see this, consider the following simplified version of functionalism about pain states: a state is a pain state when it is caused by physical damage and leads to avoidance behaviour. Suppose this causal role is played by C-fibre firing in humans. Now

³⁸See Lewis (1972) for a folk psychological account and Putnam (1960) for a computational account. See Block (1980a) for a survey of the field and a useful collection of key articles, see also Lycan (1994) and Block (1994b).

³⁹More specifically, the internalism/externalism distinction concerns whether an individual's mental properties supervene on their physical constitution and hence whether differences in the *physical, non-mental* environment of creatures can affect what mental states it is possible for that creature to be in. The individualism/anti-individualism distinction concerns whether an individual's mental states are independent of the *language and mental states* of those in the community of the individual in question. See McGinn (1989) p. 2, footnote 5.

⁴⁰Shoemaker (1984) chapter 6 outlines this possibility.

someone might ask why pain occurs when C-fibres fire. They could also ask why any state that is caused by bodily damage and leads to avoidance behaviour should be a state like a pain state. Or why a conscious state arises in these cases at all. (I will call this demand the demand for a mechanism. Note that it could also equally be raised against the identity theorist.)

Note that the type of answer that a functionalist might provide, namely that pain occurs when C-fibres fire (or when any other state which instantiates the functional role occurs) because a pain state just is one that is caused by physical damage and leads to avoidance behaviour, is not a sufficient answer here. This is because someone pushing the demand for mechanism may accept that all and only pain states have the functional role specified, but think that this type of claim does not help us to understand why pain states occur in these circumstances and in the manner that they do. That is, they accept the correlations between mental states and functional roles, but they do not think that simply in virtue of this, along with a statement of brute identity in the light of this, that a naturalistic explanation of the mental can be given. They think that what the mental is identified with (be it a realiser state or a role state) must explain the features of the mental. For example, one might think that the nature of water is explained, not just by asserting a brute identity with H₂O on the grounds that the two are always found together, but because the properties of H₂O molecules *explain* the properties of water.⁴¹

This point is often made specifically against functionalism's ability to explain experiences and sensations by appeal to the phenomenal character of such states. Remember that phenomenal character refers to the particular way such states feel - in

⁴¹Kim (1996) p. 228 expresses the same point on behalf of a general antireductionist thus: "She would reject the purely inferential model of Nagelian reduction as sufficient for the reduction of psychology to physical theory, for she conceives of reduction primarily as an *explanation*, something that renders the reduced phenomena intelligible by explaining why they occur under just those conditions in which they do in fact occur." Tye (1995a) p. 17 expresses the point this way: "in the natural world, the generation of higher-level states and processes or properties by what is going on at lower neurophysical or chemical or microphysical levels is grounded in mechanisms that *explain* the generation of the higher-level items. So if phenomenal consciousness is a natural phenomenon, as part of the physical world, there should be a mechanism that provides an explanatory link between the subjective and the objective."

the case of pain, sore or hurtful. What functionalism appears to fail to explain is why an experiential state which has a particular functional role has the phenomenal character that it does. Similarly, one might wonder in the case of identity theory how an experience's being a physical state could explain why the state has the phenomenal character that it does, or phenomenal character at all.

This demand for explanation may lead one to think that the proposed identifications which these theories make should not be made, on the grounds that no identification of this kind will allow for a suitable explanation of mental phenomena; or it may lead one to tentatively accept the identification but merely to press for further explanation.

Whether the demand for mechanism proves decisive against functionalism and identity theory is a contested matter. However, the demand for mechanism can appear appropriate if one wishes to adhere to methodological naturalism. Ideal explanations in the sciences do provide an explanation of features of higher-order phenomena in terms of lower-order ones and are concerned with doing so; we should therefore be concerned with this project in the philosophy of mind.⁴²

I will examine the demand for mechanism in the next section in relation to supervenience claims.

3.5.3 - Supervenience

Recall the discussion of type and token identity at the end of section 3.5.1. If type identities fail then (given M is a mental state type and P is a physical state type) there is not a reduction of the form: for all x, x is M if and only if x is P. Now while some identity theorists are so about states, the theory is now more frequently stated about events. Following Davidson, I take events to be basic particulars involving objects;

⁴²Similar sentiments are expressed by Tye (1995a) pp. 15-18, Kim (1996) chapter 9 and Levine (1993) and (1983).

such events have properties in virtue of which they fall under kinds.⁴³ Thus, type-identity amounts to the claim that mental event types are physical event types, or equivalently, mental properties are physical properties.

If type-identity fails then the weaker token-identity claim that still could be asserted is that every event that has a mental property also has a physical property. There is no requirement that instantiation of the same physical property will correlate in any way with instantiations of the same mental property. As I explained at the end of section 3.5.1, this claim appears compatible with the rejection of physicalism. To adhere to physicalism, a token-identity theorist can add a supervenience claim of the following kind: there can be no change in the mental properties of an item without a change in the physical properties, and that two identical physical items will be identical mentally.

By adding the supervenience claim to token identity, it is logically possible that correlations of the following kind may be found: (let *M* be a mental property and let *P*₁, *P*₂ ... *P*_{*y*} be physical properties) for all *x*, *x* is *M* if and only if *x* is (*P*₁ or *P*₂ or ... or *P*_{*y*}). We would appear to be able to form biconditionals between mental properties and disjunctions of physical properties.

A major debate in the literature is whether such biconditionals can be regarded as laws, whether they would allow us to predict the instantiation of mental properties from knowing the instantiation of physical properties, and whether they would allow a reduction of mental properties to physical properties. If one does hold that multiple realisation is consistent with reduction, then identification of mental and disjunctive physical properties could take place. This reduction would provide an ontologically naturalist account of mental states, but such reduction would still face the demand for mechanism. The claim that mental properties or states or events are (possibly

⁴³This is Davidson's (1980d) way of individuating events. Events can also be taken to be structured particulars consisting of objects, properties and times. The reason for individuating events in the former way as opposed to the latter property exemplification way is that as Kim notes, "there is no interesting distinction between token physicalism and type physicalism on the property exemplification approach to the nature of events." Kim (1996) p. 60.

disjunctive) physical properties, states, or events does not explain how physical things of these kinds could be identical with the characteristic features that the mental has. Hence the demand for a fully methodologically naturalistic explanation remains.

On the other hand, in meta-ethics G. E. Moore and R. M. Hare thought that moral properties supervened on physical properties but that no reduction was possible.⁴⁴ They took this to be a refutation of naturalism because they held that it was a brute, nonnaturalistic fact that the supervenience relation obtained.

In the philosophy of mind, Davidson (1980a) argues that although there may be true general statements of correlation between mental and physical properties, these are not law-like, would not support reduction or identification, and moreover, that we would have no good reason to believe them. His reasons stem in part from consideration of the holism of the mental and of theory formation in science. Davidson claims that we cannot know by scientific-like means what mental properties are instantiated, and that there fails to be a scientific-like explanation or prediction for the existence of mental properties. Davidson holds that there are different sources of evidence for ascriptions of mental properties and ascriptions of physical properties to people. In particular, only ascriptions of mental properties must be governed by the constitutive ideal of rationality.⁴⁵ Hence, although Davidson's position is physicalistic and therefore a species of ontological naturalism, it does not have strong explanatory or epistemological naturalist credentials regarding mental properties.⁴⁶

When we come to look at the supervenience relation more abstractly - as a claim simply that if two things are indiscernible in the subvenient or base properties then they are indiscernible in their supervenient properties - it seems that this relation could obtain because a variety of different relations hold between the subvenient and

⁴⁴See Moore (1903) and Hare (1952).

⁴⁵This is the idea that we must ascribe beliefs and desires and experiences to people in such a way as to make them as rationally intelligible as possible.

⁴⁶Wagner and Warner (1993) p. 13 also claim that Davidson is not wholly naturalistic because he believes that scientific standards are not properly applied to folk-psychology and he rejects the idea that naturalism is required in order to affirm the existence of the referents of folk concepts.

supervenient properties. As we have seen, one reason could be identity between the properties. A second could be that there is some fundamental brute fact obtaining. A third could be that of causation. In regard to the latter, some people suppose that the mental could supervene on the physical, even if the mental were non-physical. Given nomic causation, supervenience on the physical in this case is just what one might expect. Indeed, Jaegwon Kim (1994), a leading supervenience theorist, claims that emergentism (which is often viewed as a version of dualism⁴⁷) was the first fully worked out supervenience position. It is only quite recently that this element of supervenience theories has been given its true weight. Indeed, Kim recently claimed that:

it now seems to me a mistake, or at least misleading, to think of supervenience itself as a special and distinctive type of dependence relation.⁴⁸

Before continuing, I would like to say a little about the usage of the term 'supervenience'. Increasingly, it seems to me, and with good reason, as I hope to have shown, the term supervenience is used as above - as potentially involving identity, causal, or similar claims. However, supervenience is sometimes taken to be the claim that not only must there be the supervenience relation between mental and physical properties, but also that the mental is not reducible to the physical (thereby ruling out identity theory) and that some relation other than causation holds between the mental and physical.⁴⁹ I will, however, restrict my usage to the former.

Another relation that a supervenience relation might be indicative of is that of realisation. This relation is not identity, but stresses that there must be some relation of determination of the supervenient by the subvenient. Tye explains realization thus:

⁴⁷See Lowe(1993).

⁴⁸Kim (1993) p167

⁴⁹See Kim (1994) for the claim that supervenience sometimes involves a nonreductionist claim. See Ruben (1990) for the claim that supervenience often involves a relation other than identity or causation.

The realization relation is not easy to analyze, but it is at least in part one of upward determination or generation: any object that has the higher-level property, or is an instance of the higher-level type, does so *in virtue of simultaneously* having one of the lower-level properties or types that realizes it....if P realizes Q (in objects of kind K), then in all possible worlds sharing our microphysical laws and our microphysical facts, every token of P (in a member of K) is also a token of Q. A second aspect to realization, in my view, is that the determination of the higher-level type by the lower-level one is always mediated by an implementing mechanism.⁵⁰

Tye thinks there must be a mechanism that underpins the realisation, if the position is to be a fully naturalistic one. Tye commits himself to two theses here. The first is that the laws linking higher-level and lower-level phenomena must not be epistemically basic. The laws of fundamental physics are taken to be basic in this way. They are brute facts - there is no explanation of why they obtain or how things instantiating the laws do so. But for higher-level phenomena there must not be nonbasic laws, instead these must be fixed by the lowest level microphysical laws.

The second thesis is that the account of the mechanism must make it intelligible how the lower-level phenomena could realise the higher-level phenomena. Thus, if the realisation relation were to explain experiences and sensations it must explain how the characteristic features of the mental, such as phenomenal character, could be realised by the physical. In other words, Tye accepts that the demand for mechanism that I raised as a problem for functionalist and identity accounts must be answered by any naturalistic theory. If such a theory could be found - and Tye thinks that the representationalist theory is such a theory - it would be fully naturalistic: methodologically, epistemically and metaphysically naturalistic.

Thus, it seems that a number of different reasons or explanations could obtain for why one set of properties supervenes on another. Spelling out in what way the mental supervenes on the physical or other non-problematic properties, entities or relations,

⁵⁰Tye (1995a) pp. 41-42

has become part of the task of philosophers who maintain the doctrine of supervenience.⁵¹ Hence a philosopher who wishes to provide a fully naturalistic account of the mental and who holds that a supervenience relation obtains will have to spell out the nature of the supervenience, if the position is to be demonstrated to be naturalistic.⁵² Moreover, they will have to demonstrate a sensitivity to the demand for mechanism.

Many representationalists argue that their account goes further than the functionalist and token identity theories by trying to offer, and being able to offer, an answer to the demand for mechanism regarding perceptual experiences and sensations. They thus hold that their theory provides a comprehensive naturalistic account of phenomenal character.⁵³

I turn now to the last naturalistic methodology to be outlined here.

3.5.4 - The Causal, Explanatory or Law-Like Methodology

A prominent naturalist methodology that has emerged in recent literature appeals to either the causal status, the explanatory status, or the law-like status of truths

⁵¹Some philosophers hold (as Dretske does) that the mental does not supervene on the physical nature of an individual or the physical states of the world they are in. They do think, however, that the mental supervenes on the physical world an individual is in, together with the historical properties of that world. Thus, they claim mental does not supervene on the physical, but supervenes on unproblematically naturalistic objects, properties and relations. Tye holds that whether a creature is conscious or not supervenes on their physical make-up, but the nature of their consciousness does not. See the chapter on Inverted Spectra and Inverted Earth for further details.

⁵²Not only must the supervenience theorist explain the precise nature of the supervenience relationship by citing why the mental and physical properties are related in such a way, but also must take note of the fact that there are different variants of the supervenience relation that may be subscribed to. The weakest form of supervenience - weak supervenience - is the claim that physical identicals within one world must be mentally identical. Global supervenience is the claim that worlds which are physically indistinguishable are indistinguishable with respect to their mental properties. The strongest supervenience claim - strong supervenience - is the claim that any two physically indistinguishable organisms in any worlds must be identical with respect to their mental properties. It is generally held that weak supervenience is compatible with, but does not entail, an ontological non-naturalist position. Global supervenience is compatible with wide functionalist accounts of the mind. These point need not detain us here. For more see Kim (1993) and (1994).

⁵³In addition to Tye (1995a), Seager (1999) chapter 9 concurs that the demand for mechanism must be answered by a fully naturalistic theory. In his prologue, Dretske (1995) claims his account is naturalistic and sees it as a virtue of such an account that it answers the demand for mechanism. He says very little else about what he takes naturalism or the naturalising project to be. I will discuss in detail below what these characteristics of the mental are.

involving the terms to be naturalised. One finds this approach in both moral philosophy and the philosophy of mind. Thus, Robert Audi states:

In the recent literature of ethics, the debate over the status of naturalism has taken a different turn. Most proponents of ethical naturalism are now above all concerned to show that moral properties have explanatory power and that moral statements are quite continuous with others that can explain concrete phenomena. Call this explanationist naturalism. Its guiding idea is, in part, that if moral properties can be shown to have such explanatory power, then naturalism need not accomplish a reduction of the kind Moore held impossible, and the way will be open to explicating the practicality of moral judgements without the burden of defending a naive reductionist account of them.⁵⁴

In the philosophy of mind, Botterill and Carruthers state:

we should accept that the existence of a variety of special sciences is a permanent, irreducible, part of our world view, reflecting the way in which the natural world is organised in terms of laws and principles operating at different levels of generality. And then all we need to do in order to *naturalise* some property, is show that it figures in the laws of some special science, in whose persistence we have good reason to believe.

In which case, for those of us who believe in the scientific status of psychology, there is nothing more that we need do, in order to naturalise intentional content, than to point out that such contents figure within the laws of psychology. So those who have been seeking a naturalised reduction of intentional content have not only been chasing something which may be in fact unattainable, but they have been doing so unnecessarily.⁵⁵

At first glance this type of naturalisation project seems to get things the wrong way round. It is often thought that one has to naturalise a problematic term, in order

⁵⁴Audi (1993) p. 95

⁵⁵Botterill and Carruthers (1999). See also Kornblith (1994) p. 41.

to show that it does have causal power and can feature in a genuinely scientific account of the world.⁵⁶ In particular, naturalists have generally thought that some account of the relationship between physics and the special sciences is needed to show that the entities postulated by the special sciences can be endorsed as genuinely referring to entities in the world. Even if one did not think that an account of the relationship of the special sciences to physics was required in order to countenance their posits, the status of psychology as a special science has been widely questioned, which usually forms part of the reason why psychological terms have appeared problematic and in need of special attention, as opposed to chemical or biological terms. Thus, it appears to be a legitimate worry that a simple statement of conviction in the belief that psychology is a special science, and the belief that the special sciences are irreducible, does not guarantee the success of the naturalisation project in philosophy of mind.

In light of this, however, it might seem that if one could mount a defence of psychology as a special science and show that special sciences in general were irreducible to fundamental physics, but that this was not problematic, then this would be a good naturalistic methodology. In practise, however, most such defences do not seem particularly strong.

Usually people try to make the irreducibility of the special sciences in general a plausible claim by citing examples where chemical and biological notions fail to straightforwardly reduce by means of type identifications to physical types. But as we have seen, we could still explain the relationship between higher and lower-level phenomena naturalistically by some other means. For example, realization accounts, together with an explanation of how the properties of the higher-level phenomena could come about in virtue of the lower-level phenomena, look like suitable explanations. Thus, one can hold that the special sciences are irreducible, but still

⁵⁶See Fodor (1987) p. xii, Dretske (1989) p. 1 and Stich and Laurence (1994).

require some naturalistic relationship to be demonstrated between them and fundamental science in order to countenance their posits.

How could one make a case for psychology being a special science? Frequently, examples are cited of what look to be laws in psychology - they look as if they are explanations and cite causal powers. Are such laws strict laws or do they admit of exceptions? If psychology only contains *ceteris paribus* laws does this undermine their status as scientific laws? One would have to address such questions to evaluate the claim that psychology is a science.

Fortunately, we can by-pass these tricky questions by focusing only on the claim that the special sciences are not reducible to fundamental science. Botterill and Carruthers, themselves, admit that, *unconstrained*, their theory would have no principled objection to dualism. Thus their theory does not guarantee naturalism. What we in fact find is that the additions to the theory which have to be made to meet this objection amount to one of the previous methodologies that we have outlined in the above sections. For example, Botterill and Carruthers claim that to avoid dualism, some form of token identity must be countenanced. Moreover, they claim that the unity of science should be preserved by an appeal to supervenience without reduction, and they hold further that the mechanism whereby lower-level properties realise higher-level properties must then be explained.⁵⁷ In other words, this methodology, although having a different emphasis than those above, seems in the end to collapse in to a suitable form of either supervenience, token-identity or realisation, and therefore faces answering the problem of mechanism.

I turn now to look at representationalism in detail and show to how it proposes to provide accounts of sensations and experiences in line with the above naturalistic constraints. In particular, I will look at how representationalism tries to answer the problem of mechanism and tries to explain the nature, in particular the phenomenal nature, of these states in a naturalistic way.

⁵⁷See Botterill and Carruthers (1999) chapter 7, section 5.

Chapter 2 - Phenomenal Character and Content

1 - Introduction

I begin this chapter with an overview of the representationalist theories of the kind espoused by Michael Tye and Fred Dretske. Throughout this chapter and the next, I will be explicating their theories and comparing them to other theories. Some of these will be non-representationalist theories and others will be representationalist theories that differ from their views in important respects. I will explain, as I go along, why I think that their view of experiences and sensations has various advantages over other views and why it is most likely to account, in particular, for phenomenal character.

After the general overview in the next section, I will look carefully at the reasons people have given for distinguishing experiences and sensations from the propositional attitudes. I will argue that experiences should not be conceived of as merely a type of belief. I will then examine the nature of phenomenal character.

The rest of the chapter will be concerned with ascribing content to experiences and sensations. I will look at why some people have not wanted to ascribe content to sensations and some to aspects of perceptual experiences. I will then look at different types of content that can be ascribed to experiences - conceptual and nonconceptual. I will explain why Tye, Dretske, and others ascribe nonconceptual content to experiences and why doing this is plausible. I will then consider some objections to nonconceptual content and argue that they are unconvincing.

In the next chapter, chapter three, I will go on to explain the representationalists' further claims.

2 - General Overview

The representationalists I will be concerned with hold that perceptual and sensory experiences are distinct from the propositional attitudes in that they essentially and intrinsically involve undergoing a mental state that has phenomenal character. A mental state has phenomenal character when there is something distinctive that it is like to be in that state. In other words, there is a particular feel or distinctive experiential quality associated with that state. Experiences and sensations are to be individuated by their phenomenal character. At the same time, they hold that there is no phenomenology essential to having a certain belief or desire. Indeed, Tye goes further, claiming that:

insofar as there is any phenomenal or immediately experienced felt quality to the above states [propositional attitudes], this is due to their being accompanied by sensations or images or feelings that are the real bearers of the phenomenal character.¹

Thus, propositional attitudes either lack phenomenology altogether and are merely accompanied by phenomenal mental states, or they may themselves have phenomenal character but none that is either necessary or sufficient for the existence of that state. Thus, for these representationalists, accounting for perceptual and sensory experiences intrinsically and importantly involves accounting for the nature of phenomenal character.

Propositional attitudes are intentional states. Intentionality is the property of being about or referring to some object. My belief that snow is white is about snow and whiteness. Contrasting with this, the standard traditional account of sensations is that they are non-representational mental states. That is, moods, bodily sensations and pains are thought to have a particular phenomenology that is non-representational. The traditional account of perceptual experiences takes them to be hybrids, involving

¹Tye (1995a) p. 4 (My parentheses.)

both (non-representational) phenomenal and representational aspects.² On this view there is a (non-representational) phenomenology associated with perception, but also an intentional aspect - for example, a visual experience as of white snow not only strikes one in a particular manner but also seems to represent white snow in the vicinity.

In opposition to the traditional view, representationalists claim that all perceptual and sensational experiences are representational and that there are no non-representational phenomenal properties. According to the representationalist, phenomenal character is real, but is the same as a kind of intentional content. The following quotes are illustrative:

If, in accordance with the Representational Thesis, we think of all mental facts as representational facts, the quality of experience, how things seem to us at the sensory level, is constituted by the properties things are represented as having. My experience of an object is the totality of ways that object appears to me, and the way an object appears to me is the way my senses represent it as being.³

your perceptual experiences have no introspectible features over and above those implicated in their intentional contents. So the phenomenal character of such experiences ... is identical with, or contained within, their intentional contents. The same is true for bodily sensations.⁴

Thus, it is claimed that states with phenomenal character are states that represent the world as being a certain way. All aspects of phenomenology are representational and all differences in phenomenology will be differences in what is represented.

The representationalists' theory of the kind of representation involved in experiencing is motivated by many factors. One of these is to provide an account of representation that does justice to the phenomenology associated with experiences.

²See for example Reid (1941) Essays 1 & 2. (first published in 1785).

³Dretske (1995) p. 1

⁴Tye (1995a) p. 136

Thus, the representation in question must capture both the subtle and gross differences that exist between experiences. Another motivation is to single out the type of representation that is distinctive of phenomenal mental states, as opposed to the type of representation distinctive of mental states that lack phenomenal character such as the propositional attitudes (or at least lack phenomenal character of the distinctively experiential kind). The theory of representation involved in phenomenal states should also be such that all creatures that undergo conscious experiences have the capacity to represent (or their mental states have the capacity to represent) in the manner that the theory proscribes. Guided by these motivations, the representationalists I will be considering have come to favour a fine-grained, nonconceptual form of representation.

If phenomenal character is constituted by, or is identical with, the properties represented in experience, then to provide a naturalistic theory of phenomenal character one must (at least in part) provide a naturalistic theory of representation. There are several such theories of representation that are currently espoused by different philosophers. Which theory one chooses - internalist or externalist, one that allows for top-down processing or not, etc. - can have a bearing on the answers to some potentially difficult questions about the nature of phenomenology - as will become apparent below. Causal covariation and teleological theories of representation are the theories that Tye and Dretske, respectively, hold.

Many naturalistic theories of representation will ascribe content, not just to mental states or experiential states, but also to non-mental states. For example, if one state represents another by causally covarying with that state, then the rings on the trunk of a tree will represent the age of that tree. However, it is plain that such a state is not a mental state and does not have phenomenal character. Further specification of when a state that represents is a state that gives rise to phenomenal character is required. This usually takes the form of specifying the role in a creature's cognitive life that such a state must play.

This is the bare outline of what from now on I will be calling representational theories of phenomenal character. Representationalists claim that the theory provides a realist and naturalist account of experiences and their phenomenal character. If successful, the theory will explain both how and why representations of the appropriate kind have the phenomenology that they do, including an explanation of why such states are conscious.⁵ In the next two chapters I will explicate in detail the representationalist theory. We will see why the theory appears to be an advance on other accounts of experiences and sensations, and why equating phenomenal character with a certain kind of content of mental states promises to provide an account of experiences that renders them part of the natural world.

3 - Distinguishing Experiences from Propositional Attitudes

Most philosophers, representationalists included, hold that perceptual and sensory experiences are a different type of mental state to the propositional attitudes.⁶ This distinction is backed up by our introspective access to our own minds, and by some common platitudes about experiences and the attitudes. For example, experiences are often thought to be necessarily conscious and occurrent states. But although the propositional attitudes can be conscious and occurrent, often they are not. In addition, there does not appear to be a distinctive phenomenology associated with propositional attitudes, but there does with experiences.

Considerations of the above kind form the basis of the representationalists' motivation for distinguishing experiences from propositional attitudes. For example, Dretske asserts that one can hear a piano being played without believing that a piano is being played. Further, he holds that to have a belief that a piano is being played, one must possess the concepts that feature in the belief - in this case the concept of 'piano' and 'being played'. Yet he holds that one can hear a piano being played without

⁵As I will discuss later, there is a distinction to be made between states that are conscious and states that one is conscious of. The latter is taken to involve introspection while the former does not. In the present context, I mean a state that is conscious, not a state that a subject is conscious of.

⁶See Crane (1992b), Dretske (1969), (1981) & (1995), Humphrey (1993), Martin (1992), McGinn (1982), Millar (1991a), Peacocke (1986) and Tye (1995a).

possessing these concepts. For example, a mouse can hear a piano without believing that a piano is being played or without possessing the concept of a piano.⁷ Dretske claims that these presuppositions are 'ordinary' and 'familiar'.⁸ Tye agrees.⁹

Although intuitively plausible, there are some philosophers who disagree with this claim. Armstrong (1961), for example, holds that perception is the acquiring knowledge of, or inclination to believe in, particular facts about the physical world by means of the senses. He acknowledges that often we speak of perception as involving experiences or sensations, but claims that talk of a perceptual experience should be analysed as follows: it is to believe or to be inclined to believe that we are immediately perceiving some physical object or state of affairs.¹⁰ For example, to see or seem to see that a piano is before one, might be to believe or be inclined to believe that a piano is before one, or that an object of a particular shape and size is before one. One might also have detailed beliefs about the orientation of the piano, its position in relation to yourself, and beliefs about the parts of the piano that one can see. Thus, according to Armstrong, perception does not involve experiences, *if* these are to be conceived of as something other than belief-like states.

Armstrong's theory was a reaction to sense-datum accounts of perception. Sense-datum theorists hold that we do not directly see physical objects; we can only perceive them indirectly through immediately seeing sense-data. Sense-data are objects that exist in the mental realm - in our own private mental space. As such, our access to them is (usually) held to be infallible and incorrigible. Sense-datum theories

⁷Dretske (1995) p. 9

⁸Dretske (1995) p. 12

⁹Tye (1995a) pp. 1-2

¹⁰See Armstrong (1961) p. 88. He says, "to have a sense-impression is to believe, or to be inclined to believe, that we are *immediately* perceiving something. Thus if somebody has an hallucination of a cat, his false belief about what he is *immediately* seeing will not be that he sees a cat, but that he sees a thing of a certain colour and shape. And *this* is what we call 'his sense-impression' or 'the object of his visual field'. As we saw in the case of the car, different people could have different beliefs about what they were *mediately* perceiving although holding the same beliefs about what they were *immediately* perceiving. But this does nothing to refute our identification of sense-impressions with beliefs, or inclinations to believe, that we are perceiving something." (Armstrong only illustrates the difference between mediate and immediate perception by example and admits that there is no sharp distinction.) I take 'perceptual experience' to be something that is in common between veridical perception, illusion and hallucination and therefore to be equivalent to Armstrong's 'sense-impression'. I will discuss this point in the next section.

of perception do have problematic features. The metaphysical status of sense-data is unlike that of any other and appears decidedly non-naturalistic. The mechanism whereby we have infallible perception of our sense-data is also unexplained. The theory faces epistemological problems too - how we can or could come to know about the world, as distinct from our sense-data, is unclear.¹¹

Rather than examine Armstrong's criticisms of sense-datum theory, I will look directly at whether the claim that perceptual experiences can be accounted for by perceptual beliefs is plausible. If experiences could be explained in this way, then it would certainly be the more parsimonious theory than one that posited perceptual experiences in addition to perceptual beliefs. To this end, I will look at features of perceptual experiences and see if positing mere beliefs can do justice to those features.

To begin, consider Dretske's contention that one can see, or seem to see, something without believing it. Dretske mainly has in mind cases of subjects who seem to perceive objects while not possessing the concepts that would be necessary in order to acquire the relevant perceptual beliefs. I will consider arguments specifically regarding content and concepts below. There are other cases, however, where it seems that subjects have perceptual experiences but not the relevant beliefs. These occur when a subject knows they are hallucinating and so do not believe what they seem to see. Alternatively, a subject might be viewing an illusion that they knew was an illusion. For example, in the Müller-Lyer illusion, it looks as if two lines are different lengths, but a subject might know them to be the same length. (Visual illusions persist, even when one is aware of the nature of the illusion.) These cases purport to be examples where one can undergo a perceptual experience that cannot be accounted for in terms of beliefs.

In these cases, the belief theorist may retort that although one does not straightforwardly believe what one seems to see (or that one is seeing), nonetheless,

¹¹Jackson (1977), however, provides an admirable, if not successful, defence of sense-datum theory.

one has at least *prima facie* inclinations to believe what one is seeming to see. As Tim Crane has pointed out, however, this leaves unexplained why the inclination to believe what one seems to see remains.¹² Normally, when one has a nonperceptual belief and conclusive evidence is brought to bear against it, one stops having the inclination to believe. But in the case of perception, hallucinations and illusions may persist, despite one's having knowledge that one is not perceiving veridically. Therefore, perceptual experiences are not revisable in the manner that ordinary beliefs are, and are therefore unlike beliefs in quite a striking way.

Crane also objects to the belief account of experience on the grounds that experiences do not participate in deductive relations in the way beliefs do. For example, if I perceive on one occasion that the hat is on the piano and at another time perceive that the cat is on the piano, I may come to believe that the hat and the cat are on the piano. But unlike the case of belief, I will not thereby come to perceive or have a perceptual experience of both the hat and the cat on the piano. Similarly, it is often held to be a constraint on belief that I cannot consciously believe that 'P and not P'. But there are many visual illusions that seem to involve contradictory content - for example some of Escher's pictures and the waterfall illusion.¹³

A further worry for the belief thesis is that perceptual and sensational experiences are occurrent states. There appears to be a fairly definite duration of perceptual and sensational experiences. Propositional attitudes, including, inclinations to believe, are often not occurrent in this way. At any given time most of what we believe is not present to consciousness. One could think of the propositional attitudes as dispositional states. Dispositions have characteristic manifestations that are evinced in certain circumstances. Thus, a disposition is associated with a counterfactual, which relates the manifestations to certain circumstances, and which are (*ceteris paribus*) true of objects that have the disposition. Thus, your belief that there is a can of Irn Bru on the table may be manifested by your saying that you believe it, provided that

¹²Crane (1992b) pp. 150-151

¹³See Crane (1992b)

you have no motivation to conceal that fact. Similarly, it may be evinced by your reaching for it, if you desire to drink it. *Prima facie*, the belief account does not capture the occurrent nature of perceptions and sensations. Imagine that you see a can of Irn Bru on the table. If you close your eyes, your inclination to believe that there is a can of Irn Bru on the table will probably persist after you have ceased perceiving it. Therefore, perceptual beliefs can persist after the relevant perceptual experience has ceased and so perceptual beliefs seem to fail to capture the occurrent nature of experience.

The belief theorist could reply that perceptual experiences involve very many inclinations to believe, not all of which could remain after the experience ceased. For example, beliefs about the precise position of the Irn Bru and all the detailed features of complex scenes are often only present when the perceptual experience is being had. Now while there may be complex scenes, about which one only retains all the relevant beliefs while viewing them, this is not applicable for very simple perceptual experiences. Imagine seeing an expanse of uniform white when, for example, standing close to a white wall. The belief that there was a uniform expanse of white could seem to persist after one's experience of it ceased, and plausibly this could be the only perceptual belief that one might have. Therefore, it is difficult to see that there could be a strategy to specify an occurrent propositional attitude that occurred when and only when this experience occurred.

This conclusion, that perceptual experiences are not beliefs, is backed up by bizarre cases of confabulating subjects cited in the psychological literature by Moscovitch (1995). Some subjects, who are perfectly sincere, make up responses to questions or simply confabulate unprompted. The subject matter can concern the subjects' beliefs, hopes and desires but sometimes, in rare cases, completely blind subjects, unaware of their deficit, confabulate by uttering detailed reports about what they claim to see. Confabulation sometimes occurs in patients with memory disorders, confusion or dementia. However, Moscovitch notes that some patients with

specific types of aneurysms who confabulate at first due to mere confusion and general disorientation, may persist in doing so, even when their orientation is re-established. Moreover, the blind confabulators show no sign of memory dysfunction.¹⁴ Moscovitch reports that often confabulations are coherent, internally consistent, probable and commonplace.

Cases of confabulation regarding perception where the subjects are cortically blind, do seem to be problematic for the belief theorist about perceptual experiences. Here the subject does have inclinations to form beliefs about their environment and to believe they are doing so by perceiving that environment, yet the patient is blind. Moreover, we have good reason to think that these subjects are not hallucinating - not undergoing perceptual experiences. A normal hallucinating subject would soon come to realise that they were hallucinating by appreciating that their beliefs about the world were false.¹⁵ Confabulating blind people consistently deny that they have a deficit. Moreover, we have reason from evidence about their brain damage that they are not undergoing visual experiences.¹⁶ This case appears to show that perceptual experiences are more than inclinations to believe.

Thus, it seems reasonable to conclude, in line with the representationalists, that visual experiences and more generally perceptual experiences are a different kind of state from the propositional attitude. This conclusion will be backed up below when we come to consider the type of content that experiences and propositional attitudes have. But now I turn to consider the nature of perceptual experiences and sensations, given that they are not propositional attitudes.

¹⁴Moscovitch (1995) p. 230

¹⁵People who become blind are known to suffer from visual hallucinations but they do not present the symptoms of these confabulators. They, for example, realise that they are blind, realise that they cannot get about their environment without constantly bumping into obstacles and realise that they are simply having hallucinations.

¹⁶Some confabulating subjects have extensive damage to their visual cortex - they are cortically blind. It is thought that the visual cortex has to be intact in order to have visual experiences. For example, it is damage to the visual cortex that produces blindsight patients. See chapter 8.

4 - The Phenomenal Character of Experiences and Sensations

Representationalists hold that perceptual and sensory experiences are states that have phenomenal character. One has to be especially careful when introducing the notion of phenomenal character because many philosophers have denied the existence of phenomenal character when it is characterised in particular ways. I believe, however, that there is a way to introduce the concept of phenomenal character such that most people could agree that perceptual and sensory experiences have it.

Phenomenal character is associated with 'what it is like' to have experiences.¹⁷ For example, that feature which is normally possessed by an olfactory experience when it is produced by newly mown grass or that feature which is normally possessed by a visual experience when it is produced by green apples, are examples of phenomenal character. One's experience of a green apple and a red apple normally differ in their phenomenology associated with colour. Further, phenomenal character is linked with what it is like to have bodily sensations (such as pains, itches and tickles) and what it is like to have emotions (such as sadness, anger and joy). It is also associated with merely seeming to perceive or seeming to have a sensation. (Thus I will say that both seeming to perceive and perceiving involve 'perceptual experiences', similarly for 'sensational experiences'.)

The manner in which I have introduced phenomenal character leaves it open as to whether phenomenal properties are physical, functional, representational or distinctively mental. Phenomenal properties are those properties, whatever they turn out to be, in virtue of which there is something it is like to undergo an experience. Sometimes the term 'qualia' is used interchangeably with this notion of phenomenal character. Used in this way, most philosophers would agree with the assertion that experiences have phenomenal character.

¹⁷See Nagel (1974).

Yet often some philosophers seem keen to deny that phenomenal character exists. This can be explained when one realises that sometimes the term 'phenomenal character' and the related term 'qualia' are taken to be terms which refer to properties that are neither physical, functional or representational. Sometimes they are also used to refer to purported private, inner objects of the mind that are perceived. Used in this way, some philosophers deny the existence of phenomenal character or qualia altogether, because they deny that there can be nonphysical, nonfunctional and nonrepresentational properties and/or because they wish to eschew sense-datum theory.

The following two quotations by Botterill and Carruthers, and Block, exemplifies the difference of usage that exists:

Now, almost everyone accepts that conscious experiences have distinctive phenomenal feels, and that there is something which it is *like* to be the subject of such an experience. And some people use the term 'qualia' to refer just to the distinctive subjectivity of experience - which makes it indisputable that qualia exist. But believers in qualia in any stronger sense maintain that the distinctive feel of an experience is due, at least in part, to its possession of subjectively available *non*-representational, *non*-relationally defined properties. On this view, then, in addition to the distinctive ways our experiences represent the world as being, our experiences *also* have properties which are intrinsic, and which do not represent anything beyond themselves. It is often claimed that qualia are *private* (unknowable to anyone but their subjects), *ineffable* (indescribable and incommunicable to others), as well as knowable with complete *certainty* by the person who has them.¹⁸

Dennett, for example, has supposed in some of his writings that it is of the essence of qualia to be non-relational, incorrigible (to believe one has one is to have one) and to have no scientific nature ... A proponent of qualia ought to allow that categorizations of qualia (beliefs about them) can be mistaken, and that science can investigate

¹⁸Botterill and Carruthers (1999) p. 246

qualia. I think that we ought to allow that qualia might be physiological states, and that their scientific nature might even turn out to be relational. Friends of qualia differ on whether or not they are physical.¹⁹

Thus, although there are two different ways in which the terms 'phenomenal character' and 'qualia' are used, I will stick with the former usage.²⁰ I use the terms 'phenomenal character' and 'qualia' in a neutral way to refer to the 'what it is like' of experience. (For the most part I will use the term 'phenomenal character' to avoid confusion.). Conceived of thus, phenomenal character could be physical, functional, representational or peculiarly mental. This usage is I believe appropriate when it is the very nature of phenomenal character which is at issue.

Phenomenal character, thus introduced, is merely a label for the properties of experience, whatever they are, in virtue of which there is something it is like to have it. Often experiences that are subjectively indistinguishable are said to have the same phenomenal character, those that are not are said to have different phenomenal character.²¹

Many philosophers (including the representationalists) think that it is in virtue of phenomenal character that experiences should be typed. Thus, two experiences with the same phenomenal character are the same experience. Doing so allows that one could have the same experience whether one was veridically perceiving, suffering

¹⁹Block (1994c) p. 514

²⁰Note that some authors use the term 'phenomenal character' to specify the 'what it is like' of experience and use 'qualia' to refer to intrinsic, non-relational properties of experience. See Shoemaker (1996) chapter 12.

²¹There are two main problems with holding that subjectively indistinguishable experiences have the same phenomenal character. The first is that some think that our knowledge of our own phenomenal character is fallible. If this is so then not every judgement about sameness of experiences will mean that those experiences have the same phenomenal character. Nonetheless, such fallibility, does not prevent one from claiming that differences in phenomenal character are what allows one to distinguish experiences, when such judgements are correct. The second problem is more serious. It is that an experience A may be indistinguishable from experience B, and B from C, but A and C are distinguishable. In other words, the identity relation is transitive while the indistinguishability relation is not. For a discussion of this problem and some possible solutions see Bermudez (1999). I will not comment on this problem here.

from an illusion, or undergoing a hallucination.²² However, this view is not universally accepted.

There are a few philosophers - the disjunctivists - who believe that one should not type experiences in this manner.²³ They hold that, although when undergoing a veridical experience and a hallucination things may seem the same to the subject of those experiences, we should not hold that the subjects have identical experiences. Their main reason for holding this view is that they think countenancing a common psychological state in veridical perception and hallucination leads to insuperable epistemological problems regarding our access to, and knowledge of, the world. I believe that these worries are unfounded - see, for example, Millar (1996) and Lowe (2000) - but a discussion of this point would take us too far from our present study. Thus, I will assume, in line with the representationalists, that typing experiences and sensations according to their phenomenal character should not be rejected on these particular grounds.

There are another group of objectors to typing experiences by their phenomenal character. For example, Don Locke says:

A sensation's being pain is not a matter of how it feels, but a matter of it's being the sort caused by bodily damage and leading to pain behavior.²⁴

On this view, the phenomenal character of a state is irrelevant to its being the kind of state it is. Instead, mental states are to be typed according to the functional role of the state.

To some, this view is intuitively wrong, at least in the case of sensations as opposed to perceptions. Kripke, for example, famously held that it was the way pain felt that made it a pain.²⁵ Aside from such intuitions, there are reasons either to

²²See, for example, Dretske (1995) p. 24, Lowe (1996) p. 92, Millar (1991a) p. 12, and Peacocke (1983).

²³See Snowdon (1980) and McDowell (1982).

²⁴Locke (1968) p. 101

²⁵Kripke (1980) p. 146

oppose this view or to hold that it does not prevent demanding an account of phenomenal character, even if states grouped together by common names, such as 'pains', fail to share similar phenomenal characters.

Block and Fodor (1972) argue that if no particular phenomenal character is essential to a sensation's being a pain state, then this would seem to entail that having no phenomenal character at all is compatible with being a sensation's being a pain state. They hold that such a view has the unattractive consequence that someone could be having a sensation of pain - be in a pain - without feeling anything at all. Such a consequence is not just highly unintuitive, but seems to disregard what the concept of sensation is altogether.

Given this result, someone could nonetheless argue that although all pain experiences have phenomenal character, it does not follow that all such experiences have the same or similar phenomenal character. This might be held by someone who (i) thinks that experiences should be typed by functional role, and (ii) thinks that experiences should not be typed in terms of phenomenal character if that is something not fixed or determined by functional role. The problem with this view is that while we can type experiences according to functional role, we can still demand an account of phenomenal character. One could hold that typing experiences by functional role does not preclude also typing them by phenomenal character. One does not therefore escape the demand for an account of what makes for similarities and differences in phenomenal character. This position is supported by Sydney Shoemaker:

If mental states can be alike or different in 'qualitative character', we should be able to speak of a class of states, call them 'qualitative states', whose 'type-identity conditions' could be specified in terms of the notion of qualitative (or 'phenomenological') similarity. For each determinate qualitative character a state can have, there is (i.e., we can define) a determinate qualitative state which a person has just in case he has a state having precisely that qualitative character... If mental states include qualitative states, what such a functionalist says about pain could not be said

about mental states generally, since it would be self-contradictory to say that the character of an organism's qualia is irrelevant to what qualitative states it has.²⁶

Therefore, if we allow someone to claim that pain experiences, experiences of blue and experiences specified in ordinary common vocabulary need not share a similar phenomenal character in order to be typed similarly, one can nevertheless define a class of mental states that are typed by their phenomenal character and demand an account of these. In light of this, one should note the ambiguity associated with phrases like 'experience of pain' and 'experience of blue'. Someone may wish to refer to experiences that are assumed to have similar phenomenal characters, or they may wish to pick out a class of experiences irrespective of their phenomenal character. The intuition that experiences picked out by such phrases share phenomenal character (at least normally and especially when the experiences are had by the same subject) can make us overlook this point. It is important, however, to note that typing experiences by functional role does not allow one to disregard providing an account of experiences typed according to their phenomenal character. In other words, just because phrases like 'experience of blue' may not (in certain circumstances) pick out a unique phenomenal character does not show that experiences could not be typed according to their phenomenal character and therefore does not preclude providing an account of phenomenal character.²⁷

Now the question arises what sort of properties the phenomenal properties of experience are. There have been many answers put forward in the literature: physical, functional, representational and peculiarly mental. As I explained in chapter one, one might hold that phenomenal properties are reducible to a (possibly disjunctive) physical base and hence are identifiable with physical properties. As I then said, the main problem with this theory is that the explanation that mental properties, states or events are physical properties, states or events does not explain how physical things could be identical with something that has the characteristic features that the mental

²⁶Shoemaker (1975) p. 253

²⁷See also McGinn (1982) p. 9 who supports this position.

does. Now just because we do not yet have such an explanation does not necessarily show this theory to be false. But until this problem does have an answer such a theory does not provide a fully naturalistic explanation of mental states.

The functionalist theory claims that experiences have particular functional roles. Thus, for example, it might be claimed that experiences of blue are experiences of the sort that are caused by blue objects and which give rise to beliefs that something blue is before one. Functionalism faces a similar problem to that of identity theory, namely, why does a mental state that has a particular functional role give rise to phenomenal properties? Note that this question could be raised for functionalist theories, even if we are persuaded that functionalism is true - that is, even if we think it is true that types of mental states have defining characteristic functional roles. As in the case of identity theories above, lacking such an explanation would only show that the theory did not yet provide a fully naturalistic explanation for the mind. However, in addition, functionalism has faced a potentially devastating objection that questions the truth of the theory directly.

The objection has been raised by many philosophers such as Block (1980b), (1990a), Dretske (1995), Kim (1998), Putnam (1981), Shoemaker (1975) and Tye (1995a), and is related to the issue (discussed above) regarding the typing of experiential states. The thought that lies behind the objection is that it might be possible for two people to have different conscious experiences when they look at the same colours. Indeed, it is claimed that perhaps the phenomenal character of the experience I have, when I look at red things, is the same as the phenomenal character of the experience that you have, when you look at green things. More generally, perhaps all our colour experiences are systematically inverted in this way. Nonetheless, it is pointed out that because my own colour experiences could bear the same relations to each other as yours do and because we could have been brought up in the same linguistic community, we might make exactly the same colour identifications, calling the sky 'blue' and the grass 'green', and saying that 'green' was

more similar to 'blue' than it was to 'red'. In short, the objection is that it seems that two people could be functionally identical and yet have experiences with different phenomenal character.

There are several different versions of the inverted spectrum hypothesis - intersubjective, intrasubjective, inverted earth, etc. - and there is a considerable literature devoted to discussion of them. Much of it focuses on whether the hypothesis is conceptually coherent or empirically possible (and whether this last point matters).²⁸ However, if the hypothesis states a possibility or an actuality, as the above philosophers believe, then it would seem that functionalism cannot provide an analysis of phenomenal character. Moreover, it will not do, as Don Locke does (quoted above), to hold that the phenomenal character of an experience is irrelevant to the type of experience that it is. As was shown above, if one wishes to hold that experiences should be typed according to their functional role, this does not exempt one from providing, in addition, an account of similarities and differences in phenomenal character, in order to give a fully naturalistic account of such states.

In response to these perceived inadequacies of physicalism and functionalism, Dretske and Tye's representational theories of perceptual and sensory experiences was formed. Experiences, classified by similarities and differences in phenomenal properties, are identified with the properties represented in experience.

The relationship between functionalism and representationalism generally is actually quite complex. Here are three different positions that one might adopt:

(a) One could be a functionalist and not a representationalist. For example, one could hold that an account of the phenomenal character of experiences is to be given by the functional role of those experiences and hold that aspects of functional role other than those concerned with content determine the nature of a mental state.

²⁸I do think that the hypothesis is coherent and our visual systems could have been such to allow for systematic inversion, or perhaps are. I will discuss these points and the inverted spectra hypothesis in more detail in chapter 6.

(b) One could be both a functionalist and a representationalist. One could hold that it is the content of an experience that either determines or is the phenomenal character of experience and, at the same time, hold that what content an experience has is a matter of the functional role of that experience.

(c) One could be a representationalist and not be a functionalist. One could hold that it is the content of an experience that either determines or is the phenomenal character of experience and at the same time hold that what content an experience has is not a matter of the functional role of that experience.

Dretske and Tye are not functionalists, precisely because they think that not only does functionalism without representationalism fail to provide a fully naturalistic theory of the phenomenal character of experiences and sensations, but also because they think that functionalist accounts of content would render the theory open to attack from the inverted spectrum hypothesis. Both Tye and Dretske give accounts of content that play down the role of the behaviour of a subject in determining the phenomenal character of their mental states. For example, consider the following quotations:

It seems, then, we might be indistinguishable in our discriminatory behavior and, yet, different in the way we sensuously represent the objects we perceive. This, of course, is the inverted spectrum problem. The 'problem' is a problem for those - e.g., behaviorists and functionalists - who think the quality of experience must, somehow, be defined in behavioral or functional terms.

The Representationalist Thesis is a naturalistic theory that avoids this problem. The qualitative character of perceptual experience, it concedes, is not functionally definable.²⁹

What ever the merits of this objection to functionalism, it presents no problem for my proposal. On my view it is not part of the nature or essence of phenomenal qualities

²⁹Dretske (1995) p. 72

that they cause distinctive types of behavior that are common to all creatures subject to those qualities... phenomenal states are distinguished from one another via the back-ward looking element of the view, namely, what in the world is tracked in optimal conditions.³⁰

Hence, Dretske and Tye are representationalists of type (c). They do not offer functionalist accounts of the content of experience. Following their lead, I will examine representationalist theories of phenomenal character that are not functionalist. The current literature is replete with discussions of functionalism. I therefore wish to restrict my thesis to non-functionalist versions of representationalism. Representationalism of the kind that Tye and Dretske espouse is interesting because they take it to have advantages over functionalist accounts.

Prima facie, the representational theory can deal with the inverted spectrum hypothesis. Consider, for example, the following intrasubjective version. At first your vision is normal, but then inverting lenses are placed in your eyes. In consequence, everything looks inverted with respect to colour. At first you are confused and misidentify colours, but after a length of time your behavioural dispositions return to normal as you adapt. You can now function normally and identify colours in line with those in your community.

The representationalist can apparently account for these changes. Say that experience P (individuated by its phenomenal character) was tokened in you in response to blue things and represented blueness before the inversion. After inversion, P is tokened in response to yellow things, but still represents blue. This allows for the representational and qualitative aspect of experience to change in tandem after inversion, allowing for the identification of the two. Now if the person

³⁰Tye (1995a) p. 165. Tye explicitly rejects functionalism. See especially Tye (1995a) pp. 62-67, 162 and 207. Often, however, when talking of the inverted spectrum and Inverted Earth argument he compares his position to functionalism. He claims that states which have exactly the same functional role (both narrow and wide functional role), will have the same phenomenal character, but states with different functional roles (either wide or narrow functional roles) can have the same phenomenal character. See Tye pp. 203-205. Thus, his position has some affinity with functionalism, but is clearly distinct from it.

regains all their reactive dispositions, two options are open to the representationalist to explain this. Firstly, a representationalist could claim that as experience P was more and more tokened in response to only to yellow things and not to blue things, then the physical state that realises P would come no longer to represent blueness but come to represent yellowness. The physical state that realised P would come to realise experience Q - experience Q being the experience that represents yellow. As phenomenal character is to be identified with the representational properties of experience on this view, then the phenomenal character or qualia would revert to what they had been before inversion - thus explaining your behaviour's return to normal. Secondly, the representationalist could hold that P remains tokened in response to yellow things but continues to represent blueness. Although your experience remains inverted, you adapt to this change and learn to say that when undergoing a P experience that you are seeing yellow.

I will examine the inverted spectrum hypothesis in detail, and whether the representational theory can adequately account for it, in chapter six. For the moment, note that the representational theory at least appears to have more resources to deal with the hypothesis than functionalism.

Representationalists also claim that their theory provides an account of the mechanism whereby representational states can come to have phenomenal character. That is, they claim that they provide an explanation of why representational states of the appropriate kind are conscious phenomenal states. That representationalists explicitly try to account for the mechanism is a point in their favour. We can only make a judgement on whether it succeeds after further explication of the theory.

Before doing so, consider the final way in which one can think of phenomenal properties - as distinctively mental. If one believes that neither physicalism, functionalism nor representationalism can account for them, then either one can hold that these properties are distinctively mental or one can hold that at least they are highly mysterious. Chalmers (1996), Nagel (1974), McGinn (1991) and Block

(1990a), (1994c) hold versions of this view.³¹ Such views can be taken to be outright non-naturalistic if one holds that phenomenal properties are not functional, representational or physical and that this is required for naturalisation.

Some philosophers might posit distinctively mental entities but hold that this is not anti-naturalistic. They would hold that naturalism need not to involve a physicalist claim.³² Instead, they might hold that investigation of the mental would have to be amenable to scientific-like methodology and explanation. However, most philosophers who claim to be naturalistic try specifically to avoid positing mental entities of this type (see chapter 1). If distinctively mental entities have to be posited, holding that they can in some sense be natural could be an attractive view to some, but for most philosophers it is not. Moreover, on such a view, we have only a promissory note that the mental could be studied in a scientific-like manner and that integration with existing science would be possible. Thus, I will call all views that posit distinctively mental entities non-naturalistic.

Alternatively, someone might hold that although the mental is mysterious, there must be certain links to function, representation or to the physical that we do not yet know of and cannot yet comprehend, thus not denying the attractiveness of the naturalisation project, at least in spirit. Such people often think that phenomenal properties are mysterious and highlight problems with the naturalisation project, but claim that this is to do with the nature of our concepts surrounding experience, rather than the peculiarity of the phenomenon itself. (See Levine (1993) and Jackson (1993b).³³)

I have argued that while physical theories could be true, at the moment there is no fully naturalistic explanation of how they could be true. I have also argued that this

³¹ Block holds that phenomenal properties are neither functional nor representational. Although he holds that in some sense phenomenal properties are physical because they supervene on the physical, he claims that this relationship is as yet inexplicable and that therefore phenomenal properties are nonetheless highly mysterious.

³² See, for example, Chalmers (1996) chapter 4, where he calls this position 'naturalistic dualism'.

³³ Levine (1993), for example, holds that our concept of phenomenal character does not represent a functional role and this is required in order for an explanatory reduction to be made.

holds for functionalist theories. However, functionalist theories face the further worry that specifications of function do not account for phenomenal character, if thought experiments like the inverted qualia one are cogent. Finally, distinctively mental accounts of phenomenal character, or ones that hold it is highly mysterious, also lack strong naturalistic credentials. These theories reflect the problem with accounting for phenomenal character, but at the expense of leaving the nature of experiential states largely unexplained.

The motivation for establishing an alternative naturalistic account of phenomenal character is clear. It is because representationalist theories purport to offer such an account that I have chosen to investigate them in this thesis.

In the remaining part of this chapter I will explain why the representationalists hold that perceptual and sensory experiences have representational content. I will look at reasons for ascribing conceptual and nonconceptual content to experiences. I will argue that, although there are some objections to ascribing nonconceptual content to experience, these can be successfully addressed. Nonconceptual content looks to be the most plausible type of content to ascribe to experiences in order to account for their phenomenal character. In the next chapter, I will proceed to examine the case for the further representationalist claims, including the claims that all aspects of phenomenal character are representational and all differences in phenomenal character are differences in content.

5 - Ascribing Content to Experiences and Sensations

In section one of this chapter, I described the traditional view of propositional attitudes, perceptual and sensory experiences. Propositional attitudes were taken to be the paradigm of intentional states. Sensations were taken to be the paradigm of nonintentional phenomenal states, while perceptual states were held to be hybrids, involving intentional and sensational elements.

Propositional attitudes are clearly intentional. The clause that specifies what is believed or desired identifies the content of the belief or desire. The content of a propositional attitude is what is represented by the propositional attitude - certain actual or nonactual states of affairs. Representationalists hold that both the phenomenal character of sensational and perceptual experiences is wholly intentional, but this goes against philosophical orthodoxy.³⁴ Therefore, before looking at the representationalists' claim that perceptions and sensations are representational, I will look at why people have held that sensations are completely non-intentional and perceptions have a non-intentional element. It is worthwhile doing this because often it is taken to be simply obvious that experiences have non-representational aspects. Moreover, this will help us to explain and assess the representationalists' arguments against this view.

5.1 - The Non-Intentionality of Experiences

Why have people thought that sensations are non-intentional? One reason is that in the case of many sensations, such as a feeling of joy or of pain, there is no joy or pain that exists in the world, other than our feelings of it. Pain or joy are not objects that you feel, in the same way as you can feel the fur of a rabbit. There is the rabbit's fur and there is the feeling of the rabbit's fur; but pain and the feeling of pain, joy and the feeling of joy, someone might suppose, are one and the same thing. If there is nothing in the world for sensations to be about they must be non-representational. Colin McGinn expresses just this view thus:

bodily sensations do not have an intentional object in the way that perceptual experiences do. We distinguish between a visual experience and what it is an experience of; but we do not make this distinction in respect of pains. Or again,

³⁴The representationalist position is certainly gaining more ground of late, but the idea that all features of both perceptual and sensational experiences are representational is still rather novel. Tye certainly thinks he is going against the grain. See Tye (1995a) p. 131.

visual experiences represent the world as being a certain way, but pains have no such representational content.³⁵

This is part, but not all, of the story. Consider the feeling of heat. Usually when we feel heat, we think that we are detecting or reacting to an objective property in the world - temperature. Of course we can have feelings of hotness when there is no high temperature around - perhaps in a hot flush. But suffering from illusions or hallucinations of heat do not preclude our accurately detecting temperature through sensations of heat sometimes. Could sensations of heat not represent temperature? I think that some people have thought not because there appears to be too great a gulf between the sensations associated with hotness and coldness and the objective property of temperature. For example, Clark states, "The heat of the coffee mug does not present itself as mean kinetic energy of molecules".³⁶ Although we describe objects as being hot, some people have thought that those objects don't possess the property of *feeling* hot. They do have a high temperature, and this means that they have a disposition to cause feelings of heat in us, but they don't in and of themselves *feel* hot. This is a further reason why I think some people have held sensations to be non-representational. They believe that sensations of heat don't represent heat in the world, for there is none. There is only temperature - the movement of molecules - and the disposition to cause feelings of heat. Thus, some people have held that sensations of heat may often be correlated with temperature, and they may lead us to form beliefs about temperature, but they are themselves non-representational.

Lastly, consider the sensation of feeling a rabbit's fur. Normally when undergoing such a sensation we are feeling some independently existing object - the fur. In these cases, not only is there an object or state of affairs that normally causes the sensation, but unlike the cases of joy, pain and heat, it is plausible to think that the properties we sense are objective, independently existing properties - hairiness, softness etc. Some

³⁵McGinn (1982) p. 8

³⁶Clark (1993) p. 3

people have held that, unlike the case of heat, sensations such as these resemble mind-independent properties of the world.³⁷

To assess this type of sensation further, consider the traditional view, espoused by Thomas Reid, of the difference between sensation and perception. He claimed that sensation "hath no object distinct from the act itself". In contrast, he held that perception involved a "conception or notion of the object perceived", and a "strong and irreducible conviction and belief of its present existence", which, moreover, are "immediate, and not the effects of reasoning".³⁸ Reid also claimed that perception is accompanied by sensation, but it is not logically necessary that perception and sensation should occur together. Sensation is usually required for perception, but strictly speaking the two could come apart. One does not infer perceptual beliefs from sensations, but sensation may 'suggest' perceptual beliefs.

To the extent that it is right to consider feeling the rabbit's fur as involving pure sensation only, someone who thinks of the sensation as non-representational must think of the links between the sensation and the properties in the world as contingent. The connection between feeling the sensation and thoughts of what it is a sensation of must not be immediate or direct, in something like the way Reid suggests. Yet, given Reid's account here, it appears more plausible to say that in touching the rabbit's fur one is perceiving the rabbit's fur. This allows us to confirm that we seem to be experiencing an object in the world, in the way that differs from sensations of pain or heat. If this is correct, then on Reid's account there is perception of the rabbit's fur which is accompanied by a characteristic sensation. Reid's view is explicitly endorsed today by Humphrey. He argues that when, for example, we smell a rose there is both "perception of the rose as having a sweet scent", and the "sensation of myself being

³⁷See Guttenplan (1994)

³⁸Reid (1941) Essays 1 & 2. (first published in 1785), quoted in Hamlyn (1994) p. 460.

sweetly stimulated".^{39, 40} I think the central thought here is that there is an aspect of touching the rabbit's fur that can be thought of as a pure sensation, akin to pain and heat. There is also a perceptual element, which involves the representational aspect, while the sensation is a non-representational accompaniment.

This exhausts the reasons why people have thought sensation is non-representational. I will now turn to consider reasons why people think perception involves non-representational aspects.

To begin, consider Reid's account again. He thinks that in perception we immediately and directly have a conception of objects existing in the world. This, in modern parlance, provides the representational aspect of perception. Yet he also thinks that perception is usually accompanied by sensation, which is non-representational. On this 'two factor' account, the non-representational sensational element is logically distinct from the perceptual element in perception - one could (at least in theory) have either without the other. Many modern accounts of perception do not take it to involve two separable factors in quite this way, although they take a perceptual state to have both representational and non-representational aspects (but see Humphrey above), so I will turn to consider Block's account of visual experiences. I choose his account because he spells out clearly what he thinks the representational and non-representational aspects are.

³⁹Humphrey (1993) p. 28. He notes that on Reid's account there is an ambiguity between whether perception involves a sensational and perceptual aspect serially or in parallel. Humphrey argues that the parallel approach is warranted because there are cases where perceptions can occur without their characteristic sensations and vice versa.

⁴⁰Humphrey agrees with Reid to the extent that he thinks perception and sensation are distinct. Humphrey argues that perception involves representation of the external world, while sensation arises in response to what is happening directly to my body. Sensations are instructions issued by the brain for the control of the body which are held in a feed-back loop. One may think such instructions are representational, but they certainly do not represent the world in the way perceptions do. His account of sensation therefore may be said to involve representations in some sense, but they are not of the kind involved in perception. His account is therefore substantially different from Tye and Dretske's. I will be considering Humphrey's account only in so far as it suggests that perception and sensation are very different and can be dissociated. I will speak as if Humphrey's account of sensation is non-representational, on the grounds that it is not representational in the way perceptions are, but this must be taken to be qualified in the way specified here.

In, "Mental Paint and Mental Latex", Block holds that when we perceive, we have an experience with phenomenal character and we normally make judgements about the objects we see or seem to see.⁴¹ Block holds that judgements are representational. Similar to Reid, Block holds that perceptual experience is independent of judgement but, unlike Reid, Block holds that the non-judgmental aspect of perception (perceptual experience) itself has representational and non-representational aspects. These experiential representational and non-representational aspects are not logically independent from each other, for, according to Block, phenomenal character involves non-representational sensational elements, which are the vehicles for the content of experience. Therefore experiences represent (when they do) in virtue of their non-representational features. According to Block, some of the phenomenal character of experience will be the vehicle for the content of the perception; other elements of the phenomenal character will be completely non-representational. I will explicate his arguments for the former first.

Consider the veridical experience of seeing a red tomato. According to Block, the phenomenal character of this experience represents a red round tomato. The phenomenal character is the vehicle for the representational content. Some of the vehicles of content represent what they do necessarily. Block gives the example of shape properties.⁴² The phenomenal characters associated with seeing squares allow one to see that they could form a tiling with no gaps, whereas that associated with circles do not. On the other hand, some of the vehicles for the content are only contingently vehicles for that content. For example, Block holds that the phenomenal character associated with redness only contingently represents red because he thinks that inverted spectra are possible. The phenomenal character that is normally tokened in response to red things, and hence represents red in me, could represent blue in you. Thus, for Block there is more to phenomenal character than its representational content.

⁴¹Block (1996). See also Block (1995a) and (1995b).

⁴²Block (1995a) p. 278

Block also believes that this conclusion is backed up by introspective evidence. He describes Bach-y-Rita's experiment where blind people were given a kind of vision by making a camera mounted on a subject's forehead cause a device to stimulate appropriate tactile sensations on their back.⁴³ Subjects came to be able to identify objects in front of them, could accurately point to objects in space, judge their distance and absolute size and formed a conception of objects being located in a stable three-dimensional world. Bach-y-Rita reported that the subjects normally attended to what they were 'seeing' (the objects in front of them in the world) and not to the sensations on their back. However, if they were asked to do so, they could, in retrospect, recall and attend to the sensations on their back. From this, Block draws the moral that, similar to Bach-y-Rita's subjects, when normally sighted people see things they usually focus on what they are seeing (objects in the world), but they can also switch their attention and focus on the nature of their experience itself - the non-representational aspect. We can attend to the phenomenal character of our experience without attending to the representational aspects of it. Thus, Block holds that some phenomenal character is a vehicle for representational content. Such phenomenal character either represents what it does necessarily (as in the case of shape properties) or only contingently (as in the case of colour properties).

Nicholas Humphrey draws further conclusions from Bach-y-Rita's experiment.⁴⁴ He holds that people with ordinary vision perceive the world and have (non-representational) visual sensations, while Bach-y-Rita's patients perceive the world and have (non-representational) tactile sensations.⁴⁵ He concludes that this shows that the same perceptions can be accompanied by different sensations. Extrapolating from Humphrey's two factor account, one might hold that on Block's model of perception this shows that different phenomenal characters can represent the same things. The

⁴³Bach-y-Rita (1972) - reported in Block (1996) and Humphrey (1993) chapter 10.

⁴⁴Humphrey (1993) chapter 10

⁴⁵Bach-y-Rita claimed that his subjects had genuinely acquired visual perception, on the grounds that "If a subject without functioning eyes can perceive detailed information in space, correctly localize it subjectively, and respond to it in a manner comparable to the response of a normally sighted person, I feel justified in applying the term 'vision'" (quoted in Humphrey (1993) pp. 59-60).

phenomenal character associated with tactile stimulation on the back and that associated with light stimulation on the eyes can both represent objects in three dimensions at a distance from the body. Thus, there would be more to phenomenal character than its representational aspect.

A similar argument, given by Block, focuses on the cross-modal nature of ordinary perception.⁴⁶ Rightly, he claims that experiences in different sense-modalities share some of the same representational contents. For example, I can feel a square and see a square; I can feel a furry rabbit and see a furry rabbit. These pairs of experiences will contain much disparate content too. In seeing a square I will see it as being some colour and see the backdrop against which the square appears. I will not feel this. When I feel the rabbit, I feel its temperature, but I do not see this. Block maintains that although there is a common representational aspect in these cases there is not a common phenomenal character, and thus different phenomenal characters can represent the same thing. Thus phenomenal character must have a non-representational aspect.

Block also believes that some phenomenal character is not a vehicle for representation at all. His main examples are of sensations such as orgasm and pain.⁴⁷ He allows that there will be some representational aspects to these states, such as that concerning locations on the body, but he thinks that such states obviously have a 'phenomenally impressive' nature that eludes capture by specifying the representational content that such experiences have. This is very like the traditional view of sensations (discussed above) as non-representational, with the exception that certain representational aspects are admitted such as felt location. Nonetheless, there is felt to be a central non-representational aspect.

In summary, many philosophical theories of sensations hold that they do not have any representational aspects. The main reason is that there is taken to be nothing in

⁴⁶Block (1995a), (1995b) and (1996)

⁴⁷Block (1995a), (1995b) and (1996)

the world that corresponds to the sensation. Some theories, such as Block's, allow that sensations may have some representational content (in particular regarding felt location) but that there is nonetheless an important aspect of sensations that remains non-representational. The accounts of perception that take it to involve a non-representational aspect divide roughly into two. There are those that think of perception as involving a judgmental, representational aspect together with a quite distinct sensation that is the normal accompaniment of the representational aspect. The accompanying sensational element is non-representational in the way that sensations alone are. The second account has it that perception involves (representational) judgements and perceptual experiences. The phenomenal character of these experiences has both representational and non-representational elements. A particular phenomenal property may represent different things either in different subjects or in the same subject at different times. Moreover, different phenomenal characters can represent the same things. In short, there is more to phenomenal character than what it represents.

I will now turn to begin to consider the representationalists' claim that the phenomenal character of sensations and perceptions is identical with or constituted by the representational content of those states. I will firstly explain why they hold perceptual experiences have content at all, and explain what kind of content that is. I will then consider some objections to their position. In the next chapter I will then go on to consider their further identity/constitution claim.

5.2 - The Intentionality of Experiences

To explain why representationalists have thought that phenomenal character is identical with or constituted by representational content, it is necessary to begin by examining a weaker claim, namely, that perceptual and sensational experiences have content per se. Thus, I will firstly look in detail at why one might hold that experiences have content at all and what sort of content this is. Once this task has been accomplished we will be in a position to assess the stronger claim that all

phenomenal character can be accounted for by ascribing representational content to experiences.

There is a distinction between the content of a representation and the vehicle of the representation.⁴⁸ Content is what is represented and therefore concerns certain objects, properties and relations. Vehicles of representations (or equivalently, vehicles of content) are the properties of a representation that, in part, enable it to be the representation that it is. The vehicle of representation may not by itself allow it to represent what it does. This is because there may be features external to the representation that are required in order for the representation to represent what it does. Such features may include the context or the environment in which the vehicle of representation is tokened. Let us reflect a little on what sort of things have been taken to be vehicles of representations, besides experiences.⁴⁹

(a) Propositional Attitudes - The idea that mental states have content is traditionally applied to propositional attitudes, such as believing, hoping and desiring. One can believe that one's car has broken down or desire that it does not break down. Believing or desiring something to be the case requires that the subject of the propositional attitude possess the concepts which go to make up the content of the attitude.⁵⁰

Propositional attitudes are often said to exhibit intentionality. Intentionality is just another word for 'aboutness', but it is often restricted to cases where representation occurs in propositional attitudes. In particular, it is often used to capture the fine-grained nature of propositional representation - the idea that two representations can have different content, even though they are about the same objects, properties and relations. For example, believing that Glasgow is rainy is different from believing that Scotland's largest city is rainy. One can believe one without believing the other.

⁴⁸See Seager (1999) p. 175 and Dretske (1995) pp. 35-36.

⁴⁹These types of lists are to be found in several places. See, for example, Davies (1995) and Cummins (1989).

⁵⁰See footnote 56 below for further explication of this point.

(b) Linguistic and Pictorial Items - Public linguistic items such as written or spoken sentences represent states of affairs. What they represent is determined by convention in the sense that any particular word or symbol could have represented something else. This is illustrated by the fact that different words can represent the same state of affairs. The state of affairs represented by 'The car has broken down', can be represented by the Spanish 'El coche se ha estropeado'. Similar to this are pictures, maps and symbols that may represent due to conventions.⁵¹

(c) Natural Indicators - Certain states of affairs or events in the world seem to indicate that other states or events are the case or will follow. The number of rings in a tree trunk indicates the age of the tree. The angle of smoke as it comes from a chimney indicates the speed of the wind. It is generally held that such natural indicators represent conditions which do or will obtain and, furthermore, that unlike other kinds of representation, these indicators cannot misrepresent. That is, they cannot represent that which is not or will not be the case.⁵²

In opposition to this, some philosophers hold that natural indicators can misrepresent. Are there cases of misrepresentation which one can identify? Two examples spring to mind. Firstly, the redness of rowan berries in autumn is meant to indicate the harshness of the coming winter. One could imagine them being very red and hence representing a bitter winter, when in fact it turns out rather mild. Secondly, one is often told that anvil shaped clouds mean there will be thunder. Yet, one could see such clouds without there being a thunderstorm. On the other hand, one might refuse to count unreliable indicators as 'real' examples of natural indicators and hold that these are simply cases of rough correlations between natural features of the world that people have discerned.

⁵¹Pictures, maps and symbols can involve at least some representing by convention. The representation of the various saints in religious painting involves the depiction of items that feature in an account of their lives. Maps use symbols, the meaning of which is given in a key to their use. Whether all aspects of pictorial representation involve conventions, or whether there is an element that represents in virtue of resembling the object in question, need not detain us here.

⁵²Dretske (1995) holds this view. Natural indicators, he argues, cannot misrepresent until they have acquired the function of indicating something. Tye (1995a) opposes this. I will say more about these views later in section 5.2.2.

On one view, natural indication is independent of mental representation. This view has some plausibility when one considers that the number of rings in trees will continue to be the same number of years that the tree is old, whether or not anyone looks or recognises this fact to be true. Similarly, the angle of smoke from, say, a volcano will correspond to the wind speed regardless whether anyone notices this fact. On the other hand, some philosophers hold that all such cases are parasitic on and dependent on mental representation. Natural indicators would only represent to the extent that someone might, say, come to form the belief that it was very windy given the angle of the smoke rising from the chimney.

(d) Subdoxastic States - Subdoxastic states are unconscious psychological or cognitive states that are not themselves propositional attitudes but which cause or causally sustain the propositional attitudes. They are often taken to be identifiable with brain-mechanisms. Psychologists often impart information carrying and hence representational properties to physical brain mechanisms. The status of these representations is particularly unclear. In the case of brain states, they are physical states of the world which are held to be capable of misrepresenting - carrying false information. Moreover, they do not seem to require the subject of these states to be concept possessors. For example, brain states involved in vision may carry information about wavelengths of light, but one does not have to possess this concept in order that one's brain states carry information about this. Subdoxastic states are not objects of consciousness in the normal course of events. That is, day to day you are not conscious of your own brain states or unconscious psychological processes. Yet they can become objects of study by, for example, neurologists or psychologists.

5.2.1 - Ascribing Conceptual Content to Perceptual Experiences

People think that perceptual experiences represent because they inform us about the world. By looking at why and how other mental states are ascribed content - in particular the propositional attitudes - a case might be made for visual experiences having content. Having a propositional attitude requires one to stand in a certain

relation to a content. Believing that something is the case, or hoping that such and such happens, are said to be particular attitudes taken to a content. The content is demarcated by a 'that' clause which states what is believed, desired or wished. Thus, if Murdo believes that toads are slimy, then the proposition, 'toads are slimy', specifies the content to which he takes the attitude of believing, that is to say, he holds the proposition to be true. A content is something that is about certain objects or properties or relations. Furthermore, a content is also said to be something that has correctness conditions.⁵³ Content correctness conditions are conditions under which the content represents the world correctly. Thus, there is some way objects, properties and relations could be that would make the content true, and another way that would make the content false.

With this notion of propositional content in place, one can apply it to visual experiences. When someone has a visual experience it may seem to them as if they are seeing something. They may in fact be seeing something and they may be seeing it as it really is, that is, they may be having a veridical visual experience. Alternatively, they may not be seeing the object as it really is but nonetheless they may still be seeing it. This would be to be subject to illusion. A well known example is the Müller-Lyer illusion, in which one sees two lines of equal length that appear unequal in size. On the other hand, it may seem to a person as if they are seeing something when in fact nothing is seen. This is to be subject to a hallucination. In all these cases, when someone has a visual experience it seems to them as if P, and the proposition that specifies how it seems to be also demarcates the content of the experience. Thus, if Murdo has a visual experience such that it seems to him as if there is a slimy toad on a rock, then the propositional content of that experience is, 'there is a slimy toad on a rock'. This is the case even if, for example, Murdo knows that he is prone to hallucinations and does not believe that there is a toad on a rock.

⁵³See Peacocke (1992)

This notion of propositional content with regard to visual experiences is explicated by, amongst others, Martin, McGinn, Millar and Peacocke.⁵⁴ It is emphasised that this notion is tied to a subject's point of view. That is, the content represents that *P* to the subject of the experience. How things *seem to* an experiencer is the relevant factor. Attributing propositional representational content to experiences underlies the conviction that the main purpose of perception is to yield information about the world to a subject, and hence that experiences represent the world.

The propositional content outlined above is conceptual content. This is because if it seems to a subject that they are seeing a slimy toad then the subject of the experience must have the ability to have the thought that there is a slimy toad. The way an experience seems to a subject is tied to a subject's cognitive abilities. As Millar puts it, "an experience is such that *it seems to you that an F is there* if and only if you would believe that an *F* is there in the absence of countervailing considerations".⁵⁵ In order to have a visual experience, a belief, or an occurrent thought, or any mental state containing propositional content, one must possess the concepts that feature in the content. To grasp the propositional content one must grasp the concepts which comprise that content.⁵⁶ This thought is prominent in Evans, Fodor, Martin, Millar, Peacocke and Rey.⁵⁷ In this sense, the content so far outlined is conceptual content, requiring that the subject be in possession of the concepts which describe how the experience seems to them.

⁵⁴Martin (1994), McGinn (1982), Millar (1991a), Peacocke (1983)

⁵⁵Millar (1991a) p. 19.

⁵⁶The conditions that need to be satisfied in order for a subject to have mastery or possession of a concept is the subject of much philosophical work. Concepts are thought to be constituents of thought and shareable by different thinkers. Possessing minimal rationality is often taken to be a necessary condition for concept possession. This is because concepts that are constituents of contents of propositional attitudes are subject to logical relations. If one believes that a toad is slimy, it is rather important that one does not also believe, for example, that toads are both slimy and not slimy. One way to take the requirement that to have a belief a subject must possess the concepts that feature in the content of the belief is to note that to possess a concept is to have the cognitive ability to think of an object or property in a certain way. If I believe that my car has broken down, then in order for this belief to be a belief about my car, it is plausible to think that I must also have certain other beliefs about cars, for example, that they are a means of transport and are motorised vehicles. In other words, it seems that for a belief to have the content that it does, it is plausible that it has to stand in certain logical and semantic relations to other beliefs - I should normally not believe both *P* and not *P* and I must have other beliefs about what cars are. A full investigation of this subject lies outside the scope of this thesis. For a general survey of the area see Rey (1994) and Crane (1992b).

⁵⁷Evans (1982), Fodor (1991), Martin (1992), Millar (1991a), Peacocke (1992), Rey (1994)

5.2.2 - Ascribing Non-Conceptual Content to Perceptual Experiences

When attributing specific propositional attitudes to people, one consideration is certainly what they say they believe and desire to be the case. However, this is often not the only consideration. In attributing propositional attitudes, a subject's non-verbal behaviour plays an important role. Beliefs and desires are ascribed to subjects on the basis of what makes the subject intelligible. Thus, for example, if you claim not to be sexist but constantly discriminate against men on no apparent grounds other than their gender, then one might credit you with really believing that men are inferior, despite your protestations otherwise. Making the best sense of a subject's behaviour in the circumstances leads to ascriptions of propositional attitudes with a certain conceptual content.

Generalising this strategy to include visual experiences, it might be thought that one should ascribe conceptual content to experiences when this makes the best sense of the subject's subsequent behaviour. For example, if I know that you are thirsty and I know that Irn Bru is your favourite drink, then seeing you reach for the glass of Irn Bru amongst the glasses of water on the table might lead me to hold that you had a visual experience that had the content that there was a glass of Irn Bru on the table. (You might also have formed the belief that there was Irn Bru on the table given that you had an experience which had that content.) Ascribing visual experiences with a certain content may make the best sense of a subject's behaviour and make the subject's actions intelligible.

There may be pressures, however, to ascribe content even when the subject of the experience either does not possess the concepts that are used to specify the content or possesses no concepts at all. Unlike the case of propositional attitudes, where it is held that a subject cannot have a certain propositional attitude without possessing the concepts that comprise that content, it might be thought that a subject can have an experience with a content, even though they do not possess the concepts that are used

to specify the content. This is because ascribing nonconceptual content is the best, and perhaps only, way to make sense of the subject's behaviour.⁵⁸

One example of this is the behaviour and experiences of animals. It is feasible that animals who lack a specific concept can nonetheless have visual experiences with nonconceptual contents related to the concept lacked. As Dretske argues, the most plausible supposition to explain how one can train an animal to discriminate between various properties is that the information or content needed to make the discrimination already existed in the experience of the animal.⁵⁹ If the content did not exist in the animal's experience prior to learning, how could they learn to discriminate? Moreover, prior to learning, the animal does not possess the relevant concepts as is evinced by both their lack of language and their initial inability to discriminate. Thus, the content in question must be nonconceptual content. Attributing nonconceptual content to the animal's experiences prior to learning is one way that we can explain the animal's learning behaviour, despite their inability to discriminate between those contents prior to learning.⁶⁰

Another similar case is that of monkeys which were successfully trained to discriminate a 'larger-than' relation with respect to rectangles. When presented, however, with three rectangles of differing sizes they could not be trained to pick out the intermediate-sized rectangle. Yet, given they could discriminate the 'larger-than' relation, their experience of three different sizes of rectangles must have contained the content that one rectangle was larger than a second rectangle which in turn was larger than the third, and hence there is excellent reason to think that it logically follows that the content of their experience included that there was an intermediate-sized rectangle.⁶¹ Because the monkeys were incapable of picking out the intermediate-

⁵⁸Bermudez (1995) explains and illustrates this idea in great detail as it pertains to infant perception with reference Baillargeon's (1987) draw-bridge experiments.

⁵⁹Dretske (1981) chapter 6

⁶⁰See Dretske (1995) pp. 11-18 and p. 172, footnote 16.

⁶¹See Dretske (1981) chapter 6. The animal study was conducted by Klüver and was reported by Gibson (1969).

sized rectangle, it is reasonable to suppose that they did not and could not possess this concept, and so the content in question must be non-conceptual.

So far we have been looking at reasons to ascribe nonconceptual content to the experiences of subjects who lack either all, or the appropriate, concepts. If one accepts these reasons then one might hold that when subjects lack the appropriate concepts then one should ascribe nonconceptual content to their experience.

While this reasoning might tend to suggest that subjects who do possess the appropriate concepts also have experiences with non-conceptual content, on the grounds that human adult experiences are similar to infant and animal experiences, such a conclusion does not strictly follow. Are there further reasons to think that subjects that do possess the appropriate concepts have experiences with nonconceptual content? In addition, these type of considerations say little about the relation of the content of experiences to the phenomenal character of experiences. Tye and Dretske hold that phenomenal character is identical with or constituted by representational content, and they hold that this type of content is nonconceptual. In other words, all creatures that have experiences are in states that have nonconceptual content, not just those that lack the concepts necessary to specify the content. So what further reasons do representationalists have for ascribing nonconceptual content to all experiences?

The representationalists hold that perceptual and sensory experiences carry information about the world and thus represent the world to be a particular way. Both Tye and Dretske hold that the way experiences represent is akin to the way natural indicators represent, but their accounts differ slightly. Let us begin with Tye's account. He holds that natural indicators, such as the rings in the trunk of a tree, can represent the age of a tree, because, under optimal conditions, the number of rings is both caused by and covaries with the age of the tree. Sometimes, conditions will not be optimal (disease or bad weather may strike) and so misrepresentation can occur. Tye believes that experiences represent things in the same manner, namely, by

causally covarying with those things (in optimal circumstances). For example, experiences of red will be those that in optimal conditions are caused by and covary with red objects. Misrepresentation will occur when conditions are not optimal.⁶²

Dretske holds that natural indicators are of two kinds. There are those that carry information, but do not have the function of representing. One example he gives of this is the smoke which rises from a volcano that carries information about the wind speed. He claims that it is not the function of the smoke to carry such information about the wind speed and thus the smoke cannot misrepresent the speed. We may take it to represent something that it does not, but this is our misrepresenting states of affairs, rather than any misrepresentation on the part of the natural indicator. On the other hand, Dretske claims (explicitly without argument) that there are natural, and man-made or conventional, indicators that have the function to represent. Conventional indicators get their functions from their designers, while natural indicators derive their functions from their biological, evolutionary history. Indicators with functions can misrepresent, on the grounds that they can continue to have the function to indicate certain things when they no longer do, due to external circumstances or malfunction. Experiences, he claims, are natural indicators that have the function to represent that which they do. Thus, for example, experiences of red represent red in virtue of having the function to represent red, endowed on them by natural selection.⁶³

On both Tye's account and Dretske's account, experiences are representational in virtue of being natural indicators of certain states of affairs. Experiences represent that which they optimally covary with or have the function of indicating. Recall that the representationalist account of experiences is that they are to be typed and individuated by their phenomenal character. Given this, an experience will represent what it does in virtue of the phenomenal character that it has. An experience, falling under some physical description, covaries with, or has the function of indicating,

⁶²Tye (1995a) pp. 100-105

⁶³Dretske (1995) pp. 1-6

some object or property or state of affairs, and in doing so comes to represent that and have the phenomenal character that it does.

So far, this account of experiential representation does not require that subjects of experience possess concepts in order for their experiences to represent. But this alone does not show that the content of experience is nonconceptual. For it could be that experiences have their content in virtue of being like natural indicators, but in order to be the subject of such an experience, one does have to possess the relevant concepts. For example, it could be that a nonexperiential state has nonconceptual content, but for that state to become an experience of a subject, the subject must possess the relevant concepts. Therefore, to fully establish that we are justified in ascribing nonconceptual content to experiences, the representationalists argue that to have an experience with phenomenal character, one need not possess the concepts that specify what an experience with that phenomenal character represents. There are two main arguments given. The first is that it is plausible to think that a subject who lacks the relevant concepts can have the same experience (an experience with the same phenomenal character) as a subject who does possess the relevant concepts. The second is that reflection on the phenomenal character of our ordinary human adult experience shows it to have a richness and fineness of grain that out-strips our conceptual capacities. If subjects do not require appropriate concepts to have experiences with phenomenal character, but such experiences nonetheless represent, in virtue of being natural indicators, then the content of such experiences must be nonconceptual.⁶⁴

To fully comprehend this view, consider again, the ascription of conceptual content to experiences. An experience was said to have the conceptual content that X if and only if (in the absence of countervailing considerations) the subject of the experience would believe that X. The representationalists hold that although one may

⁶⁴See Cussins (1990) for an influential account of nonconceptual content. He claims that nonconceptual content is that content which can be specified by nonconceptual properties. A nonconceptual property is one that is canonically characterised in terms of concepts that a creature need not possess for the property to apply.

perfectly well ascribe conceptual content to experiences in this manner, to do so does not individuate experiences. They do not think that conceptual content individuates or captures the phenomenal character of experiences. In so far as one can ascribe conceptual content to perceptual experiences, representationalists hold that this is more indicative of, or descriptive of, beliefs that accompany perceptual experiences, rather than those experiences themselves. For example, Dretske says that there is a doxastic sense of perception, in which to see something as an F requires that one possess a concept of an F, and that one (in the absence of countervailing consideration) classify or identify what one sees as an F. Yet he holds that the doxastic sense of perception does not capture similarities and differences in the phenomenal character of perceptual experiences.⁶⁵ For example, he says:

if the dog looks the same to Susan as it looks to me, and it looks to me like a poodle, then it must look to Susan like a poodle, whether or not she understands what a poodle is, whether or not she has the concept of a poodle. Following a long tradition, I will call this the *phenomenal* sense of "look"⁶⁶

Dretske is here trying to motivate the view that it is plausible to think that there is a sense of "looking the same" which is independent of the conceptual capacities of the subjects and hence independent of the conceptual content of experiences. In other words, the phenomenal character of an experience is independent of the conceptual capacities of the subject of the experience and independent, therefore, of beliefs that a subject would form on the basis of that experience.

Many people share the intuition that when two subjects (with similar visual acuity) look at the same object, there is something in common between their two experiences, even when the conceptual content of their experiences differs. For example, Millar asks us to imagine the experiences of a possessor of the concept

⁶⁵Dretske (1995) Chapter 3, section 1.

⁶⁶Dretske (1995) p. 68

'pumpkin', and someone who lacks this concept, when faced by a pumpkin.⁶⁷ The pumpkin concept possessor may have a visual experience such that it seems to the subject as if a pumpkin is there, and so they will be in a state that has the conceptual content that a pumpkin is before them. The other subject will not be in a state with this conceptual content, however, because, as this subject does not possess the concept of a pumpkin, it cannot seem to that subject as if a pumpkin is before them. Yet Millar claims that despite these differences there is some experience with the same phenomenal character that both subjects share. They are both seeing a pumpkin and have the same 'pumpkin-type' visual experience. That is, an experience of the type which you would have if a pumpkin were available to the relevant sense modality. On the representationalist theory this would indicate that there is an experience with a certain phenomenal character, and hence nonconceptual content, which both subjects share.

There is an objection to this particular way of arguing that visual experiences have non-conceptual content. The objection is that if the vocabulary that is used to specify the content of the experience is restricted to terms that relate only to the appearances of things, then the above argument does not reach its intended conclusion. Colin McGinn argues that we should limit what concepts can feature in the content of a visual experience.⁶⁸ He claims that only observational concepts, that is concepts which are fully manifestable to the senses - those which are only about the appearances of things - should be used to accurately describe the content of visual experience. He claims that there are many concepts such as 'tiger' or 'water' that are nonobservational. That is, what it is for something to be a tiger does not depend on what it looks like, but its inner constitution. Similarly, what makes a sample one of water is that it is composed of H₂O, not that it looks clear and liquid. Thus, a tiger

⁶⁷See Millar (1991a) p. 32. He does not use the vocabulary of nonconceptual content or phenomenal nonconceptual content.

⁶⁸McGinn (1982) Chapter 3. It should be noted that although McGinn treats the content of experience as conceptual, he does not argue that limiting the concepts which can describe the content of experience is an argument against nonconceptual content. He does not consider that the content of experience might be nonconceptual.

and a fake tiger could yield experiences with the same phenomenal character, in virtue of having the same observational properties. The concepts used to specify the content of experiences should therefore be limited to colour, texture, shape and similar observational concepts.

Prima facie, one can employ this argument to show that two people who look at a pumpkin, one of whom possesses the concept 'pumpkin', the other of whom lacks it, can have the same visual experience, without the need to invoke nonconceptual content. If we allow pumpkins to feature in the characterisation of the content of experience then the pumpkin concept possessor and non-possessor will not have experiences with the same content. If, however, we restrict the concepts to those that relate to the appearance of things, for example size and shape, then to both the pumpkin concept possessor and non-possessor, it may seem as if a spherical, orange thing is present and so both will have the same experience. As long as we restrict what concepts can feature in visual experience to observational ones, we can account for why the pumpkin concept possessor and non-possessor have the same visual experience with the same phenomenal character while postulating only conceptual content.

There is good reason, however, to think that limiting the conceptual content of experiences in this way does not obviate the need to posit nonconceptual content. This is because it appears that one can have a visual experience of properties of the appearance of objects without possessing the corresponding observational concepts. There are two main reasons to believe this. The first is cited by Dretske, who claims that children and animals that lack the appropriate observational concepts can still have experiences with phenomenal characters that represent observational features. He says:

A child or animal might be visually aware of the shirt's colour (their visual experience of the shirt being, as they say, suffused with blueness) without their

knowing or thinking that the shirt is blue - without sorting (or having any disposition to sort) the shirt with other blue objects.⁶⁹

As evidence for this he cites empirical studies of cat vision. It was once thought that cats were colour blind because they failed to discriminate between colours, as was evinced by their behaviour. It is now known that cats do have colour vision. Although they do not display the normal appropriate discriminatory behaviour, under special conditions and with special training they can respond to differences in colour. Dretske says that cats without this special training can *perceptually* discriminate colours although they cannot *behaviourally* discriminate between colours.⁷⁰

The second reason is espoused in particular by Tye and focuses on adult human vision.⁷¹ Consider shades of colours. The number of different shades of colour that people can discriminate between is around ten million.⁷² (These shades, identified by discriminative abilities, are often named by subscripting, for example, red₂₉ or red₃₂.) Thus, for example, red₂₉ and red₃₂ will produce experiences with different phenomenal characters in a subject. The number of shades of colour which can be identified on an absolute basis, however, varies from subject to subject but probably never exceeds a few hundred. In practical day to day situations the number reduces drastically to about twelve.⁷³ The fact that people do not have colour words for each discriminable shade, together with the fact that such discriminable shades cannot be identified on an absolute basis, leads Tye to conclude that while we possess concepts for colour types such as red, scarlet and burgundy, we do not possess colour concepts for the particular shades of colour that we can discriminate between. On the representationalist view, it is plausible to hold that the different experiences associated with red₂₉ and red₃₂ represent red₂₉ and red₃₂ in virtue of being natural

⁶⁹Dretske (1995) p. 11

⁷⁰Dretske (1995) p. 171 footnote 10. He refers to work on cat vision reported in Hall (1981).

⁷¹Tye (1995a) p. 66, p. 104 and p. 139

⁷²See Hardin (1988) p. 88.

⁷³See Raffman (1995). The idea of lack of discrimination on an absolute basis, can be explained as follows: if I present you with a sample of red₂₉ on one occasion, you cannot on another occasion identify whether it was red₂₈, red₂₉, or red₃₀, that you saw before when presented with samples of these colours, even if the conditions for viewing are the same.

indicators of such shades. Therefore, to have experiences with these phenomenal characters and with these representational contents, it is not necessary to possess the relevant concepts, and thus, representationalists conclude that the content must be nonconceptual content.⁷⁴

To recap, on presentation of a particular shade of colour, say red₂₉, one will not normally come to have any beliefs about the colour red₂₉, so one will not see the colour as red₂₉ (in the doxastic sense), and therefore one's experience will not have the conceptual content regarding red₂₉. However, given that red₂₉ and red₃₂ will produce experiences with different phenomenal characters in a subject, and given that these experiences (in optimal conditions) represent red₂₉ and red₃₂ (by the argument that they carry information about these colours in the manner of natural indicators), one can conclude that the content must be nonconceptual content.

This latter argument, namely, that the phenomenal character of experience is more finely grained than our concepts, is given not only by Tye. Dretske makes the same point by calling experiences analogue and systemic representations, as do several other philosophers.⁷⁵ The fineness of grain of perceptual experience is also not limited to experience of colour, although this provides a striking example, but extends to experiences of many qualities in different sense modalities, for example, size, shape, loudness, pitch, smell, etc.

To summarise, the representationalists hold that experiences, individuated and typed by their phenomenal character, represent in virtue of being natural indicators. Animals and young children, who lack the appropriate concepts, can have experiences with phenomenal characters that represent aspects of the world. It is also

⁷⁴Tye (1995a) p. 139 says, "My experience of red₁₉, for example, is phenomenally different from my experience of red₂₁, even though I have no stored memory representation of these specific hues and hence no such concepts as the concepts red₂₁ and red₁₉. These points generalize to the other senses. Phenomenal character, and hence phenomenal content, on my view is nonconceptual."

⁷⁵See Dretske (1995) pp. 12-19, p. 172 footnote 16 and Dretske (1981) chapter 6. Note that the term 'systemic' is not only meant to capture the fine-grained nature of experiential representation, but also that an experience gets its function to represent in virtue of its being part of a system whose different states represent. See also Bermudez (1995); Botterill and Carruthers (1999) chapter 9; Evans (1982) p. 229; Peacocke (1986) and (1992) chapter 3 ; Seager (1999) chapter 6.

held that the phenomenology of our own (human adult) experiences is more fine-grained than the concepts that we possess. Thus, it is claimed that the content of experiences, which they have in virtue of their having the phenomenal character that they do, is nonconceptual.

The representationalists, however, wish to make stronger claims than this. Not only do they claim that experiences represent in virtue of covarying with objects, properties or states of the world or by having the function to indicate such states; they also claim that phenomenal character is not the vehicle for the content of experience but is identical with the content or is constituted by the content. Thus, they claim that all phenomenological features of experiences are about objects, properties or events. There are no non-representational phenomenological features of our experience. Moreover, all differences in phenomenal character will be differences in what is represented, and differences in what is represented will give rise to experiences with different phenomenological features. Before, however, presenting the representationalists' case for these stronger claims, which I will do in the next chapter, I will firstly examine an objection to positing nonconceptual content as the content of experiences.

5.2.3 - An Objection to Nonconceptual Content

I have presented the considerations that have been advanced to support the idea that visual experiences have nonconceptual content. An important dissenting voice in recent philosophy is that of John McDowell. He argues that although visual experiences have content, this content is conceptual content. His motive for this stance is the epistemological predicament that he thinks one finds oneself in if one holds that experiences have nonconceptual content. In his book, Mind and World, he takes a Kantian view of the subject matter, and provides a far reaching analysis of the enduring problems of epistemology.

It should be noted that McDowell's arguments against nonconceptual content are aimed only at positing nonconceptual content as the content of experience.⁷⁶ McDowell is keenly aware that cognitive psychologists explain infants' and animals' behaviour by attributing to them states with nonconceptual content. McDowell does not wish to restrict this practise but argues that such attributions of content are purely theoretical attributions of content to subpersonal states. Such content is not experiential content and therefore not content *for* the infant or animal in question.

McDowell's work on this topic is both accomplished and complex. I propose only to take issue with some aspects of McDowell's position, in order that one can see the motivation to still accept the nonconceptual view of content.

Because McDowell holds that all experience is conceptualised, he has to give some account of the two main cases that nonconceptualists present as evidence in their favour - the fine-grained nature of experience, and animal consciousness. In these cases, it was argued that subjects that lacked the appropriate concepts could nonetheless have experiences with the relevant content. I will examine what McDowell says about fineness of grain first and then go on to look at his account of animals.

McDowell recognises that experience is fine-grained and that this has lead many philosophers to postulate nonconceptual content. He agrees that the colour words, which name general types of colours (such as, 'red' and 'green'), cannot capture the content of experience, but he holds that this does not preclude giving a fully conceptual account of perception. He claims that one can have concepts as finely grained as one's experience by employing demonstrative concepts:

But why should we accept that a person's ability to embrace colour within her conceptual thinking is restricted to concepts expressible by words like "red" or "green" and phrases like "burnt sienna"? It is possible to acquire the concept of a

⁷⁶See McDowell (1994) p. 55 and 121.

shade of colour, and most of us have done so. Why not say that one is thereby equipped to embrace shades of colour within one's conceptual thinking with the very same determinateness with which they are presented in one's visual experience, so that one's concepts can capture colours no less sharply than one's experience presents them? In the throes of an experience of the kind that putatively transcends one's conceptual powers - an experience that *ex hypothesi* affords a suitable sample - one can give linguistic expression to a concept that is exactly as fine-grained as the experiences, by uttering a phrase like "that shade", in which the demonstrative exploits the presence of the sample.⁷⁷

McDowell has to make a case for this type of capacity being a conceptual capacity, and to show how such capacities can be as finely discriminated as experiences. He claims that these capacities allow us to reidentify and think about shades of colours after the experience of that shade has ceased. Although this ability may last only for a very short time for finely-grained shades (and other finely-grained aspects of experiences, such as shape, smell and hearing) it nonetheless guarantees to McDowell's satisfaction that the abilities are conceptual and can be as discriminating as the experiences themselves:

In the presence of the original sample, "that shade" can give expression to a concept of a shade; what ensures that it is a concept - what ensures that thoughts that exploit it have the necessary distance from what would determine them to be true - is that the associated capacity can persist into the future, if only for a short time, and that, having persisted, it can be used also in thoughts about what is by then past, if only in the recent past.⁷⁸

One way to attack McDowell's position is to claim that the idea of nonconceptual phenomenological saliences is required in order to *explain* the demonstrative

⁷⁷McDowell (1994) pp. 56-57

⁷⁸McDowell (1994) p. 57

conceptual capacities and thoughts that can accompany them. For example, Martin claims:

The fact that a perceiver may, through attending to features of her experience, come to be able to demonstrate that feature, or even acquire a recognitional capacity for it, certainly supports the claim that each aspect could be matched by a corresponding concept. That does not yet show that in order for the perceiver to have an experience with that content, she must thereby possess the relevant concept. Rather it seems more plausible to say that we can explain the demonstrative concept she possesses in that context, or the recognitional capacity that she acquires, in terms of the content of the experience. This would require us to suppose that the experience has the content independently of the conceptual capacities she actually possesses.⁷⁹

Prior to undergoing an experience of a particular shade one will not possess the concept of that shade. Why one may come to have a concept of that shade would be well explained by the experience having the content nonconceptually. McDowell comes dangerously close to holding that one first has an experience and this then allows one to come to have the relevant concept. He says:

A capacity to embrace a shade within one's thinking is initiated by the figuring of an instance of the shade in one's experience.⁸⁰

But for McDowell, coming to have the experience and coming to possess the relevant concept must occur simultaneously. On his view one cannot first have the experience and then come to possess the concept, for this would be to endorse nonconceptual experience. It is difficult to see how therefore he can appeal to the idea of the experience initiating a conceptual capacity, if one cannot have an experience without it being already imbued with the relevant concepts.

⁷⁹Martin (1994) p. 470

⁸⁰McDowell (1994) p. 59

This difficulty generalises to learning in general. Recall, for example, the cases outlined in the previous section of training monkeys to discriminate between different conditions, cited by Dretske. Prior to their demonstrating recognitional capacities of the sort that McDowell holds underpins the conceptual capacities, it is plausible to think that they have experiences with different phenomenologies. It is learning to respond to such differences in phenomenology that explains why they can learn and acquire such conceptual capacities. McDowell, of course, would disagree, but it is far from clear that he can plausibly explain the acquisition of conceptual capacities in the absence of such experience. I will return to this point below when I consider McDowell's account of animals.

A further way to bring out the difficulty of explaining demonstrative conceptual abilities in the absence of recourse to a nonconceptual phenomenology is discussed by Christopher Peacocke (1992). He holds that individuating demonstrative concepts requires positing nonconceptual content. This can be seen by considering ambiguous shapes that can be seen as either as squares or as regular diamonds. He claims that there are two distinct perceptions associated with the two ways in which one can see the same figure. On McDowell's account there must be two distinct demonstrative concepts that are associated with these different perceptions. Peacocke claims that the only way to account for the differences in these concepts is by reference to nonconceptual content, for we cannot do so by reference to the one object that gives rise to the different perceptions:

But what is it for one of these demonstrative concepts rather than the other to enter the content of a subject's perceptual experience? It seems to me that this has to be elucidated in terms of nonconceptual protopositional content. I have already noted the different properties and relations that are perceived when the shape is perceived as square rather than a diamond. It is these differences that we have to draw upon in saying what it is for one demonstrative concept rather than another to enter the representational content of a subject's experience. Equally, it is these differences that

would also constitute the difference between the two possession conditions for these two demonstrative concepts.⁸¹

Peacocke goes on to claim that while one might think that conceptual content, related to the different properties perceived in the square/regular diamond figure, features in an account of the conceptual content of the experiences in question, this is implausible. Discerning and working out the different properties that are perceived in these cases takes time and reflection, but perceiving an appropriate shape as either a diamond or a square happens before such reflection takes place, and does so even if demonstrative conceptual content is involved in such a perception.

While these considerations against McDowell are not completely conclusive, we can see that the acquisition of concepts and the individuation of concepts is readily explained by reference to nonconceptual content. Moreover, it is not clear that McDowell is in a position to offer suitable alternative explanations. I will now consider McDowell's account of animal perception.

McDowell holds that animals do not possess concepts. In rejecting the view that experiences have nonconceptual content, McDowell is denying that creatures lacking conceptual abilities have conscious experiences - either perceptual or sensational. Following Kant he holds, "intuitions without concepts are blind". There is no common perceptual or sensational experience that animals share with mature humans. As having conscious experiences is the way that we enjoy sentience it looks as if McDowell is committed to denying that animals and infants are conscious or sentient. McDowell realises that this is not a happy position to arrive at when he claims it is obvious that animals feel pain and are perceptually sensitive to their environment:

we cannot attribute the conceptual capacities that would figure in the account of 'inner experience' I have endorsed - for instance, a capacity to use the concept pain - to many creatures of which it would be outrageous to deny that they can feel pain. It

⁸¹Peacocke (1992) p. 84-85

is not just active self-critical thinkers that can feel pain. Whatever it may be that is true of a creature without spontaneity when it feels pain, it cannot be that it has 'inner experience', according to the picture of experience that I have been recommending... the application to 'outer experience' is similar⁸²

McDowell's strategy for dealing with this problem falls into two parts. The first part is to claim a companion in crime. McDowell says that Evans (in The Varieties of Reference), who argued for the nonconceptual content of experience, also held that those who did not possess concepts could not have experiences and hence, presumably, that the animal sentience problem does not just afflict anti-nonconceptualist positions.

Evans does say that a subject must exercise some concepts in order to have a conscious experience. That is, in order for a state to be a conscious state of a subject (as opposed to: in order for a subject to be introspectively aware of that conscious state⁸³), the subject must possess appropriate concepts. He claims that a state with nonconceptual content only counts as an experience if it:

serves as the input to a thinking, concept-applying and reasoning system; so that the subject's thoughts, plans and deliberations are also systematically dependent on the informational properties of the input.⁸⁴

When we look at Evans's reasons for this assertion, we find him appealing to our intuitions. He claims of conscious experience that "our intuitive concept requires a subject of experience to have thoughts".⁸⁵ To the extent that (as Evans holds) thoughts require concepts, this strikes one as plainly false. The common sense intuition is that concept use and having conscious experience are separable, as McDowell himself acknowledges above.

⁸²McDowell (1994) p. 50. 'Spontaneity' refers to the ability to apply concepts.

⁸³See Evans (1982) pp. 157-158.

⁸⁴Evans (1982) p. 158

⁸⁵See Evans (1982) p. 158.

Evans goes on to cite states of blindsight patients as examples of nonconceptual states that are not experiences. He says that people who suffer from blindsight may have the appropriate relations between their nonconceptual states and their behaviour. The performance of blindsight patients on certain matching and other tasks shows that they are capable of performing certain perceptual discriminations in an area of their visual field in which they are blind. Hence, at some level they are picking up visual information about a portion of the distal environment that they claim not to be able to see. Nonetheless, as is well-known, blindsight patients report themselves to be merely guessing in the tasks on which they perform significantly above chance - and they tend to be incapable of using the information which they seem to be picking up to initiate actions. It is equally well-known that blindsight patients report themselves as lacking any sort of phenomenal consciousness of what is going on in their blindfields.⁸⁶

The blindsight case warrants the claim that there may be forms of perceptual sensitivity that are not experiential, and that their not being experiential explains why they do not feed into the subject's 'concept-applying and reasoning system'. This, however, is a long way from the claim that nothing can count as an experience unless it feeds into a concept-applying and reasoning system.

It seems, moreover, as if Evans has simply forgotten the case of animal consciousness. This is backed up by the fact that when considering possible cases of nonconceptual states that do not amount to conscious experiences, Evans claims that "it seems abundantly clear that evolution *could* throw up an organism" that had no consciousness but that had nonconceptual contentful states.⁸⁷ Evans does not mention the case of animals here. He does not say evolution has thrown up animals all around us that exemplify such organisms. Indeed, Evans's position does not require him to hold that concept lacking creatures have no sentience, for he appears to legislate for it

⁸⁶For more on this phenomenon see Weiskrantz (1997) and chapter 8 below.

⁸⁷See Evans (1982) pp. 157-158 (my emphasis).

simply on the grounds that it is common sense, when it clearly is not. McDowell, on the other hand, is stuck with the position due to other philosophical commitments.

In the second and more substantial part of McDowell's defence of his position, he claims that humans have one type of 'perceptual sensitivity', where they have conscious experiences in which conceptual powers are necessary and integrated. Animals have another type of perceptual sensitivity that involves sentience but it does not involve conceptual powers and conscious experiences. There are two main problems for this defence. The first is the very idea of sentience that does not involve undergoing conscious experiences. It is difficult, if not impossible, to conceive of this. All our perceptual sentient states are conscious experiences, indeed it is exceedingly tempting to treat the two terms as synonymous. Denying that animals have conscious experiences but holding that nonetheless they are sentient, appears really only to identify the position that McDowell is forced into, rather than to provide some illuminating solution.

The second problem for this defence becomes clear when one considers states such as fear and pain. According to McDowell, animals and humans are to have nothing in common when they are in sentient states. Yet in the case of pain, it is difficult to hold that an animal is in pain if it feels nothing in common with humans when they feel pain. I would be disinclined to think that animals and I share nothing in common when in pain, or if I could be moved to believe something like it, I would no longer think that the animal was really in pain when it displayed what was called 'pain behaviour'. In other words, to hold that animals and humans can both feel pain yet have nothing in common is a very counter-intuitive position. It appears to lose sight of what we mean by 'pain'. Thus, in my opinion, McDowell faces either having to deny that animals can be in pain, or he must accept that there is a notion of nonconceptual experience that explains the supposed similarities between human and animal sentience.

McDowell's main motivation for denying nonconceptual experience is that he believes that only if experience is imbued with concepts can it provide justifications for belief. Given the problems with this position outlined above, if there is reason to believe that ascribing nonconceptual content to experiences does not leave one in an epistemological predicament, then McDowell's position would be weaker still. It is not clear that experience can justify belief only if it is conceptual, as McDowell claims. Another option may seem viable. It starts off from McDowell's contention that what is important for justification is that one does not exercise one's conceptual abilities but that they are passively activated when there is contact from the world. One can maintain this part of his view while holding that experience is nonconceptual. Nonconceptualised experience could be such as to activate one's conceptual abilities without one actively judging or actively bringing certain concepts into play. This would allow that one was "saddled with content".⁸⁸ One's conceptual powers would be subject to control from the world and so justification would be possible. One's experience could be such as to trigger certain conceptual abilities in one, if one has those abilities, without itself being necessarily conceptualised. This model appears to meet the important conditions that McDowell considers necessary for justification to be possible, but it does not show that experience must be conceptual. Thus, one could hold that experience must be passively *conceptualisable* if it is offer justifications, not that it must always be already conceptualised.

Thus, holding that visual experiences have nonconceptual content does justice to our conception of animals and infants as conscious, sentient creatures. It does justice to the fine-grained nature of our experience also. Furthermore, it is certainly not evident, despite McDowell's work, that experience has to be conceptual in order for our beliefs to be justified. Therefore it seems reasonable to favour the idea that experiences have nonconceptual content.

⁸⁸McDowell (1994) p. 10.

In light of the results of this chapter, I will not be considering representationalist positions that try to account for the phenomenal character of experience by reference to conceptual content alone.⁸⁹

⁸⁹This conceptual representationalism is developed by, for example, Harman (1990). We have already looked at McDowell's attempts to account for some of the phenomenology of experience in this way.

Chapter 3 - Further Representationalist Claims

1 - Identifying Phenomenal Character and the Content of Experience

To summarise the position we have reached so far: the representationalists hold that perceptual and sensational experiences are not beliefs. I have argued that there are many good reasons to think that this is the case. Representational theories of phenomenal character hold that experiences are to be typed in virtue of their phenomenal character, and I have explored reasons for thinking that providing an account of phenomenal character is essential to the project of providing a naturalistic account of the mind. I also noted that by the term 'phenomenal character' I mean those properties of experience that are responsible for what the experience is like for the subject of the experience, and leave it open as to what the best theory of such properties is. Thus, I take it to be an open question whether such properties are physical, representational, functional, relational or distinctively mental. The representationalists I am concerned with claim that both conceptual and nonconceptual content can be ascribed to experiences. They hold, however, that ascribing conceptual content is more indicative of the beliefs that accompany experiences, rather than the nature of those experiences vis a vis their phenomenal character. I have looked at the reasons for ascribing nonconceptual content to experiences, namely, the arguments regarding infant and animal behaviour, those regarding learning and the fine-grained nature of experience, and considerations about the phenomenology of experience in general. I have also briefly outlined Tye and Dretske's claim that experiences, typed by their phenomenal character, will represent in virtue of being natural indicators of what they represent. Therefore it is in virtue of the phenomenal character of an experience that it represents what it does.

As I explained in the last chapter, the representationalists argue for the further claim that phenomenal character is identical with or constituted by the nonconceptual

content of experience. Thus, they claim that all phenomenological features of experiences represent objects, properties or events - there are no non-representational phenomenological features of our experience. Moreover, all differences in phenomenal character will be differences in what is represented, and differences in what is represented in experience will give rise to experiences with different phenomenological features. This particular feature of representationalism is argued for, not only by Tye and Dretske, but also by Lycan (1996) and Botterill and Carruthers (1999).¹

These claims are considerably stronger than the claim that the most appropriate way to characterise the representational nature of experiences is to appeal to nonconceptual content. It could be true that the content of experience is nonconceptual, but this alone does not lend support for the following three further claims which representationalists make:

- (1) All phenomenal features of experiences are representational.
- (2) All differences in phenomenal character will be differences in experiential representational content and vice versa.
- (3) Phenomenal character is constituted by or is identical with the content of experience. In particular, phenomenal character is not a vehicle of content.

I will therefore now turn to consider the further arguments that the representationalists give for these three claims.

The argument that both Tye and Dretske give for the conclusion that all phenomenal features of experiences are representational is the argument from transparency or introspection.² They claim that experiences have no introspectible

¹I will examine and explain how their theories differ from Tye and Dretske's below.

²See Tye (1995a) pp. 135-137 and Dretske (1995) Chapter 2. This argument is also forwarded by Harman (1990) and Lycan (1996) in favour of their versions of representationalism. The point has been noted about experience generally by Moore (1922) p. 22, McGinn (1982) p. 13 and Shoemaker (1996) chapter 5.

features that are not also representational contents. One piece of evidence for this assertion is that when you focus very hard on the nature of your experience and pay attention to your introspecting, you find that you are only paying attention to the objects and properties in your environment. At no time do you encounter your experience or something that exists in yourself, as opposed to a representation of objects and properties in the world. The following quotation from Tye is illustrative:

Generalizing, introspection of your perceptual experiences seems to reveal only aspects of *what* you experience, further aspects of the scenes, as represented. Why? The answer, I suggest, is that your perceptual experiences have no *introspectible* features over and above those implicated in their intentional contents. So the phenomenal character of such experiences - itself something that is introspectively accessible, assuming the appropriate concepts are possessed and there is no cognitive malfunction - is identical with, or contained within their intentional contents.³

Prima facie, attending to one's experience does only seem to amount to attending to the external world and not to something inner. A full assessment of this claim, however, would have to proceed by looking at particular potentially problematic cases and assessing them. Some representationalists, such as Dretske, spend little time doing this, while others such as Tye and Lycan, spend a considerable effort to account for many different experiences. It is clear that finding a counter-example here is not an easy matter, for the representationalists make out good cases for many features of experiences being representational. I will address three examples here to show the power of the representational account.

A group of related colour experiences, namely after-images and phosphenes, have been held by some philosophers to falsify the claim that when we introspect our experience we appear to be attending only to features of the world.⁴ In having an

³Tye (1995a) p. 136

⁴After-images are often cited by representationalists as a difficult case they have to account for. The source of the worry may be traced to Frank Jackson's presentation of after-images as a problem for any account that does not posit sense-data. See Jackson (1977). Block (1996) holds that phosphenes and after-images are problematic cases.

experience of an after-image one seems to see patches of (often translucent) colour, but they look as if they are not attached to surfaces of objects and look an indeterminate distance away. Phosphenes are coloured regions in the visual field which are caused other than by stimulation of the retina.⁵ Similarly, Christopher Peacocke describes 'psychedelic' visual experiences, "such as those experienced when your eyes, closed, are directed towards the sun, and swirling shapes are experienced."⁶ These experiences have been thought to be problematic for three reasons. The first (expounded by Peacocke (1993)) is that when one has these kinds of experiences it does not look as if these coloured patches are in your environment, therefore there is reason to think that they do not represent anything. The second is that it is unclear if these effects could be produced by circumstances in the environment. If they could not, then one might worry that such experiences could never be veridical and thus, if they had no correctness conditions, they would not have content. The third is that the experiences are often indeterminate, especially regarding their distance from the subject, and have indeterminate, fuzzy boundaries. This again leads to the worry that content will not capture the nature of these phenomenal characters and that introspection can yield features of experiences that are not of features of the world.

One of the merits of the representationalist account, I believe, is that it can account for cases such as these. The general strategy is to hold that conditions could be created in the world that would typically result in experiences of the kind mentioned. For example, Lycan holds that one could produce phosphene-like experiences in a dark-room with little coloured lights, or swirls in a darkened psychedelic theatre.⁷ Tye holds that as clouds have indeterminate boundaries and can be represented as such, so the indeterminate boundaries represented in experiences of after-images present no problem. Similarly, representations can be indeterminate as to

⁵See Hardin (1988) pp. 94-95. He notes that phosphenes can be induced by cosmic ray bombardment, electrical stimulation of the visual cortex, or by "an occlusion of the blood supply brought about by pressing on the eyeballs with the palms of the hand through closed eyelids."

⁶Peacocke (1993) p. 675

⁷Lycan (1996) p. 138

the distance from the perceiver that objects are represented as being. Tye also goes to some lengths to describe what the content of such experiences would be:

In the case in which I experience swirling shapes, the situation is similar. I have visual sensations of various shapes occupying certain moving, two-dimensional locations relative to my point of view. I experience a square shape, say, *as* being on my left, next to an oval shape a little to its right and moving away from it. My experience represents these shapes and spatial relations. What it does not do is represent the locations of the shapes in the third dimension either relative to one another or to anything in the environment. Nor does it represent the two shapes in two dimensions relative to items in the environment. My experience does not comment on these matters. It leaves it open, or at least it does so as long as it is agreed that I do not undergo any sensory representation of the spatial relations just mentioned.⁸

In short, it seems as if one can identify what after-images and the like represent. We do appear to locate such images in front of ourselves and they are not unspatial (at least in two dimensions). While it is true that we often do not mistake such appearances for real objects in our environment, this can be explained by our knowing that such experiences are illusory - they are misrepresentations. Indeed, this is often only established in the case of after-images, when, for instance, one moves one's eyes about and finds that the images move with one's eye movements and are not patches of colour attached to an object. Moreover, the representational account appears to describe well and account for the indeterminacies involved in the phenomenal character of such experiences.

The second type of problematic case is non-visual perceptual experiences such as those associated with hearing, smell and taste. Neither Dretske, Tye, nor Lycan have much to say about these perceptual experiences, but in general it is assumed that they will yield to the same analysis as visual experiences. Thus, it is assumed that all

⁸Tye (1995a) pp. 158-159

perceptual experiences will represent certain features of the environment of the subject. Again, this approach does not appear implausible. Auditory experiences may represent pitch (frequency of sound waves), loudness (amplitude of sound waves) and timbre (perhaps combinations of sound waves and their smoothness). Olfactory and taste experiences may represent certain specific chemicals or perhaps more coarsely grained properties, such as sweetness or rancidness (groups or properties of chemicals).

What of non-perceptual, sensational experiences, such as pains, itches, feelings and moods? Here Tye again provides by far the most comprehensive account.⁹ Recall that one of the main reasons for thinking that sensations are not representational is that there does not seem to be an object or property that is sensed, and that is indistinguishable from the sensation. For example, pain and the feeling of pain are taken to be one and the same thing. Tye's response to these cases is to try to make a plausible case for what is represented in the case of pains, feeling and moods.

In the case of pain, he claims that what is represented is disturbance or damage in some location of the body. For example, in describing the representational content of different pains he says:

Aches represent disorders that occur *inside* the body rather than on the surface. These disorders are represented as having volume, as gradually beginning and ending, as increasing in severity and then slowly fading away. The volumes so represented are not represented as precise or sharply bounded. This is why aches are not felt to have precise locations, unlike pricking pains, for example. A stabbing pain is one that represents sudden damage over a well-defined bodily region. This region is

⁹Dretske does not pay much attention to giving an account of sensational experiences, and again assumes the account of visual experiences will adapt to include these. He does, though, give a quick account of the kind of approach he would adopt, which, as we will see, Tye elaborates on. Dretske says, "The qualities we are aware of when we experience pain (thirst, hunger, nausea, etc.) are not qualities of a mental event; they are properties of the physical state of the body an awareness of which *is* the thirst, hunger or nausea...But this, as I say, is a topic that I have neither the time nor (I admit) the resources to effectively pursue." (Dretske (1995) pp. 102-103).

represented as having a volume (rather than as being two dimensional), as being the shape of something sharp-edged and pointed (like that of a dagger).¹⁰

The account of moods and feelings is similar. Although these often involve a cognitive aspect (a relevant belief or desire) the feelings themselves are held to be representations of states of the body. Tye again provides a plausible and detailed account:

Suppose you suddenly feel extremely angry. Your body will change in all sorts of ways: for example your face will flush, your chest will heave as the pattern of your breathing alters, your voice will become louder, you will clench your teeth and hands, the muscles in the back of your cheeks will become more tense, your immune system will alter rapidly. These physical changes are registered in the sensory receptors distributed throughout your body... In this way you will *feel* the physical changes, The feeling you undergo consists in the complex sensory representation of these changes.¹¹

When thought of in this way, the idea that sensations do represent becomes reasonably plausible. Pains are felt as having locations in the body and are more or less diffuse. A feeling such as anger appears to grip the whole body as the muscles tense and adrenaline heightens our readiness for action. Thus, in presenting plausible candidates for what is represented by sensational experiences, the idea that sensations represent becomes quite credible. (I will examine this claim in detail in chapter 7.)

Now consider the second representationalist claim, namely, that all differences in phenomenal character will be differences in representational content and vice versa. One can certainly observe that most differences in phenomenal character are accompanied by differences in what is represented. For example, the phenomenal difference between having an experience of redness and blueness is mirrored by a difference in content. In one, the colour red is represented, in the other, the colour

¹⁰Tye (1995a) p. 113

¹¹Tye (1995a) p. 126

blue. The reverse is also generally true. An experience in which a curve is represented is phenomenally different from one in which a straight line is represented. To test this thesis one would again have to look at particular experiences and see if differences in phenomenal character were differences in representation, and differences in representation resulted in experiences of different phenomenal characters.

We have already observed that a case which purports to falsify this thesis is the inverted spectrum hypothesis. If two people had experiences of different phenomenal characters when looking at the same colours, then one might think that the experiences represented the same colour, but were phenomenally different, in which case the representationalist thesis would be false. In response, representationalists allow that two people might have different experiences when looking at the same colours, but try to provide an account of this that does not allow differences in phenomenal character without differences in representation. In short, they will argue that in cases where there is a difference of phenomenal character there will also be a difference in representational content. The circumstances of the inversion, and the different theories of representation held, will affect the reasons that representationalists give for there being a difference in content. (I will look at this potential counter-example in detail in chapter 6.)

If we grant the representationalist theses 1 and 2, then what is the argument for thesis 3? Thesis 3 is that phenomenal character is constituted by or is identical with the content of experience, and in particular, that phenomenal character is not a vehicle of content. The most direct argument for the thesis is given by Tye. He claims that if theses 1 and 2 are right then what would explain this is that phenomenal character is the content of experience:

Consider the overall conclusion of the last chapter, that all feelings and experiences are intentional. Is this necessary connection between phenomenal consciousness and intentionality a brute fact, admitting of no further explanation? Surely not. The *simplest* explanation is that the phenomenal character of a state is itself intentional...

More generally, my claim is that experiences and feelings are sensory representations that elicit various sorts of cognitive reactions, and that differences in what the sensory representations represent go along with differences in what it is like to undergo the experiences and feelings. Again, the simplest explanation for this pairing is that differences in what it is like are simply intentional differences.¹²

Other philosophers are less direct. They claim that this theory allows one to account for the phenomenology of experience. In particular, it explains why experiences themselves are not objects which can be introspected, in the sense that we can be aware of something other than what is represented in experience. They also claim that this theory is attractive because it is naturalistic. In this regard, Dretske says:

Representational Naturalism helps one understand, for example, why conscious experiences have that peculiar diaphanous quality - the quality of always being present when, but never where, one looks to find them. It provides a satisfying account of the qualitative, the first-person, aspect of our sensory and affective life - distinguishing, in naturalistic terms, between what we experience (reality) and how we experience it (appearance). In providing this account, it establishes a framework within which subjectivity can be studied objectively... These benefits, and more, derive from conceiving of the mind as the representational face of the brain.¹³

Indeed, although Tye does provide the above direct argument for representationalism, the beginning of his book outlines ten problematic features of consciousness, and the plausibility of the representationalist thesis is taken to rest on its accounting for these features of conscious experience.

As we have seen, one of the benefits of representationalism is that it takes talk of experiences and phenomenal character seriously and does not try to analyse talk of these into something else (e.g. belief), nor does it wish to eliminate such talk. The

¹²Tye (1995a) p. 134

¹³Dretske (1995) p. xiv

theory accounts for the transparency of experience, and differences in phenomenal character are explained by differences in representational content.

The other main benefits of the theory are that it claims to provide a plausible account of the nature of our knowledge of our experiences. It aims to provide a theory whereby animals and young children can have conscious experiences, and not just cognitively sophisticated adult humans. Lastly, it claims to explain the mechanism whereby conscious states arise. To appreciate these points one has to consider the representationalists' account of when a nonconceptual representation is a conscious experience.¹⁴ I turn to this in the next section.

2 - Differentiating Experiences from other Representational States

Tye and Dretske hold that states which represent do so in the manner of natural indicators. For Tye this means that a state will represent a feature Q if and only if it would be caused by and covary with instantiations of Q in optimal conditions.¹⁵ For Dretske, a state will represent a feature Q if the state has the function of providing information about Q. Clearly, on these accounts there will be many states that represent which are not experiences. How should one differentiate experiences from other representational states? Experiences have to be differentiated from both non-mental states and from other representational mental states, such as the propositional attitudes.¹⁶

I will explain Dretske's account first. A thermometer has the function of providing information about temperature and so represents temperature, but states of a thermometer are not conscious experiences. Beliefs and desires also represent and plausibly do so in virtue of evolutionary processes, but they are not experiences. The

¹⁴Although we have seen that ascribing nonconceptual content as opposed to conceptual content helps to explain why children and animals have conscious experiences, the representationalists' theories of what distinguishes experiences from other states with content also has a bearing on this issue. This will become apparent below.

¹⁵I take a feature of the environment to be an object, property, relation, or state of affairs.

¹⁶I will explain the difference between Tye's theory and Dretske's theory in this respect from other representationalists, such as Lycan and Botterill and Carruthers, in later sections.

dance of the honey bee has the function to indicate the presence of pollen, but the dance of the honey bee is not an experience either. Dretske's further specification of the kind of representation involved in experience rules out the propositional attitudes and states of thermometers being experiences. His account of the role of experiences rules out the dance of the honey bee as a conscious experience.

Dretske's first move is to distinguish natural from conventional representations. When a state has been given a function by the intentions of designers and builders, it is a conventional representation. When a state has a function to indicate which has been naturally acquired through natural selection, it is a natural representation. Experiences have gained their functions through natural selective processes, while thermometers have gained their functions from the people that built them. Employing this difference, Dretske distinguishes experiential representation from the representation done by artefacts. Dretske says:

I assume that there are naturally acquired functions and thus, natural representations. I do not argue for this; I assume it... The senses, I assume have information-providing functions, biological functions, they derive from their evolutionary history... This is why the senses - or, more precisely, the internal states (experiences, feelings) the senses produce by way of performing their function - have original intentionality, something they represent, say, or mean, that they do not get from us. That is why the perceptual representations in biological systems - unlike those in laptop computers, speedometers, and television sets - make the systems in which they occur *conscious of* the objects they represent.¹⁷

In fact much later in his book, Dretske gives a further insight into the difference between natural and conventional indicators. He says that a natural indicator must have acquired the function to indicate a feature Q, because it was already indicating Q (that is already covarying with Q). Evolution cannot select a state to indicate Q, unless that state is already doing so. If a state indicates Q, then evolution can select it

¹⁷Dretske (1995) pp. 7-8

as it provides advantages for that organism to have information about Q. On the other hand, a designer can build an instrument to have states which are supposed to indicate Q, but the instrument could be built very badly and never indicate Q, although it has the function of doing so. Natural indicators must have, at least once, actually used the information they get in such a way that it improves their fitness, while conventional indicators need never have used that information for anything.¹⁸

As I have already explained in detail above, one difference between beliefs and experiences according to Dretske is that the former are conceptual representations, while the latter are nonconceptual. In addition to this, Dretske introduces a distinction between systemic representations and acquired representations. A systemic representation acquires its indicator function from the system of which it is a part. A system will have a basic representational function, and states of that system will be systemic indicators of what the system has the function of indicating. For example, a thermometer has the function of providing information about temperature. A state of that thermometer that indicates a temperature of 20 degrees, will systemically represent 20 degrees. An acquired representation is a systemic representation that has had its function altered by learning or design. Thus, if we print "danger" at the point where the mercury in the thermometer indicates 20 degrees, then this state of the thermometer has the acquired function of representing danger. Dretske holds that experiences are systemic representations, while beliefs (and conceptual states in general) are acquired representations:

experiences have their representational content fixed by the biological functions of the sensory systems of which they are states... Since we inherit our sensory systems, since they are (at a fairly early age, anyway) hard-wired, we cannot (not easily anyway) change the representational character of experience. Through learning, I can change what I believe when I see k, but I can't much change the way k looks (phenomenally) to me, the kind of visual experience k produces in me... The way a

¹⁸Dretske (1995) pp. 165-168

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. This is why a representation_s of k as red (a sensation of redness) is different from a representation_a of k as red (a belief that k is red) even though both are representations of k as red.¹⁹

A further difference between systemic and acquired representations, according to Dretske, is that systemic representations are likely to be analogue or nonconceptual, that is, provide information about continuous quantities. Acquired representations are more likely to be digital, that is, to 'chunk' information into limited categories. This point is meant to be reflected in our phenomenology in the fine-grained nature of experience. Our conceptual capacities are flexible and we may learn to make finer conceptual discriminations if we need to, but our experience, for the most part, remains the same. Thus, according to Dretske, the difference between experiences and the propositional attitudes is the difference between systemic and acquired representations.

If the distinction between natural and conventional representations rules out artefacts from having experiences, and the distinctions between acquired and systemic representation and conceptual and nonconceptual representation marks the difference between the propositional attitudes and experiences, then what distinguishes the dance of the honey bee from experience? The dance of the honey bee is a natural representation. The different moves in the dance are also systemic representations.

According to Dretske, an important feature of experiences is that they have the function to supply information to the cognitive system in such a way that the cognitive system can construct acquired representations (beliefs and desires) for use

¹⁹Dretske (1995) p. 15. The subscript "s" indicates systematic functions or representations, the subscript "a" indicates acquired ones.

in the control and regulation of behaviour.²⁰ These representations need not, on every occasion, have an impact on the cognitive system, but they must have the function to do so.

One might worry that this does not allow one to distinguish the bee-dance from an experience. Is the function of bee-dances not to affect the cognitive system of bees so that they can find pollen? Dretske does not address this problem directly, but one could extrapolate from what he does say about other cases to two possible replies. The first would claim that bees inflexibly respond to the dance and therefore have no way of altering their response to suit individual needs and circumstances. The dance does not therefore affect their cognitive system in the right way.²¹ Alternatively, or in addition, he could claim that the dance does not feed *directly* into the cognitive system.²² The dance would cause the bees to have experiences of the dance, and it is the bees' experience of the dance that serves construction of acquired representations, which, in turn, service the bees' needs and desires. Thus it is the bees' experience, rather than the dance, which has the appropriate direct function.

To summarise, Dretske holds that experiences are natural, systemic, nonconceptual representations that have the function of supplying information to a cognitive system for learning and use in the control or behaviour. All and only experiences are such representations.

Turning now to consider Tye's account, one notices very many similarities between his account and Dretske's, despite the different language in which Tye's account is couched. Tye holds that phenomenal character is Poised, Abstract, Nonconceptual, Intentional Content (PANIC). We have already looked in detail at the claim that phenomenal character is nonconceptual content.²³ (Note that on Tye's

²⁰Dretske (1995) p. 19

²¹See Dretske (1995) p. 172, fn. 17

²²See Dretske (1995) p. 20

²³Tye (1995a) p. 96 claims that content is intentional if a content can represent a feature, even if that feature does not exist. In addition, a content can represent a feature as an F and not as a G even though F and G are necessarily co-instantiated or 'F' and 'G' have the same meaning.

account the difference between experiences and the propositional attitudes is that experiences have nonconceptual content, while the propositional attitudes have conceptual content.) So let us focus on the claims that the content is abstract and poised.

If content is abstract, then no particular concrete objects enter into the content. It is plausible to restrict the content in this way because two different objects can have the same appearance and thus produce experiences with the same phenomenal characters. Recall the discussion in chapter 2, section 5.2.2, of Colin McGinn's account of the conceptual content of experience. He claims that only observational concepts, that is, concepts which denote things that are fully manifestable to the senses, should be used to accurately describe the content of visual experience. Restricting the content in this way excludes individual objects from featuring in the content of experience. Tye wishes to carry over McGinn's idea about conceptual content to the domain of nonconceptual content. Not only is the nonconceptual content to exclude individuals, it is also to include only general observational features or properties.²⁴

The requirement that the content of experience is poised does a similar job to Dretske's claim that it has the function of interacting with the cognitive system in a specified way. Tye holds that experiences are representations that are outputs from the sensory modules which serve as inputs into the cognitive system. Tye says:

The claim that the contents relevant to phenomenal character must be poised is to be understood as requiring that these contents attach to the (fundamentally) maplike output representations of the relevant sensory modules and stand ready and in position to make a direct impact on the belief/desire system. To say that the contents stand ready in this way is not to say that they always do have such an impact. The idea is rather that they supply the inputs for certain cognitive processes whose job it is to produce beliefs (or desires) directly from the appropriate nonconceptual

²⁴Tye (1995a) pp. 138-139

representations, *if* attention is properly focused and the appropriate concepts are possessed. So, attentional deficits can preclude belief formation as can conceptual deficiencies.²⁵

Thus, Dretske's and Tye's account are similar to the extent that they require experiences to bear some relationship to the cognitive system. The difference lies in the fact that Tye requires the representation to be poised, while Dretske holds that the representation must have the function of interacting with the cognitive system.

Thus both Tye and Dretske hold that nonconceptual representations of an appropriate kind (e.g. abstract, systemic or natural) which stand in an appropriate relation to the cognitive system (either poised to interact with it, or having the function to interact with it) are experiences. Any creature that is in a state which is such a representation will be undergoing a conscious experience, the phenomenal character of which is determined by what is represented.

3 - Knowing about Experiences

One distinctive feature of Tye's account and Dretske's account is that having a state which is an appropriate representation, that is undergoing an experience, is not a sufficient condition for knowing about one's experience. One can undergo an experience without knowing what it is like to be in that state. In what conditions does one have knowledge of one's experience?

Tye and Dretske claim that when having an experience one may form beliefs about the world, that is, about the objects or properties which one's experience represents the world as having.²⁶ To do this, they claim, is not to form beliefs about one's experience. To know that one is experiencing and to know what that experience is like, one must possess certain particular concepts in addition to those implicated in

²⁵Tye (1995a) p. 138

²⁶Note that neither Tye nor Dretske explain how conceptual states, such as beliefs, are formed in response to nonconceptual experiences, in the sense that they do not explain whether experiences cause us to form beliefs or whether we infer things from our experiences. See Seager (1999) p. 179.

believing what one does about the world. The concepts that are required pertain to representation, experience and mental states. If one possesses the concepts of experience and representation and one believes that P because one has an experience that represents that P, then one can form the belief that one's experience represents that P. In this way one can have knowledge of one's experience. One knows what that experience is like because one knows the content of that experience.

Thus, for the representationalist, introspective knowledge does not require a special introspective faculty, whereby one perceives one's experiences. In undergoing an experience one is in a state with content. To know of that experience one simply forms a belief about that content, namely, the belief that one is having an experience with that content. The following quotations by Tye and Dretske, respectively, are illustrative:

knowing the phenomenal character of P, I suggest, is representing, or being capable of representing, the relevant intentional content via the appropriate concepts.²⁷

Introspective knowledge, being a form of representation, is, therefore, a metarepresentation - a representation of something (a thought, an experience) as a thought or an experience or (more specifically) a thought about this or an experience of that. If E is an experience (sensory representation) of blue, then introspective knowledge of this experience is a conceptual representation of it as an experience of blue (or of color).²⁸

This account of introspection has some attractive consequences. Unlike a Rylean view of self-knowledge which advocates that the knowledge of one's self differs only in degree from the knowledge that one has of others, this view advocates that introspection gives one privileged access of a special kind to one's own mind.²⁹

²⁷Tye (1995a) p. 166. The appropriate concepts here are 'experience', and phenomenal concepts. Speaking of knowledge of an experience of red, Tye (1995a) p. 167 says, "I conceptualize it as an experience of this shade of red". Precisely what phenomenal concepts are will be explained below.

²⁸Dretske (1995) p. 44

²⁹See Ryle (1949).

Because the person introspecting is the one who is in a state that represents something, their conceptual resources need only be employed in the correct manner for them to have knowledge of their mind. Their knowledge is direct, in a way in which knowledge of other minds is not. Moreover, unlike a Cartesian account, introspective knowledge is not infallible. One's concepts may be incorrectly employed in response to experience, for example, when one is distracted, or there is malfunction.³⁰ Lastly, as we have noted before, because introspection does not involve perceiving or sensing one's experiences, but merely forming beliefs about the content given in experience, the account does justice to the phenomenology of introspection, in which attending to one's mental states is indistinguishable from attending to the apparent objects and properties of the world. One does not have experiences of one's experiences that would provide extra layer of phenomenology in addition to that associated with the content of one's experience. One merely forms beliefs about, or comes to know, what that content is.

One of the most interesting aspects of the representationalist account concerns the knowledge we have or can have of others' experiences. Some philosophers claim that there is a kind of knowledge of experience that can only be had by being the subject of that experience.³¹ This has led them to suppose that the mind may not be physical, or at least that we do not understand how it could be physical. This is because they suppose that all objective physical knowledge should be expressible in language, and as one cannot express some facts to people who have not undergone the relevant experiences, this knowledge cannot be knowledge of objective physical fact.

Tye and Dretske can be seen to provide different answers in response to this type of challenge. Dretske rejects the idea that there is a kind of knowledge of what others'

³⁰See Tye (1995a) p. 192-193

³¹Frank Jackson (1986) considers 'Mary', a scientist of colour vision, whose vision is restricted to monochromatic conditions. Jackson argues that Mary does not know what it is like to see colour. He emphasises that once released from her monochromatic environment, not only does she learn what it is like to see colour, she also learns what it is (and was) like for others to see colour. See also Nagel (1974) who argues that one cannot know what it is like to be a bat because one has not had those kind of experiences.

experiences are like that can be had only by being the subject of an experience. Tye accepts this, but does not see it as an obstacle to providing a naturalistic, broadly physical account of experience. (Tye holds that although mental facts are representational facts, these are ultimately physical, albeit externalist, facts.)

Dretske thinks that to know what another's experience is like, one only has to know what the representational content of the experience is:

Knowing what bats, fish, and neighbors experience is, in principle, no different from knowing how things 'seem' to a measuring instrument. In both cases it is a question of determining how a system is representing the world. Although this is difficult - sometimes, from a practical standpoint, impossible - it does not require the conceptual impossibility of getting 'inside' the head of another being.³²

In my opinion, we can know something about the experiences of others and, for the most part, the kind of information that we exploit in this context is about the representational content of experience. Kathleen Akins, for example, tells us a lot about what the echolocatory experiences of bats must be like based on knowledge of what information could and could not be available to beings who detect objects by sound:

we can infer, with fair reliability, what information the bat lacks given the properties of the physical world and the signals produced. For example, if we know that a sound signal with a certain frequency F can travel only about 6 feet, then we know that the echo of frequency F does not provide any information about objects at a distance of greater than 3 feet³³

³²Dretske (1995) pp. 81-82. He demonstrates quite clearly that 'knowing how' something represents something is just to know what is represented: "If you know what it is to be 18°C, you know how the host 'feels' to the parasite. You know what the parasite's experience is like as it 'senses' the host. If knowing what it is like to be such a parasite is knowing how things seem to it, how it represents the objects it perceives, you do not have to be a parasite to know what it is like to be one." (Dretske (1995) p. 83). Contrast this with Tye's conception of knowing how something is represented below.

³³Akins (1995) p. 139

Because Doppler compression in the bat occurs only in one direction objects moving away from the bat will produce echoes that are well below 61 kHz. This means that the echo will fall in a frequency range to which the basilar membrane is least sensitive, so objects that move away from the bat will simply disappear. Indeed, the faster the object moves away from the bat, the more quickly it will 'evaporate'.³⁴

Although one can know something about experiences one has never had, there is a remaining doubt that knowing the representational content is sufficient for knowing everything about what those experience are like. Firstly, there is the intuition that although we may learn what a bat can detect, this still leaves something out. For example, because a bat perceives objects in a (limited) three dimensional space, it is tempting to think of echolocation as akin to vision. For example, in the second quote (above) from Akins, one might think that objects that are moving away from a bat disappear into darkness, with the objects themselves being 'light' in some way. But this would simply be to employ a visual metaphor where it is quite unwarranted. Bats do not detect the colour of objects via echolocation and using this sense they can perceive objects in the dark. It is difficult therefore to really get any grip on what the bats' experience of objects is like. This is, however, only an intuition.³⁵ Dretske would no doubt reply that if we knew everything that bats' experiences represented we would know what the bats' experiences are like.

One thing to note is that we can represent the same thing in different ways. One can have a belief that red is represented in one's experience and one can have the different belief that colour reflectance property XYZ is represented in experience, even if red is XYZ. Conceptual representation is fine-grained in this way. Perhaps then what is important in knowing what an experience is like, is knowing not only what is represented, but also how it is represented. This is exactly the approach adopted by Tye, which I will now consider.

³⁴Akins (1995) p. 141

³⁵But quite a strong intuition nonetheless, as is witnessed by Tye's (and other's) adherence to it. See Tye (1995a) pp. 12-15 and 165-171.

Tye holds that knowing what is represented in experience does not necessarily allow one to know what that experience is like. In fact, he thinks that only if one has undergone the experience, or a comparably similar one, can one know what it is like to have that experience.³⁶ This is because, according to Tye, to know what any experience is like, one must possess the appropriate phenomenal concepts, and one can only possess these concepts by having, or having had, the appropriate experience.

To explain Tye's view, consider again his view of introspection. To know about your experience which represents feature Q, you must have a belief that your experience is of Q. According to Tye, phenomenal concepts must be employed in having this belief if one is to have knowledge of the phenomenal character. Tye says:

I call the concepts relevant to knowing the phenomenal character of any state "phenomenal concepts". Phenomenal concepts are the concepts that are utilized when a person introspects his phenomenal state and forms a conception of what it is like for him at that time.³⁷

phenomenal concepts, as described, are crucial to knowing phenomenal character... knowing what it is like to undergo a phenomenal state type P demands the capacity to represent the phenomenal content of P under those concepts... knowing what it is like to undergo any given phenomenal state requires adopting the appropriate experiential perspective.³⁸

According to Tye there are two kinds of phenomenal concepts - predicative and indexical. Predicative phenomenal concepts are ones like 'this shade of red'. The possession conditions for the phenomenal concept 'red' are such that one must have experienced red and one must have the ability to tell on the basis of one's experience which things are red, in appropriate conditions. There is only one phenomenal indexical concept, namely, 'this'. If one possesses this concept one has a way of

³⁶See Tye (1995a) pp. 165-171. One must allow for comparably similar experiences to confer knowledge, to account for Hume's example of the missing shade of blue.

³⁷Tye (1995a) p. 167

³⁸Tye (1995a) p. 169

picking out a particular feature of experience while it is present in experience. One may not have the ability to reidentify that feature on other occasions and one may not be able to classify that feature as belonging to any particular category, such as colour, redness, sound etc.³⁹

To summarise, Tye holds that to know what an experience is like, one must know what the representational content of that experience is. But one must know of the representational content in the right mode of representation. This involves conceptualising the experience with phenomenal concepts, which can only be possessed if one has undergone the experience in question. Tye calls this feature of experiences their 'perspectival subjectivity'. One cannot communicate to another fully what an experience is like if that person has not undergone that experience (or a suitably similar one).

Yet according to Tye, the fact of experiences being perspectival does not entail that experiences are not naturalisable and realised by physical states. He claims that the fact you know when you introspect your experience when phenomenal concepts are employed is a different fact from the one you know when you know what the representational content of your experience is when not employing phenomenal concepts. This is because the facts are fine-grained. A fine-grained view of facts allows that two facts may be different when, although they refer to the same states of affairs in the world, they have different cognitive significance for the knower. Thus, 'Hesperus is bright' and 'Phosphorus is bright' can be regarded as different fine-grained facts although they refer to the same state of affairs in the world. Consider knowing a fine-grained fact about an experience under phenomenal concepts and knowing a fine-grained fact about your experience not under phenomenal concepts. Tye claims these facts refer to the same state of affairs in the world. Knowing one fine-grained fact under one mode of presentation does not let you know the other fine-grained fact that is given in a different mode of presentation. However, Tye

³⁹Tye (1995a) p. 167

holds that what you know in both cases is the same with regard to objective states of the world. You know the same coarse-grained fact in each case. Thus, although there are some fine-grained facts that can only be known if one has had an appropriate experience, this does not render experiences non-natural. Tye says:

The existence of the fact that I am tall, as distinct from the fact that Michael Tye is tall, is no objection to physicalism. One and the same thing can be conceived in different ways.⁴⁰

This view is attractive as, unlike Dretske's account, it respects the common intuition that to know what an experience is like one must have undergone that experience, or a relevantly similar one. There is a certain kind of perspectival nature which experiential states have, yet this can be accounted for in a way which does not compromise the objective nature of states of affairs or the naturalisation project.

4 - Experiences, Animals and Oblivion

Another attractive feature of Tye's and Dretske's accounts is that they try to do justice to our intuition that animals (and similarly, young children) are conscious creatures which are the subjects of experience. Tye and Dretske hold that there is something it is like for animals to undergo experiences.⁴¹ Recall that they hold that a representational state (with the appropriate kind of content) which is either poised to interact with the cognitive system or has the function of interacting with the cognitive system is an experience. Animals have cognitive systems, and it seems plausible that they have appropriate representational states which interact with those cognitive systems. Thus, it appears quite straightforward that animals can have conscious experiences if Tye or Dretske's theory is true.

There are, however, a few difficulties to be ironed out. Firstly, what is a cognitive system? Tye and Dretske give little direct indication of what they take it to be. For the

⁴⁰Tye (1995a) p. 173

⁴¹Tye (1995a) p. 5; Dretske (1995) p. 111

most part they seem to suppose that the cognitive system is distinctive in (at least) involving beliefs and desires which play a role in causing behaviour.⁴² Further, as we have seen, they both suppose that beliefs, desires and propositional states in general are conceptual states. On their accounts, therefore, one would expect them to hold that animals are creatures capable of possessing concepts because they hold animals can have conscious experiences.

This prompts one to ask what are Tye's and Dretske's accounts of what it is to possess a concept. Despite the fact that both their accounts rely heavily on making a distinction between conceptual and nonconceptual content, there is surprising little discussion of this point. Certainly, this is a particularly difficult question. In the history of philosophy we find very different accounts of concept possession, ranging from the idea that to possess a concept one must possess language, to the idea that to possess a concept it is enough that one be able to reidentify the object of which one (allegedly) has a concept. It is clear that animals do not possess concepts if they have to have language, but that they could possess concepts if less stringent requirements like the latter are stipulated. Call the former view a high-grade view of concepts and the latter a low-grade view of concepts. If Dretske and Tye hold that animals can have conscious experiences then they must hold that animals have cognitive systems. As they appear to hold that a cognitive system is a conceptual system, they must hold a low-grade view of concepts, which animals can possess.⁴³

This makes clear a few points which are not explicitly brought out by Tye and Dretske. But now consider their view of introspection. Both hold that to introspect one's experiences one must not only possess the concepts relevant to what is being represented, one must also possess the concept of experience. This is required in order that one can believe that one is having an *experience* of such and such a character.

⁴²See Dretske (1995) p. 19 and Tye (1995a) pp. 138-139.

⁴³Tye's account of the possession conditions for phenomenal concepts suggests that in fact he has a low-grade view of concepts. See Tye (1995a) p. 167. Similarly Dretske (1995) p. 138 suggests an account which would elucidate concepts in terms of recognitional powers.

According to Dretske, one should distinguish between having an experience (where one is conscious of properties in the world) and being conscious of that experience:

There are, to be sure, states in (or of) us without which we would not be conscious of trees and pianos. We call these states experiences. Since these experiences make us conscious of things (pianos, trees, French horns) the states themselves can be described as conscious. But we must be careful not to conclude from this that because the states are conscious, we must, perforce, be conscious of them.⁴⁴

If a subject does not introspect and form beliefs about the nature of their experience, then they will not be conscious of their experience. They will, however, be conscious of the properties which their experience represents.

Some backing is given to the idea that a subject can have a conscious experience, without being conscious or aware of their experience, by Mike Martin.⁴⁵ He imagines a person called Archie, who is looking for his cuff link. He searches and, when looking in a drawer, fails to notice it, although it is in plain view. Later, Archie recalls looking in the drawer and recalls his experience. He suddenly realises that the cuff link was in the drawer but that he failed to notice it. Martin claims that Archie's memory is evidence of how things looked to him, that is, of what his experience was like. Archie knew when he was searching what his cuff link looked like, thus, his not retrieving it shows that he was not conscious of his experience at the time. Martin claims:

one can experience something as a certain way even if it does not impinge on one's beliefs, precisely because one fails to notice how things appear.⁴⁶

⁴⁴Dretske (1995) p. 100. Dretske also claims that being conscious of a property (being conscious of an F) is also to be distinguished from being conscious that it is an F, which is a conceptual representation of the experience.

⁴⁵Martin (1992)

⁴⁶Martin (1992) p. 750

In this way one can understand how one could be undergoing a conscious experience, without being conscious or aware of that experience or some aspects of it.

It is a generally acknowledged fact that even if animals do possess some concepts, they do not possess concepts about minds or experiences.⁴⁷ Therefore animals will be unable to form beliefs about their experiences and to introspect on the representationalist account. According to Dretske, this implies that animals will not know what their own experiences are like, nor will they be conscious of their *experiences*. Rather, animals will be conscious of the objects and properties represented in their experience. Dretske explicitly acknowledges this fact and takes it to be an advantage of his theory:

I see no reasons to think that because animals have no concept of experience - do not, therefore, know or believe that they have experience - that, therefore, their experience is somehow different from ours.⁴⁸

Dretske holds that animals have conscious experiences, they just cannot have certain beliefs about those experiences.

An explication of Tye's account is not quite so straightforward. In line with Dretske, he holds that having knowledge that one's experience is of a certain character involves the application of the concept of experience. Therefore, presuming he also believes animals do not possess a concept of experience, he will hold that animals cannot introspect. But Tye also claims that in some circumstances one can be 'oblivious' of one's conscious experiences. One example he cites is the well known case of the distracted driver who avoids obstacles in the road but is unaware of the scene in front of his eyes because he is lost in thought.⁴⁹ According to Tye, the driver is having experiences of the road in front of him, but he is simply oblivious of those experiences. He explains that this is because the driver is not paying attention to his

⁴⁷The exception may be the great apes. See Carruthers (1992) pp. 137-139.

⁴⁸Dretske (1995) p. 111

⁴⁹This cases seems to originate in Armstrong (1968) p. 93.

experiences or to the objects and properties which his experience represents the world as having. The driver's representations of the road are poised to interact with his belief system - that is what makes them experiences. The representations do not actually interact with the belief system, therefore the driver is unaware of his experiences. Tye claims:

without the application of phenomenal concepts of the sort I have described, we are oblivious of our experiences. There is something it is like for each of us to undergo any experience, but we need not always be aware of what it is like.⁵⁰

One interpretation of Tye's position has recently been proposed by William Seager. He claims that Tye holds that if a subject is not introspecting their experience then they are oblivious of it. Because animals do not possess the concept of experience they cannot introspect. Seager believes that Tye is committed to claiming that animals are oblivious of all their experiences. He finds this position unpalatable because he believes that if animals are oblivious of their experience we should then be unconcerned for the welfare of animals. Animals cannot suffer if they are oblivious of their experience. The following quote is illustrative:

It appears to follow from this understanding of the relationship between consciousness and introspection that animals are perpetually and irredeemably in a state like that of the distracted driver with respect to all their sensations, perceptions and any other 'phenomenal' states as well, inasmuch as they lack the concepts needed for introspective knowledge... if this is what it is like for animals, then there seems little to be concerned about regarding their treatment or condition.⁵¹

Seager reads Dretske's account differently. Although, according to Dretske, animals cannot be conscious of their experiences, he nonetheless claims that animals have experiences just like our own. Therefore Seager holds that on Dretske's account animals undergo conscious experiences but merely cannot have beliefs about those

⁵⁰Tye (1995a) pp. 168-169

⁵¹Seager (1999) p. 173

experiences. Animals, on this account, can still suffer. On the other hand, Seager holds that according to Tye, animals undergo experiences but these experiences are concealed from them because they cannot introspect. Animals do not suffer.

I believe that Seager misinterprets Tye's theory on two accounts. The first is that it is not obvious from what Tye says that one should think of being 'oblivious' of one's experience (as in the case of the distracted driver) as implying that one could not suffer, if that experience was a pain experience. Tye says that if one is 'oblivious' of one's experience, there is still something that it is like to be the subject of that experience. If Seager accepts that on Dretske's account there can be a sense in which it is like something to undergo an experience, while not being conscious of one's experience, then why cannot he accept it on Tye's account?

On the other hand, perhaps it is reasonable to question whether Tye's account is the same as Dretske's on the grounds that Tye says the distracted driver is not only unaware of his experience, he is also unaware of the scene in front of his eyes. Perhaps this entails that, if that experience in question were a pain experience, the person would not suffer. I don't think this is what Tye would claim but, nonetheless, I wish to suggest that if this is the interpretation of Tye that Seager thinks is correct, it still does not appear to follow that animals will have experiences only in the manner of the distracted driver. Thus, it does not follow that animals are always oblivious of their experiences and cannot suffer.

Seager fails to notice that Tye says that a subject will be oblivious of their experience when they do not apply phenomenal concepts to their experience. But at no time does Tye say that a subject will be oblivious of their experience if they are just not introspecting it. It seems to me that on Tye's account, while animals cannot introspect, there is no reason to think that they cannot apply phenomenal concepts to their experience without introspecting, and thus be unlike the distracted driver.

It is easy to see why one might misread Tye in this respect. Tye sometimes says that phenomenal concepts are the concepts utilised when a person introspects. However, the detailed account of how one applies a phenomenal concept makes no reference to the fact that one must also be introspecting in the sense that one must apply a concept of experience to one's experience. Indeed, Tye says very little about introspection other than it involves the application of both phenomenal concepts and the concept of experience. He does explicitly claim, however, that one can apply phenomenal concepts and therefore form beliefs about the objects and properties represented in experience without forming beliefs about that experience. Consider the following passage:

So, how do I conceptualize my 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 the 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.* This is why when I turn my attention inward to the experience itself, I always seem to end up scrutinizing external features. *The phenomenal concepts I apply and the features to which I apply them are the same in both the perceptual and the introspective cases.*⁵²

According to Tye, when one applies only phenomenal concepts one is attending to the features of world, not attending to the nature of one's experience. The oblivious distracted driver is not attending to either his experience or the objects in the road that he manages to avoid.

On my reading of Tye, animals need not be oblivious of their experiences, for they can apply phenomenal concepts to their experience. Tye's account of the possession conditions for phenomenal concepts suggests that they are low-grade concepts and that animals would be capable of possessing them. At the same time, it

⁵²Tye (1995a) p. 167 (my emphasis)

will still be true on Tye's theory that animals cannot introspect, for they presumably do not possess the concept of experience.

To summarise, both Dretske and Tye explicitly hold that animals have conscious experiences. Moreover, their theory of experiences would lead one to expect that animals have experiences - animals have cognitive systems and representational states which feed into those systems. Dretske explicitly holds that animals cannot introspect. They cannot therefore know what their experience is like in the sense that they cannot form beliefs about their experience, but there is still something it is like to be an animal undergoing such an experience. Tye does not explicitly mention whether he thinks animals can introspect but it is plausible to think that animals do not possess the concept of experience and therefore cannot do so. Tye holds that in introspection one applies both phenomenal concepts and the concept of experience. He also holds that one can apply phenomenal concepts without applying the concept of experience - this is what happens in ordinary perception. Tye holds that one is 'oblivious' of one's experience only if one does not apply both a concept of experience and phenomenal concepts to one's experience. Specifically, in contradiction to Seager's explication of Tye, he does not say that one is oblivious of one's experience if one only applies phenomenal concepts to one's experience without introspecting which involves the further concept of experience. We have reason to think that animals can possess phenomenal concepts and therefore that when they apply such concepts to their experience they will not be oblivious of their experiences. Of course animals could, on occasion, fail to apply phenomenal concepts to their experiences and thus be oblivious to them, but equally, humans can be in this position also (as the case of the distracted driver shows). In any case, whether being oblivious of one's experience entails that one would not suffer, if that experience was a pain experience, is unclear. The language of oblivion may suggest this, but Tye says that even when oblivious of one's experience, there is still something it is like to have that experience.

5 - Representationalism and Higher-Order Theories of Consciousness

There are a class of theories of conscious experiences that can be quite similar to the representationalist theories expounded above. These are higher-order theories of conscious experience. Some higher-order theories of experience are representationalist theories and others are not. Both Tye and Dretske reject higher-order theories of consciousness. I wish to briefly give an account of these theories for two reasons. The first is that some of the arguments that I will present later in this thesis will also have a bearing on some higher-order theories. The second reason is to motivate my choosing Tye and Dretske's representationalism to be the focus of this thesis over higher-order representationalist accounts.

Higher-order theories of consciousness can be divided into two main types. There are higher-order thought theories and higher-order experience theories. I will look at the former first.

Higher-order thought theories assert that a state A is a conscious state if one has a thought or a belief B appropriately caused by A. The content of B must be something to the effect that one is in a state A. (The thought or belief is usually not taken to have to be a conscious belief.) This theory can be applied to explain how thoughts and beliefs are conscious, but also to explain conscious experiences. David Rosenthal is a prominent proponent of this type of theory.⁵³ Rosenthal holds that intentional properties are not the same as phenomenal properties, but according to him both kinds of properties become conscious when one has a thought or belief about them. Rosenthal is therefore not a representationalist higher-order thought theorist about experiences.

A slightly different version of the higher-order thought theory of consciousness is proposed by Carruthers and Botterill.⁵⁴ They deny that phenomenal properties are

⁵³Rosenthal (1986)

⁵⁴Carruthers and Botterill (1999) chapter 9

distinct from intentional properties. They claim that the states A, which become conscious experiences by having an appropriate thought or belief B about them, have intentional content which determines the phenomenal character. This theory is a representationalist higher-order thought theory.

Representationalist higher-order thought theories can be clearly distinguished from Tye and Dretske's representationalism. Tye and Dretske's representationalist theory does not require that one have a thought or belief in order to have an experience. In the previous section I explained in detail why this was so. In particular, their theory stresses that introspection, which they take to consist in forming a belief about one's experience, is not required in order to have a conscious experience.

On both representationalist and non-representationalist higher-order thought theories one must have an appropriate belief or thought to the effect that one is in another mental state for that state to be conscious. Recall that it is generally agreed that animals do not have concepts of mental states, therefore they cannot have thoughts or beliefs about their mental states. According to the higher-order thought theory this means that animals cannot have conscious experiences. In contrast, Tye and Dretske's representational theory allows that animals can have conscious experiences.

It might be thought that there is really nothing separating representationalist higher-order thought theories from Tye's and Dretske's representationalist theories. For example, recall that Dretske holds that if one does not introspect, then although one has a conscious experience, one is not conscious of that experience. The higher-order theorists claim that if one does not have a higher-order thought about that experience then one may be in a state that represents the world, but that state is not conscious. It is tempting to think that there could perhaps just be a verbal difference between these theories. Perhaps they are just describing the same phenomena using

different language. This appears to be the view of Lycan but not of many other philosophers.⁵⁵

I think that Lycan's interpretation of the debate must be wrong. The reason is that Tye and Dretske can also allow that there are representations that are not conscious, in a different way from the higher-order theorist. These will be representations that either do not have the function of interacting with the cognitive system (Dretske) or are not poised to interact with the cognitive system (Tye). These are equivalent to the states which, *on the higher-order theory*, we form no beliefs about. On Tye and Dretske's representationalist theory, representational states that have the function of interacting with, or are poised to interact with, the cognitive-system are conscious, even if no beliefs about them are formed. There is something it is like to be in such states; what is lacking is a further level of consciousness, namely, consciousness *of* those states. In opposition to this, higher-order theorists claim that if there is no higher-order belief about the representational state then there is no consciousness simpliciter. This is why they cannot attribute consciousness to animals, while Tye and Dretske can.

The fact that a theory denies consciousness to animals is seen to be problematic by most people. On appreciation of this some philosophers might retract the claim that a higher-order state must involve concepts of experience. This latter option generally results in higher-order experience theories of consciousness, which I will look at presently.⁵⁶ Yet some philosophers maintain that animals are not conscious creatures.

⁵⁵See Lycan (1996) p. 29. Those that explicitly disagree include Botterill and Carruthers (1999), Dretske (1995) and Seager (1999).

⁵⁶ See Botterill and Carruthers (1999) pp. 256-258. One might wonder why a higher-order thought theorist could not drop the requirement that one has to have a thought about one's *experience*. Perhaps they could hold that one just has a thought about the content of their experience. This thought, however, would no longer be a *higher-order* thought, but simply a conceptual rendering of nonconceptual content. Botterill and Carruthers argue that such an account eventually collapses back into one where the subject of experience must possess a concept of experience or it becomes a higher-order experience theory. Examination of this point would take me too far from my present concerns.

Botterill and Carruthers, explicitly hold that animals and young children are not creatures which have conscious experiences. In an earlier work too, Carruthers holds that animals do not have conscious experiences of pain and therefore do not suffer.⁵⁷ This view is highly-counter intuitive. As I have pointed out before in the discussion of McDowell above (chapter 2, section 5.2.3), I take it that arriving at such a view should allow one to discount the theory of consciousness. I do not argue for this but simply assume it.

Higher-order experience theories of consciousness are held by Armstrong and Lycan.⁵⁸ The main idea of these theories is that one has a conscious state when one has a perception-like awareness of it. This theory has strong similarities with Locke's account in which consciousness occurs when there is an internal perception-like representing of lower-order mental states. This view does not prohibit attributing consciousness to animals.

There are a variety of worries concerning this theory of conscious experiences. The theory seems committed to the empirical claim that there is an inner-sense mechanism for detecting mental states. Yet the perception of inner states appears to involve no extra phenomenology than perception of the world (this is the transparency of experience again). Are experiences objects which we see or experience? If they are objects, are they sense-data or are they physical brain states? If the latter, how could detecting a brain state inform one of the content of experience? Can the theory account for the special reliability and authority that we suppose subjects to have of their mental states? There has been much written about these problems and whether they are damaging to the theory.⁵⁹ I intend to by-pass these and focus on one particular worrying feature of the account.

⁵⁷Carruthers (1992) chapter 8

⁵⁸Armstrong (1968) and (1980); Lycan (1996).

⁵⁹See Dretske (1995) chapter 4, Shoemaker (1996), Botterill and Carruthers (1999) chapter 9 and especially Lycan (1996) for many further references.

Why should a mental perceptual state be re-represented as another mental perceptual state? What function would this serve? Any function one might postulate for such a state (for example, that it serves perceptual integration⁶⁰) could, it seems, be carried out by either the original representation or, if not, it could do so only by the higher-order state affecting the cognitive system in an appropriate way. In other words, the addition of a second perceptual state appears to have a redundant role. If there is something special about its being a perceptual state, then why do we need two such states? If it has to feed into the cognitive system, why not suppose that the original state feeds directly into the cognitive system without the intervention of a second perceptual representation?

Interestingly, when we turn to Lycan's higher-order experience account, we find him claiming that not any higher-order experience will make a state conscious. He says:

The operation of an internal monitor does not *eo ipso* constitute consciousness. For we can imagine a creature that has a panoply of first-order states and a rich array of monitors scanning those states, but scanning in such a way that the monitors' output contributes nothing cognitively at all to the creature's surrounding psychology, maintenance or welfare... For it to constitute consciousness, we must require that monitor output contribute specifically to the integration of information in a way conducive to making the system's behaviour appropriate to its input and circumstances.⁶¹

This seems to directly confirm the problem. If one thinks a state has to feed into the cognitive system to confer consciousness, then why cannot the lower-order experience feed directly into that system?

I now leave the subject of higher-order accounts of consciousness. I hope to have made plain how they differ from Tye and Dretske's representationalist account and to

⁶⁰This suggestion is made in Lycan (1996) and Armstrong (1980).

⁶¹Lycan (1996) p. 32

have provided some good, if not conclusive, reasons to think that their representationalist account is preferable to higher-order theories.

6 - The Problem of Mechanism and the Status of the Representational Theory

I will now consider precisely how representationalism can account for the problem of mechanism and what kind of theory the representationalist theory is. Recall that the problem of mechanism was a demand for an explanation of how a mental state could be identical with or supervene on certain physically, functionally, or otherwise naturalistically identified states. Specifically it asked how a naturalistically identified state could explain the properties that mental states have - they are conscious, have phenomenal character, are transparent, allow for privileged access, etc.⁶²

According to representationalists, a physical state is a representational state if it bears the right relations to what it purports to represent. For Tye this relation is one of causal covariation in optimal conditions. For Dretske, it is having the natural function to represent what it does. If this physical state meets certain further requirements regarding its representational nature (for example, that it has acquired its function from evolutionary processes, that its content is abstract and nondoxastic) and if it bears an appropriate relation to the cognitive system, then, according to the representationalist, it will have the same properties as a conscious experience. For according to the representationalist, being a conscious experience just is being a representational state of the appropriate kind.

According to Tye's account of realisation outlined in chapter 1, section 3.5.3, the conditions are met for saying that a physical state of this sort, which bears the correct relations to the world and the cognitive system, will realise a conscious experience. Tye explains realisation thus:

The realization relation is not easy to analyze, but it is at least in part one of upward determination or generation: any object that has the higher-level property, or is an

⁶²See chapter 1, section 3.5.2 and section 3.5.3.

instance of the higher-level type, does so *in virtue of simultaneously* having one of the lower-level properties or types that realizes it.⁶³

Experiences are states with the higher-level property of being conscious states with phenomenal character. According to the representationalist, experiences have this property *in virtue of simultaneously* having the lower-level property of being a certain kind of representation. Physical states can also have the property of being this kind of representation. Physical states can therefore be said to realise experiences.⁶⁴

According to the representationalist, a physical state that shares all the intrinsic properties of another physical state that does realise a conscious state, but which does not bear the same relations to the world or the cognitive system, will not realise a conscious experience, or one of the same phenomenal character. Thus, on the representationalist account, experiences do not supervene on physical states of the brain. Two states could be identical in all their intrinsic physical properties while one realises an experience and the other does not. Nonetheless, experiences will supervene on physical states together with the external relations that those states bear to other objects in the world and historical events and processes that the subject of those states and their ancestors have been subject to.

This explanation helps to explain how physical states could realise conscious states. If we hold that conscious states are necessarily representational states of the kind representationalists suggest and necessarily bear the stated relations to cognitive systems, then any physical state which is such a representation will realise a conscious state. We can regard this as a solution to the problem of mechanism, if we can explain two further things. Recall that Tye's account of what was required for a naturalistic explanation of an instance of realisation (outlined in chapter 1 section 3.5.3), was that the correlations found between lower-level and higher-level phenomena must not be epistemically basic. In the case at hand we do not have any

⁶³Tye (1995a) pp. 41-42

⁶⁴See Tye (1995a) p. 164

problematic brute facts. The physical states that realise experiences and the experiences themselves are both representations. Facts about what makes a representation are naturalistic on both Tye's and Dretske's account of representation. Secondly, Tye claimed that it must be explained how the characteristic features of the mental could be realised by the physical. These features were those that I have discussed in the sections above, transparency, privacy etc.

If we are satisfied by the representationalists' account of these features of the mental and we are convinced that it is necessary that all and only conscious experiences are representations of the above kind, then it would appear that the representationalists have explained the mechanism whereby physical states realise mental states. If it is the essence of a particular conscious state that it represents what it does and bears particular relations to the cognitive system, and if a physical state can also have these properties, then the physical state will realise the mental state. We can also explain why this is so naturalistically.

If it were merely a contingent fact that conscious experiences were such representations then one should not be convinced. This provides us with a clue to the status of the main claim of the representationalists' theory, namely, that experiences are appropriate representations poised to interact with the cognitive system, or having the function to interact with the cognitive system. It must be a necessarily true claim, if true at all - and this is what Tye and Dretske claim.⁶⁵

To conclude, what one needs to establish, in order to determine whether the representational theory provides a naturalistic explanation of why certain physical states of the appropriate kind realise conscious experiences, is whether the claims of the theory are true and necessarily true.

This concludes the main explication of the representational theories of states with phenomenal character. To conclude this chapter I will now explain how I will assess

⁶⁵Tye (1995a) p. 184; Dretske (1995) makes it clear only by trying to account for certain nonactual possible cases, such as swampman.

Tye and Dretske's representational theory (which from now on I will simply call the representationalist theory) in the rest of the thesis.

7 - Assessment of Representationalism

Thus far I have defended the thesis which the representationalists hold, namely, that experiences have nonconceptual content. I believe that this is a plausible thesis and I will not question it.

There are two important things to be said about Tye and Dretske's naturalistic theories of representation - the causal covariation and teleological theories. Firstly, there are two competing naturalistic theories of representation to Tye's and Dretske's in the current literature. The first claims that what a state represents is determined by its functional role. This functional role could be characterised narrowly referring only to function that occurs within a subject's head, thus yielding an internalist theory of representation; or it could be characterised widely to include causes in the world, thus yielding an externalist theory. I will not consider this view, primarily because if one thought that phenomenal character was representational content and representational content was a matter of the functional role of a state, then this would be a straightforwardly functionalist theory of the mind. As I explained in chapter 2, section 4, Tye and Dretske wish to provide an alternative theory to functionalism, which they believe to be inadequate, and this is why they do not adopt a functional role account of representation. I will follow their lead in this. Functionalism does seem to be open to attack from the inverted spectrum hypothesis, and several philosophers in addition to Tye and Dretske think that representationalism can offer at least a more sophisticated, if not successful, defence against the possibility of inverted spectra.⁶⁶

Another account of representation holds that we do not need a specific theory of representation to know that representation can be naturalised. I discussed this view, which is held by Botterill and Carruthers, at the end of chapter 1. Their view seems to

⁶⁶See for example, Block (1990a), Lycan (1996), Seager (1999) chapter 6 and Shoemaker (1996).

be that we can employ the notion of representation in giving a naturalistic account of mental states because we know that the content features in the causal laws of psychology, and therefore we know that content can be naturalised without providing a specific theory of it. I argued in chapter 1 that this was no guarantee that content could be naturalised. Moreover, if one is not provided with a theory of representation then it would make assessing the representationalist theory near impossible. We do not know if content is narrow or wide, or in what circumstances misrepresentation can occur etc.

In short, the causal covariation and teleological theories of representation appear to be the only two naturalistic theories of content that are discussed in the literature, besides functionalist accounts. I have no theory of content to offer myself, thus I will, for the most part, consider only the theories of representation that Tye and Dretske themselves hold.⁶⁷

The second important point to make clear is that one could easily attack the causal covariation and teleological theories on the grounds that they are poor theories of representation generally. For example, there are many accounts in the literature of the problems these theories face in accounting for representation in states other than experiences, e.g. the propositional attitudes and non-mental representations.⁶⁸ Another worry is that Tye and Dretske do little other than give the briefest outline of the theories of representation. For example, Tye hardly ever discusses what he takes 'optimal conditions' to be or how one would go about determining what they were. I will not criticise their theories of representation on these grounds. One reason is that one might think that, as theories of experiential representation, the theories do not face problems which they might if they were accounts of propositional attitude representation. For example, one might think that these theories do not have to account for the representation of things that don't exist, like Santa Claus, because

⁶⁷Note that Lycan (1996) p. 75 holds a nonconceptual teleological theory of content similar to Dretske's.

⁶⁸See Cummins (1989) for an extensive attack on these theories as general theories of representation and the references therein.

experiences represent only general observational features as Tye claims. Therefore I will be criticising the representationalists' theory only on account of their ability to explain specifically perceptual and sensational experiences.⁶⁹

Recall the three claims of representationalism outlined in section 5:

- (1) All phenomenal features of experiences are representational.
- (2) All differences in phenomenal character will be differences in representational content and vice versa.
- (3) Phenomenal character is constituted by or is identical with the content of experience. In particular, the phenomenal character is not a vehicle of content.

These claims are held by the representationalist to be necessary truths. The third claim rested on establishing claims one and two. Therefore, to assess the third claim one must assess the first two claims. I will argue that neither claim is true.

(One should note that these claims could be adopted by a representationalist higher-order theorist of consciousness. Lycan (1996) and Botterill and Carruthers (1999) hold these three claims to be true. If they held the theories of representation which Tye and Dretske hold, then refuting these claims would also be refuting their theories. Lycan accepts a teleological theory of representation like Dretske and thus my arguments will be relevant to his theory. However, Botterill and Carruthers do not commit themselves to a theory of representation. Therefore, some of my arguments will be not be conclusive against them.)

Firstly, I will address the claim that all differences in phenomenal character are differences in experiential representation and vice versa. This will form the content of chapters four, five and six. In chapter four I will examine two counter-examples to this claim which have been made in the literature and argue that they are

⁶⁹Tye (1995a) pp. 101-102 explicitly acknowledges that his account of representation would fail to account for propositional attitude representation, but thinks that it is a promising theory of experiential representation.

inconclusive. The cases focus on cross-modal perception and prosthetic vision. I will then examine a feature of auditory experiences, namely, the representation of pitch, and will argue that certain important distinctions need to be recognised to best extend the representationalist view to cover auditory experiences. These distinctions may then yield insights into the nature of content in other sense modalities.

In chapter five I will argue that experiences of certain ambiguous figures provide a counter-example to claim two above. There are experiences that can differ phenomenally without there being a difference in the content of those experiences.

I will then examine the inverted spectrum hypothesis in detail. I will argue that a plausible representationalist theory fails to account for inverted spectra. Therefore there can be differences in content without corresponding differences in phenomenal character. This will form the basis of chapter six.

Secondly, I will address the claim that all features of experiences are representational. I will present some putative counterexamples and show that they are inconclusive. Then I will argue that the claim is false by considering an experiment reported in Science which claimed to elicit experiences of novel colours in subjects. I will argue that if these claims are true then the nature of these experiences cannot be accounted for by the representationalist. Further, I will argue that even if these experiences do not exist, they reveal that it is possible that experiences of this kind could exist. This will be the content of chapter seven.

The last chapter, chapter eight, will assess the other aspects of the representationalist theory. These will include the claim that appropriate representations must be poised to interact with the cognitive system or have the function of interacting with the cognitive system and the representationalist naturalistic solution to the problem of mechanism. This chapter will conclude with an overall assessment of representationalism and some speculative remarks on the relation between phenomenal character and content.

Chapter 4 - Cross-Modal Perception and Experiences of Pitch

1 - Introduction

In the next three chapters I will be examining the representationalist claim that all differences in the phenomenology of experience are accompanied by differences in representation, and that experiences with different representational contents have different phenomenologies. In this chapter, I will firstly examine two types of case presented by Block and Humphrey which can be used to try to establish that experiences with different phenomenal characters have the same representational content. These arguments focus on comparing experiences in different sensory modalities. I will show that these arguments are inconclusive. I will then examine a feature of auditory experiences, namely, the representation of pitch. Representationalists have focused almost exclusively on visual experiences, and it is assumed that it can be extended unproblematically to experiences in other sense modalities.¹ Perception of pitch is unusual because there appear to be two distinct groups of people who perceive pitch. There are those who have perfect pitch and those who have relative pitch. I will argue that certain important distinctions need to be recognised to best extend the representationalist view to cover auditory pitch experiences. These distinctions will then yield insights into the nature of content in other sense modalities.

2 - Cross-Modal Perception

Block and Humphrey both try to establish that experiences with the same representational content may have distinct nonrepresentational elements.² Although in this respect their accounts are the same, they put this result to different uses. Block

¹One author who discusses the representational nature of the direction in which sounds are heard is Evans (1982).

²Block (1995a), (1995b), (1996); Humphrey (1993). From now on I will use the phrase 'experiences that represent the same thing' to mean to same as 'experiences with the same representational content'.

argues that the phenomenal character of experience is merely a vehicle for content - it is not identical with the content itself. Humphrey argues that there is a distinctive sensational element to all perception. I will be concerned here only to establish whether one can use the cases Block and Humphrey present to show that the phenomenal character of experience is not determined by the nonconceptual representational content of that experience.

2.1 - Content and Sensory Modalities

Block and Humphrey both try to establish their claims by comparing experiences in differing sense modalities. I will firstly examine Block's argument that experiences in different sense modalities can represent the same thing while having different phenomenologies. One of Block's main examples is that one can both see and touch a dog. He claims these two experiences have different phenomenologies, but they will represent the same thing - a dog. Thus, according to Block, the phenomenology of experience is not determined by what the experience represents.

There is a very straightforward response to this example. As the representationalists hold that the phenomenology of experiences is determined by nonconceptual content pertaining only to general observational features, they can hold that the content 'dog' is conceptual content. (Depending on their view of conceptual content they may hold that this content can either be attributed to the experience in addition to nonconceptual content, or it can be attributed to the beliefs formed in response to the experiences.³) Therefore the representationalist can claim that the different experiences one has when seeing and touching a dog can be attributed to the fact that an experience of seeing a dog will nonconceptually represent something of a particular size, shape and colour, while the experience of touching a dog will represent the temperature and texture. The size and shape will

³Tye (1995a) holds that experiences can have conceptual content but that this is irrelevant to their phenomenal character. See Tye (1995a) p. 156. Dretske (1995) p. 15 holds that conceptual content attributed to experiences is more indicative of beliefs that usually accompany those experiences.

only gradually be revealed by a series of touch experiences. Therefore the different phenomenal characters can be explained by a difference in content.⁴

In response to this type of reply, Block tries to come up with better examples which illustrate his point. Block does not actually acknowledge the conceptual/nonconceptual distinction. Instead, he interprets the above reply as holding that there is too much disparate content between the experiences, and that is what explains the different phenomenology:

Suppose I both touch and see a dog. Both experiences represent a dog as a dog, but they are different phenomenally. Representationalists are quick to note that the two experiences also differ in all sorts of other representational ways.⁵

He therefore tries to come up with examples of experiences which have a very limited representational content. His examples also provide a way of avoiding the above objection by positing a content that could plausibly be nonconceptual. Block says:

If you wave your hand in the vicinity of your ear, you experience movement without size, shape or colour. You have a visual experience that plausibly represents something moving over there *and nothing else...* 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*?⁶

The thought is that while there is a common representational aspect to these experiences there is not a common phenomenological aspect. If this were true then it

⁴Tye (1995a) p. 156 explicitly forwards this argument. No other representationalist that I am aware of responds to this objection.

⁵Block (1996) p. 38

⁶Block (1996) p. 38

would seem that the phenomenology cannot be identical with the content of experience; at best it could only be vehicle for the content.

In response to this argument the representationalist could take one of two lines. The first would be to maintain that because there are some representational differences between the two experiences (as Block points out) this accounts for the differences in phenomenal character. This is Tye's position (although he claims that even in peripheral vision there will be never simply be a representation only of location).⁷ The second would be to claim that differences of phenomenology between experiences in different sense modalities are not dependent solely on what is represented - the sense modality that an experience is in contributes to the phenomenal character of that experience. On this view, the phenomenal character of an experience would be identical with the representational content of that experience *in that sense modality*.

The first representationalist position is difficult to assess. Block's intuition, that there is nothing phenomenological in common between experiences in different sense modalities which have common nonconceptual content, can seem right. However, one can make Tye's suggestion more plausible. Consider what makes an experience an experience in a certain sense modality. A plausible suggestion would be that it is the peculiar kind of content that experiences have which determines this. For example, one might hold that auditory experiences must represent some pitch. Visual experiences must represent some difference in lightness. Certainly, if one abstracted away from all differences in content between, say, visual and auditory experiences, one might end up with an essentially amodal content pertaining only to locations which would be common to the different experiences. Nevertheless, one might hold that visual and auditory experiences always contain disparate content concerning what is at the location in question in virtue of being the kinds of experience that they are. When one sees something in a certain location one is in a state that represents

⁷Tye (1995a) p. 157

something of a certain lightness at that location. When one hears something in a certain location one is in a state that represents something emitting a certain pitch at that location. To think of 'abstracting away' (as Block puts it) from all the content except that regarding location would be, on this representationalist view, to think of states that were no longer visual or auditory. This would explain away the intuition that visual and auditory experiences are fundamentally different. These experiences would be fundamentally different, but this would be in virtue of the peculiar type of content that each experience must have to be an experience in that sensory modality. One can see why this type of response may be a plausible counter to Block's claim. In abstracting away some content from an experience, one may thereby lose what is essential to an experience's being an experience in that sensory modality. To try to imagine an experience with content pertaining only to what is in common, may be to try to imagine an experience in no sensory modality (or certainly not one we are familiar with), which may be much more difficult than Block suggests.

It is hard to assess whether one can account for phenomenological differences across modalities purely in terms of content, and this is why it is unclear whether this representationalist response is adequate. Block's objection appears to rely only on the intuition that there is more to an experience being in a particular sensory modality than the content it has. However, a fully worked out version of this representationalist view would have to consider in more detail what representational content, if any, is peculiar to each sensory modality that makes it the modality it is. There might be difficulties for the view that there is such peculiar content. For example, one can detect movement by both sight and touch. Content regarding movement would not be peculiar to either visual experiences or tactile experiences. Yet, some people have defects in their senses which allow them only to be able to visually recognise objects when they are moving, or which allow them only to recognise movement itself.⁸ On the one hand, the obvious description of people who can recognise only movement by means of their eyes is that they are having visual experiences with content pertaining

⁸See Ellis and Young (1988) p. 65 and Farah (1995) pp. 14-15 and 19-20.

only to movement. If this is the appropriate description, then visual experiences would not have a peculiar content that distinguishes them from experiences in other modalities. On the other hand, it is not clear that one might not be justified in withholding the adjective 'visual' simply on the grounds that the experiences of these people are so severely degraded. Thus, it remains unclear whether one can account for the differences between experiences in different sensory modalities purely in terms of content, or whether Block is right in thinking that there is more to the phenomenology of an experience in virtue of it being in a particular sense modality.

Now consider the second possible representationalist reply: differences of phenomenology between experiences in different sense modalities are not dependent solely on what is represented. The sense modality of an experience contributes to the phenomenal character of that experience. As Block points out, many representationalists are quite vague on whether they think that this type of supplementation to the representationalist account is required, or whether like Tye they rule it out.⁹ Adopting this response would strictly falsify the representationalist thesis. The official thesis is, after all, that phenomenal character is identical with nonconceptual content. This response requires holding that the nature of phenomenal character would depend on something further, namely, the particular sense-modality associated with the experience.

This 'quasi-representationalism' is the kind that Lycan officially adopts.¹⁰ His explanation of the difference in phenomenal character between experiences that have the same content in different sensory modalities is that such experiences have a different functional role. This functional role contributes to the phenomenal character of experience together with the content of that experience (which is not determined by functional role). This is a very brief statement of his position, but it is impossible

⁹See Block (1996) p. 38.

¹⁰See Lycan (1996) pp. 134-136. Lycan is officially a 'quasi-functionalism', but he often tries to defend his position by accounting for phenomenal character solely in terms of the content of experience. This may be one reason why Block notes the vagueness of representationalists on this point, together with the fact that some representationalists do not consider this matter.

to glean any more information from Lycan's account. One might like an explanation of what the difference in functional role is, or to be shown why we might think that there is such a difference, but none is given.

To argue against the quasi-representationalist account of phenomenal character, one could investigate whether experiences in the same sensory modality can differ in their phenomenology while having the same representational content. I will take up this line of enquiry later in this chapter after I have examined Humphrey's arguments, and also in the following two chapters.¹¹

In conclusion, one can see that Block's contention that experiences in different sensory modalities can have the same content but nothing phenomenally in common, proves inconclusive against the representationalist. One could maintain (as Tye maintains) that differences in experience can be accounted for in terms of differences in content. I outlined the way in which one might elaborate on this defence. I argued that in the end the issue would have to be resolved by determining whether one could give an account of the sensory modalities purely in terms of the content of the states within those modalities. While such an approach might be feasible, the experiences of people with severely degraded perception may undermine our confidence in this approach.

2.2 - Prosthetic Vision

Block and Humphrey both claim that experiments with prosthetic devices that are intended to produce perception by artificial means show that experiences with the same representational content may have different nonrepresentational elements. Recall Bach-y-Rita's experiments (outlined in chapter two, section 5.1) with prosthetic devices that stimulated the skin on a subject's back. These allowed subjects accurately to report features of the scene in front of them. Bach-y-Rita reported that

¹¹Because I think there are problematic cases for representationalists and quasi-representationalists arising within one sensory modality, not only regarding the question of whether phenomenologically different experiences can differ in their content, but also whether all experiences are representational at all, I will not pursue the further questions raised against Lycan in the text.

the subjects normally attended to what they were 'seeing' (the objects in front of them in the world) and not to the sensations on their back. However, if they were asked to do so, they could, in retrospect, recall and attend to the sensations on their back. Block and Humphrey claim that this shows that experiences with the same representational content can be accompanied by or have different nonrepresentational elements. Hence, there is a distinctive nonrepresentational element to the phenomenal character of experience.

A representationalist might try to counter this argument by claiming that there is a difference in content between the two experiences. Representationalists hold that the phenomenology of visual experience can be totally accounted for by the content of that experience, and that this content will be about distal objects or properties in the environment. If we accept this, then the obvious way to account for prosthetic vision is to claim that it involves experiences that not only have content about distal objects and properties in the environment, but also content concerning which parts of the back are being stimulated. The representationalist account of sensations of touch is that they are states with phenomenal character that are explained by an account of their content. Thus, prosthetic vision may indeed involve both perception of the world and a distinctive sensation of touch, but this is no threat to representationalism.

A representationalist should claim that the difference between experiences generated by a prosthesis, and experiences generated by our eyes, is that the former will contain extra content regarding touch. There is no reason to think that ordinary visual experiences involve visual sensations if that means that there is more to the phenomenal character of these experiences than the content pertaining to distal objects and properties. Indeed, the descriptions of reports by subjects wearing prosthetic devices confirms that their experiences had much in common with visual experiences, and this might support the claim that they had experiences just like ordinary visual experiences, only accompanied by additional tactile experiences:

By making use of information in the image about perspective and motion parallax, the blind subjects came to perceive external objects as being located in a stable three-dimensional world. They did not locate objects as lying up against their skin - any more than we with normal vision locate objects as lying up against the retina of our eyes - but immediately perceived them as being out there in space.¹²

That subjects of prosthetic vision report that they are also able to report tactile sensations on their back simply requires their experiences to contain content about what is happening to their back, in addition to the content concerning distal objects and properties in front of them. For the most part, subjects of prosthetic vision attend to the content regarding the objects in front of them in the world, but they can turn their attention to the content concerning tactile sensations. This fact poses no threat to the representationalist.

In order to question the representationalist position here, one would have to hold that there are distinctively visual sensations that cannot be accounted for by the content of experience. One might claim that the experiences of those with prosthetic vision are different in comparison to the experiences of those with ordinary vision, not just on account of the former having extra content regarding touch, but on account of the former experiences lacking some phenomenal character pertaining to visual sensations that the latter have.

Plainly, experiences generated by the prosthetic devices of Bach-y-Rita will lack some of the phenomenal character of ordinary visual experiences. For example, the former will not have any experiences of colour and will be of a lower resolution than ordinary vision. But aside from these features, which could be explained by a difference in content, the case for there being some extra phenomenal character which is missing is rather poor. The descriptions of Bach-y-Rita's subjects tends to suggest that they did have experiences very like normal vision. This was the intended aim of the experiment. The case against the representationalist appears to rest on intuitions

¹²Humphrey (1993) p. 59

which, although vaguely plausible, the representationalist will resist. In fact, the intuition in question here is exactly the same intuition that Block promotes in the case of cross-modal perception in section 2.1 above, namely, that sensory modalities can by themselves add an extra phenomenal quality to experiences. As I have already discussed that case at length, I conclude that experiments which involve prosthetic vision do not help to decide whether phenomenal character can be explained by the content of experience. If anything, they show the power of the representationalist theory.

3 - Experiences of Pitch¹³

Thus far we have been looking at certain types of experience in different sense modalities that pose prima facie problems for the representationalist. I will now examine experiences within one sensory modality, namely audition. Proponents of representationalism pay relatively little attention to experiences in modalities other than the visual, but by looking at another sense modality we encounter different types of experience that the representationalist should be able to account for. In the rest of this chapter I will examine experiences of relative and perfect pitch. I will identify two main kinds of representationalism - environment-based and cognitive role-based. These two types of representationalism could give different accounts of perfect and relative pitch. I will argue that to explain the relationship between the two theories a distinction should be drawn between various types of implicit and explicit content. When investigated, this distinction sheds some light on the difference between the phenomenology of perfect and relative pitch experiences and may be usefully applied to describe the nature of experiences in the other sense modalities.

3.1 - What is Perfect Pitch?

An unusual feature of hearing is that some people have perfect pitch while others have relative pitch. People are described as having perfect pitch when they can

¹³A large proportion of the material in section 3 has been published in Macpherson (1999).

uniquely identify the pitch of a note. For example, if a middle C is played, they can identify this note in isolation without a given reference note. Along with this ability usually goes the ability to produce a note of a certain pitch, without hearing a reference note (obviously within the vocal capabilities of the subject). This ability is rare, even amongst professional musicians, occurring in less than one percent of the general population.¹⁴ Most people only have relative pitch. That is, when played two notes they have the ability to tell how far apart in pitch the notes are. If a middle C is played and a note above it is played, say the C above it, subjects can tell that the notes are an octave apart. These people cannot identify what pitch a note is unless they are given a named reference note. (There may also be a third category of people who are tone deaf. I take it, however, that this means only that their relative pitch abilities are particularly poor or limited.)

Young children and animals can also possess perfect pitch. There would be evidence for perfect pitch in subjects that lacked musical vocabulary if they could be trained to press a button when a note of a particular pitch was played without a reference note. Ward and Burns report that this type of experiment has been carried out to determine whether certain animals have perfect pitch. There is evidence that dogs and rats possess perfect pitch, while in cats the ability is poor.¹⁵ Similarly, John Booth Davis reports the case of a parrot that had perfect pitch. Evidence for its ability came from the fact that it always whistled the first four bars of Beethoven's 'Fifth' in the correct key¹⁶.

¹⁴See Moore (1989) p. 190 for the frequency of perfect pitch in the population. For an overview of the research on perfect pitch and relative pitch, see Ward and Burns (1982). It should be noted that some people who only have relative pitch can sometimes uniquely identify the pitch of a note of a particular instrument. It is thought that these people have this ability in virtue of their acquaintance with the timbre of the instrument, and when tested in laboratory conditions cannot make unique identifications from pitch alone.

¹⁵Ward and Burns (1982) p. 449

¹⁶See Davis (1978) p. 134. Because the parrot always started the tune on the right note, it must have the long term ability to produce, and therefore remember, notes of the same pitch - a classic test for perfect pitch.

There is little psychological research on perfect pitch and no firm conclusions about its nature have been reached¹⁷. Many adults have made numerous and rigorous attempts to see if they can attain perfect pitch and have failed. In fact only one adult subject has ever managed to train to achieve perfect pitch and this took him several years. Some studies conducted early this century, however, suggest that up to 80% of young children can be taught the ability. This had lead to the postulation of either an imprinting model of learning or a genetic basis to account for the ability.¹⁸

3.2 - Perfect Pitch, Experiences and Theories of Content

The existence of perfect and relative pitch raises some interesting questions. In general, what exactly is the difference between people who have relative pitch and people who have perfect pitch? Do they have different experiences, or do they have the same experiences but different abilities to utilise those experiences? In particular, on a representationalist account, should one ascribe the same content to those experiences, or characterise the difference in another way?

For convenience, I will call an experience had by a subject with perfect pitch a 'perfect pitch experience', and one had by a subject of relative pitch a 'relative pitch experience'. How can one tell whether a perfect pitch experience has the same phenomenology as a relative pitch experience, when the same note is played? When we consider this matter I believe we have conflicting intuitions. There are reasons to think that the experiences are the same. For example, the two subjects can discriminate between notes similarly and hear the same range of notes. So perhaps the experiences are the same, but how those experiences are utilised is different. On the other hand, there are intuitions that the experiences are not the same. For example, just because the subjects' abilities are so different, it seems the experiences themselves must be different. Moreover, people with perfect pitch often claim that the

¹⁷For an overview of the research on perfect pitch and relative pitch see Ward and Burns (1982).

¹⁸See Ward and Burns (1982).

qualities of tunes played in certain keys can only be appreciated by people with perfect pitch.¹⁹

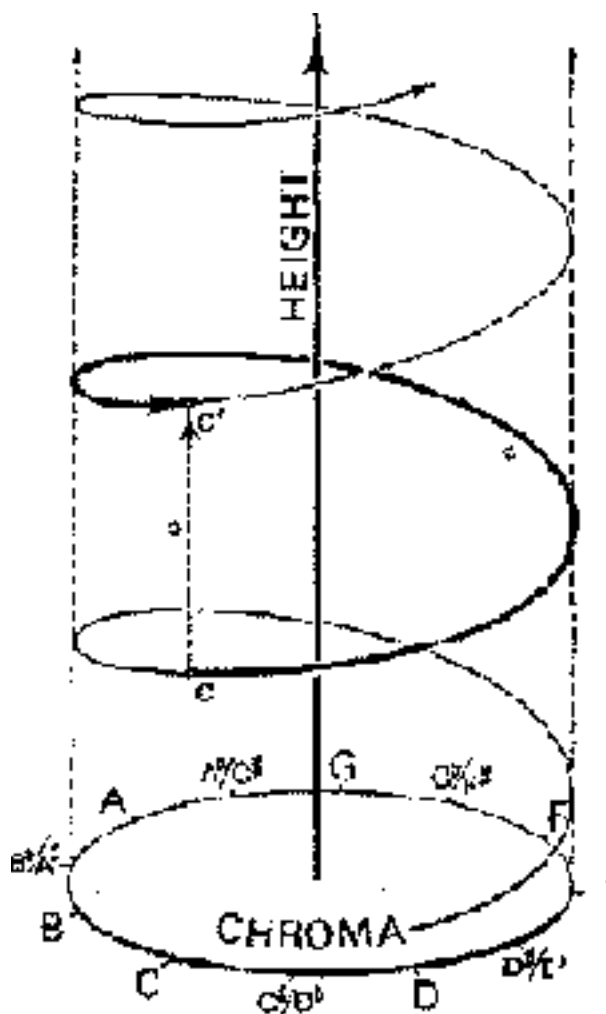
On the representationalist theory, if the experiences are phenomenologically different there must be a difference in nonconceptual content. On the other hand, if the experiences are the same there will be no difference in nonconceptual content, and a nonexperiential difference must be found that explains the subjects' different abilities. Therefore, by looking at the theories of representation held by the representationalist, we may be able to tell which account they would favour.

In the remainder of this chapter I will look at two general types of theory of representation. Tye's account of representation will be seen to be of one type, and Dretske's the other. One theory will point towards the conclusion that there is no phenomenological difference between a relative pitch experience and a perfect pitch experience, and the other will support the view that there is a difference. I will then suggest a view of nonconceptual content that reconciles these theories and which does most justice to our conflicting intuitions about the phenomenology of the experiences. I will start by considering the view that the experiences have the same phenomenology.

What other than the nonconceptual contents of the experiences could explain the different abilities the subjects have? In some of the psychological literature it is argued that subjects with perfect pitch and subjects with relative pitch have different types of memory for sounds. Reference is made to a template in memory consisting of a 'pitch spiral' representing the ascending tones.²⁰

¹⁹Bachem ((1955), reported in Ward and Burns (1982) p. 447) claims that, "Particular characteristics of certain keys, e.g., the brilliancy of A major, the softness of D-flat major, can only be appreciated fully through absolute pitch."

²⁰See Ward and Burns (1982) p. 433.



A person with perfect pitch has the points on this spiral anchored. The pitch spiral of a person with relative pitch spins free, thus enabling the subject to maintain a relative pitch memory schema but not an ultimate basis on which to identify sounds. So perhaps the experiences of the two subjects have the same nonconceptual content, but only the subject with perfect pitch utilises this content in conjunction with their nonrelative memory schema. (When someone with perfect pitch learns a convention for naming notes, they must effectively be labelling this fixed pitch spiral at certain points. This would underpin their ability to form beliefs about and identify particular notes such as middle C, in the way that someone with relative pitch cannot. It should be noted that when testing for perfect pitch experimenters often require subjects to learn a new system for naming pitches other than the traditional western musical scale.)

A causal covariation account of what it is for an experience to have nonconceptual content, would suggest that relative pitch and perfect pitch experiences of the same note do not differ in content. An account of content can perform a constitutive task, namely, to give an account of what the content of a given state is, on the assumption that such a state has content. A simple causal covariation theory of representation asserts that if optimal conditions were to obtain, a necessary and sufficient condition for one state to represent another is that it is caused by and covaries with that state.²¹ This view of representation could vindicate the idea that a relative pitch experience and a perfect pitch experience have the same nonconceptual content, for it is plausible to think that both states are caused by and covary with the same note of a particular pitch, thus, representing that pitch. This theory of content is the one endorsed by Michael Tye. What little indication he gives of his account of hearing suggests he would endorse this type of account of pitch sensation.²² Given this type of view of nonconceptual content, which stresses the relation between the experience and the environment in fixing the content of the experiences, one could hold that both experiences represent the same specific pitch.

Many theories of content, however, stress that if two experiences have different effects in a subject then there are pressures to ascribe different contents to the experiences. Consider the teleological theory held by Millikan, who argues that the use of representations by the consumers of those representations helps to determine what the content of that representation is.²³ (This theory is very similar to Dretske's teleological theory. Although in general he down-plays a subject's behaviour in determining the content of a representation, there is room for natural selection to bestow the function of representing something on a state in virtue of the contribution that that state makes to the fitness of the subjects of that state. Thus, how the subjects

²¹See Tye (1995a) pp. 135-137.

²²See Tye (1995a) p. 104 and pp. 149-150.

²³See Millikan (1993) Chapter 4. I am not claiming here that Millikan's account would yield the conclusion that the two states in question actually have a different content, merely that the use the states are put to is an important factor in determining the content.

of that state use that state can be an element incorporated into Dretske's teleological account.)²⁴

These theories reflect the thought that it is not just the relation between an experience and the environment that determines what the content of the experience is, but that the behaviour of the subject and the cognitive utilisation of the experience may also be determining factors. This approach to content appears to warrant the claim that, when they hear the same note, the experience of a person with perfect pitch and the experience of a person with relative pitch may have different nonconceptual contents. The experiences have a different function or a different use, which is manifested in the different abilities of the subjects to reidentify the pitch of a note over time.

One suggestion of what the difference in nonconceptual content might be between a perfect pitch experience and a relative pitch experience is that a perfect pitch experience represents a particular pitch such as that called middle C, while a relative pitch experience represents only an indeterminate middle pitched note. A second note heard by a person with relative pitch that was slightly higher, or a determinate interval higher, than the first note might then represent a middle pitched note slightly higher, or a determinate interval higher, than the one heard before. The scope for identifying differences in content, however, appears limited.

Two types of theory of nonconceptual content have now been identified. One focuses on the relation between the experience and the environment, which I will call an environment-based theory, and the other places a distinctive emphasis on the subsequent role of the experience - a cognitive role-based theory. One might choose between these theories and adopt the resulting view of auditory experiences. Alternatively, one might attempt to integrate these theories of content. I will explore

²⁴Although I have already stressed that I will not be considering functional accounts of content, one can note that a functional-role theory of mental content stresses the position a state occupies in either a causal, computational or inferential network, thereby also giving weight to the effects that a state has in determining the content.

this possibility because it will, I hope, illuminate the relationship between the two types of theories of content and show their mutual contribution and applicability to the field. This strategy also goes some way towards explaining and accommodating our apparently conflicting intuitions regarding the phenomenology of these experiences. The strategy is to distinguish implicit from explicit content.

3.3 - The Implicit/Explicit Distinction in Computational Systems

One main area of enquiry where *representations* are classified into implicit and explicit types is in the domain of computational systems. The computational theory of the mind holds that cognition (both conscious and unconscious) occurs in virtue of the appropriation, modification and application of representations. Mental states are representational states of some kind that are actually realised in the brain, although they could be realised on any appropriate hardware.

The *classical* computational model of the mind holds that all representational states that underlie cognition are such that the information contained in these states is explicit. A good first attempt to say what is meant by explicit in this context is made by Dennett:

Let us say that information is represented *explicitly* in a system if and only if there actually exists in the functionally relevant place in the system a physically structured object, a *formula* or *string* or *tokening* of some members of a system (or 'language') of elements for which there is a semantics or interpretation, and a provision (a mechanism of some sort) for reading or parsing the formula.²⁵

As Dennett points out, this formulation does not commit one to thinking that explicit representation must be propositional or language-like. The representations in question might be map-like, diagram-like or in some way nonconceptual. The classical computational view, however, is committed to the position that representations underlying cognition have a compositional syntax and semantics *and* are similar to

²⁵Dennett (1983) p. 216

sentences in a language.²⁶ On the classical view, cognition resembles digital processing in a computer, where strings of symbols are manipulated and produced sequentially according to the instructions of a symbolic program.

A classical system can also contain implicit representations. Dennett specifies that:

for information to be represented implicitly, we shall mean that it is implied logically by something that is stored explicitly²⁷

Dennett holds, therefore, that a classical system that represented Euclid's axioms explicitly would implicitly contain all the theorems of Euclidean geometry. This example illuminates why classicists hold that only explicit representations can underlie cognition.²⁸ They have the intuition that only the information contained in explicit representations has some causal power or function within a system, because only that information is physically tokened and available to be read. Only if a system made explicit some of the implicit theorems could that information play a role in the system.

Connectionism (a theory usually held in opposition to classicism) holds that implicit representation can underlie and explain cognition.²⁹ The connectionist views mental processing as the dynamic activity in a neural net. A neural net is comprised of individual units that allow for different patterns and strengths of connections between them. This is known as the weight distribution or architecture of the net. Representations are embedded in, or distributed over, the architecture of the neural network. The distribution of weights over the individual units represent 'trained-in rules' that fix the behaviour of the net. The 'activation patterns' that fluctuate across

²⁶The classical view - the Language of Thought Hypothesis - was advanced in Fodor (1976).

²⁷Dennett (1983) p. 216

²⁸Note that one might hold that in a classical system, information may be stored in an implicit form but to be used by the system it must be made explicit.

²⁹Smolensky (1988) holds that classicism and connectionism are not necessarily incompatible, as he claims connectionist systems can realise classical systems.

the net, depending on the input into the net and the architecture of the net, represent input, output and various intermediate transformations of information.

It is usually taken for granted that the trained-in rules of a connectionist system are implicit.³⁰ This is because the content of these rules is never addressed by the system of which they are a part. The trained-in rules cannot be read or parsed by the system of which they are a part. The rules simply influence the activation patterns without their content entering into inferential relations with the content of the activation patterns. One can see, however, that the trained-in rules do not conform to Dennett's definition of the implicit. The trained-in rules are not logical consequences of explicit rules. At the point the rules are trained in, there are no other representations in the system, therefore none that could be explicit and could logically imply the trained-in rules. This consequence leads one to think that perhaps Dennett's definitions of implicit and explicit, however useful in some domains, do not capture a main pretheoretical intuition that lies behind the use of the terms 'implicit' and 'explicit'.

Several philosophers have thought that connectionist systems force us to re-examine the notion of implicit and explicit representation.³¹ The main reason for this is that connectionist systems have shown that the particular physical manifestation of a representation is not important to its nature; rather, what matters is how a system containing a representation is able use that representation. In other words, the role that a representation could play within a system is germane to its classification as implicit or explicit. Usually, authors in this field seem to agree that, if a representation can either be immediately read by the system or immediately used as data by the system, then it is explicit. An implicit representation is one that would have to be worked out, derived or processed by the system to render it explicit. For example, David Kirsh claims that explicit content is:

³⁰See Hadley (1995). The status of the activation patterns is less clear.

³¹See Kirsh (1990), Elman (1991) and Hadley (1995).

directly available to the system reading it; no elaborate translation or interpretation process is necessary to extract the information it represents.³²

Hadley says that explicit representations in computational systems which underlie cognition are:

immediately usable as data in inference and other actions³³

and

a representation conveys 'immediately usable' information if the representation *need not* be transformed into an informationally equivalent representation in order to be used as data in the reasoning of the agent, or as a basis for the agent's actions. In theory, connectionist activation patterns, or representations in classical mentalese could each constitute *immediately useful* data (by virtue of driving a connectionist inference network or by driving a classical deduction machine, for example).³⁴

Although Hadley and Kirsh disagree over what is to count as 'immediately usable' information by a computational system (Hadley claims that the representation need not be immediately physically present to the relevant parts of the system, while Kirsh holds that whether and to what extent a representation is immediately physically present is germane to the issue), the basic idea of something being explicit if it is 'immediately usable' in this way gains support by considering our intuitions regarding specific examples. One can see that physically tokened representations in a classical system will turn out to be explicit because the machine head of a Turing machine is able to read directly the information contained in the representation and this information can be used in inferences. By contrast, the trained-in rules of a connectionist system, although followed by the system, are never read by the system or used as data in inferences. An attractive feature of this distinction is that what is implicit and what is explicit will be always relative to the particular system that

³²Kirsh (1990) p. 342

³³Hadley (1995) p. 239

³⁴Hadley (1995) p. 233

instantiates the representation. In particular, it will depend on the abilities and capacities of the system and the other representations that are contained therein.

One further important distinction relates to what Dennett calls the 'potentially explicit'. There is a large difference between information that is implicit in a system which that system can make explicit, and information that could not be made explicit for reasons such as that the system lacks the necessary analytical skills or some other abilities, or needs to be provided with some further information to complete the process of making the information explicit. Call information that is implicit but which could be made explicit by the system implicit₁. Call information that is implicit but which cannot be made explicit implicit₂.

David Kirsh describes some information contained implicitly₂ in a robot thus:

some robots currently under research navigate without maps. Such systems are equipped with a compass, with knowledge of their orientation with respect to an origin, and suitable instructions to find their way from any point in a maze to any other. These robots explicitly represent information of the form *if at position A then to get to B orient 90° and go 10 steps, turn 120° then go 15 steps*. It is easy to prove that the total information contained in such instruction sets is sufficient to define a structural map giving the position of all points and identifying all open corridors. A structural map is, in principle, recoverable from the instruction set, though not recoverable by the system itself unless it has certain analytic skills.³⁵

A robot, which could in principle define a structural map from the type of explicit information that Kirsh describes, would contain representations of that map implicitly₁.

From this foray into the philosophy of computational systems, we have a conception of implicit and explicit representations that relies on the distinction between information that can be immediately read or used as data in inferences by the

³⁵Kirsh (1990) p. 347

system and that which can not. We also have a distinction between implicit₁ and implicit₂ representations, which focuses on whether the representations in question could be made explicit. Can these distinctions be made in respect of the content and the phenomenology of experience? Before addressing this question directly, I will firstly outline a view of explicit and implicit elements experience held in the 1950s by William Earle. We will then be in a position to develop a theory of implicit and explicit nonconceptual content in experience which draws on both Earle's and the computational account.

3.4 - Implicit and Explicit Content in Experience

Earle suggests that a distinction between explicit and implicit can be made within the contents of experience.³⁶ He describes two party-goers who have very similar experiences at a party. He claims that, nevertheless, one of the two people (a novelist) might be able to bring to the attention of the other (a philosopher) certain features of the philosopher's experience, which the philosopher had not noticed:

Whereas I [the philosopher] had been aware of nothing but a tired and banal affair he [the novelist] has seen all sorts of minor dramas, with characterizations and nuances of feeling to which I had been oblivious.³⁷

While at first glance one might think that the experiences of the novelist and philosopher were very different, Earle tries to motivate the thought that they were not quite so different after all. Earle stipulates that the case described is one where the novelist and the philosopher looked at the same states of affairs in the world. The attention of the two people was focused similarly on what they were looking at (one was not distracted or lost in thought when the other was not). He also stipulates that their sense organs were of the same acuity. Thus, the novelist and the philosopher had, in a sense, access to the same information (the novelist did not hear extra conversations or see things that were out of sight of the philosopher). Earle claims

³⁶Earle (1954)

³⁷Earle (1954) p. 212

that this is a plausible scenario because the novelist is bringing to the philosopher's attention certain features of the philosopher's experience that the philosopher recognises were features of his own experience:

after he [the novelist] had spoken, then what he said seemed to me [the philosopher] evident enough because it characterized my experience, and I could 'verify' it directly. He did inform me of something, namely, what I had experienced.³⁸

The novelist is said to 'clarify' aspects of the philosopher's experience, rather than provide him with new information.

Further, Earle claims it is plausible to think that the novelist might not just be eloquently describing to the philosopher what he had seen, for the novelist is not just making generalisations about the experience or uttering words that the philosopher was unaccustomed to, but actually bringing insight to the philosopher that could be verified by the philosopher's own memory of his experience. Further, the novelist is not just making inferences from what he saw and heard and leading the philosopher to make similar inferences. Earle says:

It should be clear also that the problem does not concern the novelist's ability to give scientific explanations of what I saw. he has not gone behind appearances to account for them, nor provided general hypotheses. The entire problem is on the experiential, phenomenal level and concerns ways of seeing or modalities of experience.³⁹

But I [the philosopher] had not even noticed the detail in the original experience ... I could very well have named it and so connected it to other experiences if I had noticed it; but the implicit as long as it remains so cannot be talked about. It was his [the novelist's] power of making the particular party explicit that I lacked, and not his power of generalizing, making comparisons, analogies or contrasts.⁴⁰

³⁸Earle (1954) p. 214

³⁹Earle (1954) p. 213

⁴⁰Earle (1954) p 214

The philosopher comes to notice certain details about his own experience that he had not done previously. If he had noticed all there was to his experience then he would have been able to do just what the novelist had done. Therefore Earle is pointing to a way in which a content can figure in an experience without the subject of the experience noticing that content. It is not that the subject did not notice the content simply in the sense that he failed to apply concepts to his experience, or failed to infer certain things from that experience. The subject failed in this way *because* he did not notice the content. If he had noticed the content, then he probably would have applied the concepts, but nonetheless, someone could notice the content and fail to apply concepts (perhaps in the case where they do lack the appropriate concepts).

Earle describes what has happened in the case he has described by saying that certain aspects of the philosopher's experience were only implicit; after the conversation with the novelist they then came to be explicit. He states:

let us sum up how the implicit and the explicit are related. In common: they are both *phenomena*, that is they are both appearances to the subject, and not something hidden from experience altogether; and secondly they are in fact identical in *content*. An explicit phenomenon is not different in content from an implicit one; the explication or clarification is simply a rendering clear of what was already given, and not something else altogether. The clarified experience is the same experience as the implicit and inarticulate experience. There is absolutely only one content.⁴¹

Earle seems to be suggesting that the content of experience can be categorised into explicit and implicit types, and that both of these types of content can be manifested in the phenomenal character of experience.

If one identifies nonconceptual content with the phenomenology of experience as the representationalist does, then one could draw on both Earle's considerations and considerations of what makes a content implicit or explicit taken from computational

⁴¹Earle (1954) p. 214

accounts, to posit a distinction between implicit and explicit nonconceptual content, and hence implicit and explicit phenomenology.

Let us say that the nonconceptual content of an experience is explicit content if it is *immediately* available to or grasped by a subject. The nonconceptual content of an experience is implicit₁ if it is recoverable by some means by the subject of the experience (can be made explicit) without the subject being provided with any further information or without extending their capacities. The nonconceptual content of an experience is implicit₂ if, provided with further information or abilities, a subject could recover the information (make it explicit) either immediately or through processing. These definitions are all relative to a particular subject and their circumstances at a particular time.

What exactly is it for a subject to immediately grasp or have available the nonconceptual content of experience? Firstly, consider experiences of speech sounds. If I hear the words 'It rains a lot in Glasgow', I immediately grasp the meaning of the words, being a fluent English speaker. The meaning of 'It rains a lot in Glasgow' is part of the conceptual content of that experience or part of the conceptual content of a belief formed directly in virtue of having that experience. Immediately grasping the meaning of words in our native tongue is a clear example of what it is for something to be immediately grasped, available to, or usable by the subject of an experience. We grasp the meaning instantaneously without reflection and without thinking of the words or the experience as being a vehicle for the content.

One can use this conception of grasping the meaning of words to explicate in part what it is to immediately grasp the nonconceptual content of one's experience. To immediately grasp the nonconceptual content of one's experience is to be in the situation such that if one possessed the relevant concepts then one would be able to immediately conceptualise the content, grasp the meaning of a proposition that specified that content, and use it consciously as a premise in reasoning or as a reason for action. Moreover, one would accept the proposition as true, provided that one took

the experience at face value. An experience containing explicit nonconceptual content is also a particular conscious mental state that can immediately be used to initiate and control action or cause other mental states (such as long-term memories) pertaining to the nonconceptual content in question. Furthermore, the relation between the nonconceptual content and the action would be such that the concepts required to specify the nonconceptual content would, if constitutive of a propositional attitude, stand in a rationalising relation to the action in question.

Evidence for there being explicit, implicit₁ and implicit₂ nonconceptual content comes from reflecting on the abilities of certain creatures, together with reflection on the phenomenology of our own experience.

A case that lends itself to description in terms of implicit and explicit content, is Dretske's discussion of Kluver's monkeys.⁴² These monkeys are trained under experimental conditions to be able to discriminate the larger of any two differently sized triangles that are presented to them. This justifies the supposition that the nonconceptual contents of the monkeys' experience can be described as containing the larger-than relation. (Moreover, it seems appropriate to think that this content is explicit because the monkeys can immediately discriminate and act directly in virtue of this content.) After the initial training the monkeys are presented with three triangles of different sizes (A, B and C, where A is the biggest and C the smallest). We can then assume that the monkeys' experience contains nonconceptual contents relating to triangles A, B and C, but also that A is larger than B, and that B is larger than C. Reflection on the logic of the situation would lead one to postulate that the experience of the monkeys must contain the nonconceptual content that B stands in the intermediate-sized relation to A and C. From experimentation, however, it is known that the monkeys are incapable of being trained to pick out the intermediate-sized of the three triangles.

⁴²Dretske (1993) and (1981)

A good description of this case is that the nonconceptual content of the monkeys' experience contained the intermediate-sized relation, but that the content was only implicit². The monkeys could not grasp the intermediate-sized relation, in the sense that they were unable to act upon and pick out the middle-sized object in spite of any training they received. Yet, it appears incumbent on us to postulate this relation in the nonconceptual content of the experience, and to think that this is manifested in the phenomenology of the monkeys' experience. Logical relations between the larger-than relation and the intermediate-sized relation lead us to postulate this implicit² content.

Another type of case that brings out certain features of what it is for an experience to have implicit content is the analogue nature of perceptual content. The term analogue has been used to express many different qualities of experience. It is fine-grained and carries lots of detailed information. It varies in a way that analogue devices, such as the hands of a clock, do, as opposed to the discrete intervals that a digital watch displays. One particular notion of analogue experiential content is discussed by Christopher Peacocke (1986) and is concerned with the way in which magnitudes are represented. When we see a distance or length, although we see the length it is, we do not see the length it is in miles, kilometres, inches or centimetres - we do not come to know what the length is in any units unless, for example, there is a measuring device around. The same goes for shades of colours (as was discussed in chapter two). We see a colour, say blue, and we see it as a particular shade of blue, but we don't know what that shade is without looking up a detailed colour chart.

Taking the case of normal colour perception as an example, we can tell what broad colour categories particular shades of colour fall under. That is to say we can know straight away whether something is blue or red (or even in the case of something being, say, a yellowish-green, we can tell that it lies on the border between yellow and green without difficulty, even if we would hesitate about whether it is more yellow or more green). When it comes to the particular shades of colour that we

see, however, we cannot identify them in this way. Paint companies provide colour charts of various shades, not just because lighting conditions may vary between the shop and the area to be painted, but because we generally cannot remember with sufficient accuracy the shade of familiar objects in our environment, to ensure that the paint will match or will not clash. The number of different shades of colour that people can discriminate is around ten million. The number of shades of colour which can be identified on an absolute basis varies from subject to subject but probably never exceeds a few hundred. In practical everyday situations the number reduces sizeably to about twenty.⁴³ The relatively stable ability of colour comparison, however, allows us to make up colour charts and suggests that our experiences contain nonconceptual content relating to particular shades of colours, despite our inability to uniquely identify them. Moreover the phenomenology of our experience seems to present specific shades of colour to us, thus suggesting that our experiences do contain information regarding specific shades of colour.

It is clear that if we were presented with a shade of colour (say red₂₉) then we could use that experience to immediately initiate and control action relating to the content 'red'. For example, we can quickly press a bell in response to all and only red things. Thus, an experience of shade red₂₉ will contain the explicit content relating to redness (in a normal subject). We could not, however, use an experience caused by red₂₉ to initiate or control action relating to the content regarding red₂₉. That is to say, we cannot learn to press a bell in response to all and only red₂₉ things. Indeed, we would need extra information such as a colour chart to pick out red₂₉ or act in virtue of the red₂₉ content. The content regarding red₂₉ is only implicit₂ in our experience.

One might think that because we have the capacity to compare shades of colours and to tell which is darker or lighter, we can act in virtue of the content pertaining to particular shades of colours and, thus, that the content pertaining to shades of colour

⁴³See Hardin (1988) p. 88 and Raffmann (1995).

is explicit. It is true that in one sense we can act in virtue of this content. Because we can tell shades of colour apart, we must exploit information about shade. The information about shades of colour that is in our experience is used so as to allow us to make judgements of similarity and dissimilarity regarding saturation and lightness. But this use of the information is not such as to qualify the content regarding what particular shade is represented as explicit content. To see this, consider what justification someone would give who judged one shade of colour to be lighter than another. They would not say that they judged shade A to be lighter than shade B because shade B is red²⁹ and shade A is red²⁸. What they would say is that shade A looks lighter than shade B. Similarly, someone who judged two shades to be the same would justify this by saying that they looked identical. In other words, the explicit content for a subject who made these judgements and who would justify them in this way is not that a particular shade is present, but that one shade which is lighter than another is present, or that two identical shades are present. What is explicit is content regarding sameness and difference in shade. Content regarding which particular shade is present is not explicit.

3.5 - The Implicit/Explicit Distinction Applied to Perfect and Relative Pitch and the Theories of Content

With these notions of content in place, I would hold that the experience of the subject with perfect pitch has the explicit nonconceptual content that a note of a certain pitch is being heard, say middle C, because that content is immediately grasped or available to the subject. The experience of the subject with relative pitch has only the implicit² nonconceptual content that a middle C is played. This is because without any further information, the fact that the note is middle C is unrecoverable. Either the person needs additional information such as a reference note, or needs to acquire, if this is possible, the ability of perfect pitch. The difference in nonconceptual content between the two experiences is thus not a difference in what the content is, but in whether it is explicit, implicit¹ or implicit².

An interesting case is provided by those people who suffer from tinnitus - a ringing in the ears. The ringing can always be of a specific pitch and, if the sufferer knows what pitch it is, then on hearing a note they can compare the pitch of that note to the ringing and work out what the pitch of the heard note was.⁴⁴ The experience of hearing a note by this kind of tinnitus sufferer with relative pitch could be said to contain content regarding the pitch of the note implicitly₁. This is because they do not know the pitch of the note immediately, but they can work it out without being given any extra information or abilities. In virtue of their tinnitus, they carry around a reference note in their head. From these cases we can see clearly that what is explicit, implicit₁ or implicit₂, is relative to and depends on the particular subject in question.

Making these distinctions between types of content also casts light on the relationship between the constitutive theories of content I have been considering. Both theories are trying to explicate what has to be the case for a state to represent what it does. Environment-based and cognitive role-based theories are usually held to be rival theories. However, by considering the distinction between implicit and explicit content, we can see that the theories need not be taken as rival and opposing theories.

Recall that I claimed environment theories would predict that relative pitch and perfect pitch experiences would have the same content - both would have the content that a specific note was being played. If it is correct that a perfect pitch experience of middle C has middle C as explicit content and a relative pitch experience has middle C as implicit₂ content, then I would claim that actually an environment-based theory specifies the totality of content of a state. That is, it specifies all content, making no distinction between implicit and explicit content. At this level of description the experiences of a subject with perfect pitch and the experiences of a subject with relative pitch would be the same - they would both have the content that middle C

⁴⁴Ward and Burns (1982) p. 438 report a tinnitus sufferer who employed this strategy for naming notes. One way to distinguish people who identify notes in this way from those with perfect pitch is the time of their response. People with perfect pitch respond immediately, while comparison with one internal standard can take some time.

was being played. The experiences have the same content provided no distinction is made between explicit or implicit content.

What the cognitive-role based theory of content does, I would suggest, is to specify only the content that is either explicit content or implicit₁ content. That is, content that is immediately grasped or that can be retrieved by processing by the subject as he or she currently stands (that is, without acquiring extra information or abilities). That the cognitive-role theory of content determines the explicit and implicit₁ content gains support from the idea that ascribing content on this theory is a matter of looking in particular at what is or can be done by the subject or the subject's cognitive system.

I originally suggested that a cognitive-role theory of content would predict that the perfect pitch experience would have the content that a specific pitch of note, such as a middle C, was heard, while the relative pitch experience would have a less specific content. If the cognitive-role theory actually specifies the explicit and implicit₁ content, then it would be in line with this theory to hold that the perfect pitch experience has the explicit content that middle C is heard. This theory would also then predict that the relative pitch experience could not contain the content that middle C was heard either explicitly or implicitly₁. It does, however, leave room for the content to be contained implicitly₂, and this matches up nicely with the predictions of the environment-based theory that content relating to a specific pitch should be present in some form. The two theories of content can, on these assumptions, be seen to be compatible and complementary. The cognitive role-based theory is a theory of explicit and implicit₁ content only. The environment-based theory is a theory of explicit, implicit₁ and implicit₂ content.

It should be noted that the definitions of explicit and implicit content are such that they can only tell you whether a particular content of an experience is explicit, implicit₁ or implicit₂, *given that you know what the content of the experience is*. In particular, the definitions of implicit content do not allow you to figure out what

content any particular experience has. For example, if an experience had the explicit content that P and you were provided with the further information that if P then Q, one would be able to work out that Q. Based on the definition of implicit₂ content one might wrongly think that, on this basis alone, the content that Q was contained implicitly₂ in the experience. But one must note that the definitions of explicit and implicit content do not provide a constitutive theory of content. The environment based theory provides a specification of what the totality of content of the experience is and, given that one knows what that is, the definitions specify the manner in which that content is manifested in a given subject. The definitions of explicit and implicit content therefore should be taken to indicate the nature of the content of an experience, which is specified by the environment and cognitive role based theories.

3.6 - The Phenomenology of Experience

To what extent does the distinction between types of implicit and explicit content help us in considering the phenomenology of pitch perception? I think that the proposal goes some, but not all, the way towards this goal. It seems plausible to claim that when a person with relative pitch hears a note they hear the pitch of the note but they do not appreciate or grasp what the pitch of the note is, and this coincides well with the idea that this content is only implicit in their experience. On the other hand, the subject with perfect pitch not only hears the pitch of the note, they also appreciate or grasp just what that pitch is. The content of their experience is explicit. Furthermore, that the experiences differ, not in what the content is, but rather in how that content is manifested, helps to explain the conflicting intuitions one may feel about whether the experiences have the same phenomenal character or not. I will explain below.

Reflecting on the nature of implicit content, I think it is clear that what implicit content an experience has will affect the phenomenology of the experience. Recall that Earle states that implicit and explicit content are, "both *phenomena*, that is they are both appearances to the subject, and not something hidden from experience

altogether"⁴⁵. Why should we think this? In the case of Kluver's monkeys, if one triangle being larger than another is manifest in the phenomenology of the monkeys' experience, then when three different sized triangles are seen, the fact that one is middle-sized must also be reflected in the phenomenology of the monkey's experience. In the case of colour perception, it would seem that when one views a shade of colour and then comes to compare it with a colour chart of shades of colour, the phenomenology associated with viewing the shade in question is precisely what allows one to compare and identify it with the labelled samples. This suggests that the implicit content is manifested in the phenomenology of experience.

This conclusion, however, does not answer the question of whether an experience with the explicit content that P will have the same phenomenology as an experience with the implicit content that P. There are two pieces of evidence which could help in deciding this matter. The first comprises the reports of the only person ever to gain perfect pitch by training, P.T. Brady. He claims that after he had gained perfect pitch, sounds in the environment began to take on codable pitch qualities - the B-flat of refrigerator's hum, the child's pull-toy in A.⁴⁶ This consideration, however, is not conclusive. In the first place, it is a one-off report. One would like more substantial evidence than a single anecdote. In the second place, it is not clear from Brady's remarks whether the phenomenology of his experiences changed and sounds were now recognisable in virtue of this changed phenomenology, or whether the phenomenology of the experiences was the same, but because he could now tell which pitch various sounds were, the change he attests to was simply his coming to know what the pitch was of sounds emitted from various common objects in his environment.

⁴⁵Earle (1954) p. 214

⁴⁶See Dowling and Harwood (1986).

The second piece of evidence comes from many reports in the literature that claim certain characteristics of musical keys can only be appreciated by those with perfect pitch.⁴⁷ For example, Bachem claims:

Particular characteristics of certain keys, e.g., the brilliancy of A major, the softness of D-flat major, can only be fully appreciated fully through absolute pitch.⁴⁸

It is difficult to know how to assess these claims and how one could test for their truth. However, even if they were true and they were evidence in favour of perfect pitch experiences having different phenomenologies from relative pitch experiences, it would still not answer the question posed above, namely, whether a content being implicit or explicit makes a difference to the phenomenology of experience. This is because there may be further differences in content between relative pitch experiences and perfect pitch experiences that exist in addition to the implicit/explicit difference regarding pitch. Perhaps these further, as yet unknown, differences account for the claims of those with perfect pitch, if they are correct. Thus, even if the best way to describe the difference in content between perfect pitch experiences and relative pitch experiences is in terms of implicit and explicit content, it remains unresolved whether these experiences are phenomenologically identical.

Consider now what light the implicit/explicit distinction and reflection on perfect and relative pitch can shed on other experiences. The existence of radically different abilities in different human subjects within one sense modality is a peculiar phenomenon. An obvious question to ask is whether other types of experience are more like perfect pitch experiences or relative pitch experiences. Ward and Burns assume that perfect pitch experiences are more like experiences in other modalities:

a bit of reflection should convince one that, viewed in comparison to other sensory modalities, AP is not so strange after all. We learn labels for colors, smells and tastes

⁴⁷See Ward and Burns (1982) pp. 444-447. Interestingly, unlike people with natural perfect pitch abilities, P. T. Brady could not immediately tell which key a piece of music was in.

⁴⁸Bachem (1955) quoted in Ward and Burns (1982) p. 447.

- indeed, for speech sounds, voices and instrumental timbres. Why not also for pitches? Stimuli that fall along any metathetic continuum should be labelable, one would think, and not require the comparison between stimuli either present or in short term memory that is involved in relative-pitch judgements. One does not need to look at a rainbow in order to see that a rooster's comb is red nor take a whiff of camphor to identify a nearby skunk. Viewed in this light, the real question is why everyone does not have AP: Why cannot some people put labels on pitches?⁴⁹

The situation is, however, not quite as they portray.

Ward and Burns report that people with perfect pitch can accurately discriminate around seventy-five pitches spread equally over the hearing range (without a reference note). Therefore, they can identify a note to almost the nearest quarter tone. People with relative pitch can uniquely discriminate between seven pitches spread equally over the range of possible detectable pitches.⁵⁰ This means that, given seven very different pitches to learn (labelled one to seven), they can uniquely discriminate amongst them; given any more, they start to make substantial errors. Although there is a big difference in the number of unique identifications that people with perfect pitch and people with relative pitch can make, what is common to both is that the number of just noticeable differences in pitch far exceeds the number of unique identifications that can be made. (It is probably around one thousand five hundred.⁵¹) Thus, although there is a large difference in the accuracy of unique identification, both groups of people only have the ability to identify pitches as belonging within certain bands of possible discriminable values.

In this respect, colour vision, smell, taste and hearing speech sounds are similar. For each person there will be a certain number of unique identifications that they can make and this will probably be a far fewer number than the number of just noticeable differences in the quality that they can detect. We have already noted this fact in the

⁴⁹Ward and Burns (1982) p. 434. 'AP' means absolute pitch - another name for perfect pitch.

⁵⁰Ward and Burns (1982) pp. 440-443

⁵¹Ward and Burns (1982) p. 445

case of colour vision. The number of different shades of colour that people can discriminate is around ten million. The number of shades of colour which can be identified on an absolute basis varies from subject to subject, but probably never exceeds a few hundred. In practical everyday situations the number reduces sizeably to about twenty.⁵² Thus, as Ward and Burns say, we can judge a rooster's comb to be red, but what they don't say is that judging the precise shade of red is impossible. One difference between colour perception and pitch perception is that we do not find two distinct populations of people with very different unique colour identification abilities. Another difference is in the number of just noticeable discriminations and unique identifications that can be made between colour and both varieties of pitch perception.

Smells, tastes and speech sounds have many more uniquely detectable differences for the majority of people than pitch does for someone with relative pitch. But, at the same time, there are many small differences in these qualities that I am sure cannot be detected unless by comparison. What seems different about these qualities is that people can clearly seem to *learn* to uniquely discriminate many more of them. For example, tea-tasters, wine tasters and parfumiens educate their palate and nose. I assume that there may be natural differences in ability between people in their ability to learn these skills, but as far as I know, there does not seem to be a distinct division amongst people in their absolute smell detection (as opposed to their relative smell detection) comparable to perfect and relative pitch.

In light of comparing pitch experiences to experiences in other modalities, perfect pitch and relative pitch can both seem reasonably ordinary phenomena, the difference between them being simply that one small group of people seem naturally able to make many more unique discriminations than everyone else. If either existed without the other, one might think that there would be little reason to think it distinctive from perception of the other qualities. However, three intriguing features that distinguish

⁵²See Hardin (1988) p. 88 and Raffmann (1995).

pitch perception from the perception of the other qualities so far considered remain. The first is that, with one exception, adult subjects with relative pitch appear unable to learn to discriminate as those with perfect pitch can, even with extensive training (the case for young children is unclear). The second is the different qualities of the different musical keys that people with perfect pitch commonly attest to and which people with relative pitch fail to appreciate. Very little is known or understood about this phenomenon. The third, and possibly most important, is that both people with perfect pitch and people with relative pitch can exceedingly accurately identify how far apart in pitch two given notes are. To my knowledge, this ability does not exist in colour, smell or taste perception. Given two smells, two colours, or two tastes to compare, people can say whether they are quite similar or quite different, but they cannot precisely quantify this amount. I think it is because people with relative pitch can tell very precisely the interval between notes while not being able to uniquely identify them with the same precision that justifies the claim of Ward and Burns that relative pitch is peculiar. Of course, people with perfect pitch can also judge the intervals between notes, but only with a precision equal to their unique identification abilities, and thus it appears less of an anomaly in their sense perception.

To see this last point, compare perception of pitch to perception of length. In common they both have qualities that people can tell apart on an absolute basis and smaller ones they cannot. I know of no empirical study to test absolute magnitude detection. Let us suppose that most people can tell whether a length of one centimetre or two centimetres is before them without a ruler, but not whether one or one and a half centimetres is before them. (I am presuming that either the person is familiar with centimetres or could be trained to differentiate one centimetre from two, without ever knowing what the lengths in question were in any measurement system.) If now presented with two lengths simultaneously, say, one of three centimetres and one of four centimetres, a person should be able to tell that they were one centimetre different in length, as opposed to two centimetres. We do not expect someone to be able to tell that two lengths presented to them, say, three and three and a quarter

centimetres are one quarter centimetre different in length. All we expect in this case is that they can indicate which is shorter and that it is less than one centimetre, or that they cannot discriminate between the lengths. (This example works for perceiving small lengths, though perhaps not for long lengths. You may be able to tell one centimetre from two on an absolute basis, but not one hundred from one hundred and one. Similarly, you may not be able to tell that one hundred centimetres is one centimetre less than one hundred and one centimetres when comparing them. These points need not distract us here.) Imagine if perception of length was like perception of pitch for someone with relative pitch. A person would not be able to tell without a ruler whether one centimetre or one and a quarter centimetres was presented to them, but they would be able to tell that a three centimetre length was one quarter centimetre less than a simultaneously presented three and a quarter centimetre length. That would seem very strange. In this respect perceiving distance is more like perfect pitch than relative pitch.

On the other hand, similar to relative pitch, there are many distances of which we have only a very rough idea of what length they are. This is especially so when we compare it to shape perception. I do not require a reference shape to see that a shape is a triangle or a rectangle or a hexagon. However, even with shapes, there may be some that I cannot discriminate on an absolute basis if they are very complex and lack regularity.

In conclusion, I have made some comparisons between perfect and relative pitch experiences and experiences of other qualities in different sense modalities. The question of whether, or to what extent, perception in our other sense modalities functions like perfect or relative pitch requires further investigation. Moreover, the precise nature of the detection of pitch in both people with perfect pitch and people with relative pitch requires further investigation. After considering auditory experiences of pitch, it is not clear that a view of content based on visual experience can be automatically and straightforwardly extended to cover experiences of qualities

in other sense modalities. Indeed, it is not clear that a similar treatment of all visual qualities such as length, shape and colour can be given. I have considered one way to extend the representationalist theory to account for the phenomena of perfect and relative pitch by introducing the notions of implicit and explicit content. I have shown how this distinction could be used to clarify the relation between environment-based theories of content and cognitive-role based theories. I hope that this distinction helps to explain the difference between experiences of perfect and relative pitch, even if it does not settle all the questions about the phenomenology of these experiences. Perhaps also, the distinctions I have made could be usefully employed in specifying the content of experience in other sense modalities.

3.7 - Conclusion

In this chapter I started to examine the relationship between nonconceptual content and phenomenology. I firstly presented two examples that have been used in the literature to try to demonstrate that differences in phenomenal character are not always accompanied by differences in content. The first was experiences in different sense modalities that had content in common, and which it was claimed had no phenomenology in common. I argued that while intuitions that this was the case could seem plausible, they could be explained away by the representationalist by maintaining that abstracting away from content that was not common between experiences was not as straightforward as might first seem. I also showed that a quasi-representationalist could agree with Block that the example shows pure representationalism to be false. Such a person could argue that a sensory modality does contribute something to the phenomenology of experience, but they would thereby cease to hold that phenomenology was identical with content per se.

I then turned my attention to experiences of pitch. Representationalist accounts of phenomenal character focus on giving an account of visual experiences. Experiences of perfect and relative pitch provide a challenge to someone who wishes to uphold the representationalist theory. I explained how one might have conflicting intuitions

about the phenomenology of such experiences. I showed how two different types of theory of content might suggest different answers to this question. Given that both theories are trying to give an account of the same thing - content - I explained how one might see them not as competing theories but as complementary, by showing how a cognitive role theory gave a joint account of explicit and implicit₁ content while environment-based theories gave a joint account of explicit, implicit₁ and implicit₂ content. This distinction shed some light on the difference between perfect and relative pitch experiences, although in the end it was still unclear whether one should think that the experiences had the same phenomenology. I briefly indicated some ways that the implicit and explicit distinctions could apply to experiences of colour and experiences of shape as had by monkeys. I then investigated to what extent experiences of qualities in other sensory modalities were like perfect or relative pitch experiences. I then suggested that the distinctions between implicit and explicit could help characterise these experiences, when further investigation of their nature was carried out.

Thus far, I have tried to defend the representationalist account of phenomenal character. In the next two chapters, however, I will examine experiences where I believe there are differences in phenomenal character that cannot be accounted for by differences in content. The next chapter will be an examination of experiences of ambiguous figures. the chapter following that will examine the inverted spectrum hypothesis.

Chapter 5 - Ambiguous Figures

1 - Introduction

In the last chapter, in addition to looking at perfect and relative pitch, I looked at two examples of experiences that could be used to try to establish that there can be differences in the phenomenal character of experiences without differences in the content of those experiences. The cases focused on cross-modal experiences and experiences induced by prosthetic vision. I argued that these cases were unpersuasive. In this chapter I will be considering experiences that differ in phenomenal character but which do not appear to differ in content, or at least not in a way that could be explained by the naturalist accounts of representation I have been considering. The experiences in question are brought about by the phenomenon of Gestalt switching associated with some ambiguous figures. I will be arguing that although these experiences differ in phenomenal character, the causal covariation and teleological theories of representation cannot make a good case for there being a difference in content between these experiences.

2 - Representationalism and Content

Before proceeding, I shall briefly recapitulate the relevant aspects of the representationalist theory. Recall that the representationalist holds that all differences in phenomenal character are differences in nonconceptual content. There are two main types of naturalistic theories of representation held by the representationalist - the causal covariation and the teleological theory.

The causal covariation theory states that if optimal conditions obtain, a necessary and sufficient condition for one state to represent another is that it is caused by and covaries with another state. Michael Tye formalises this approach thus:

S represents that P = df If optimal conditions obtain, S is tokened in x if and only if P and because P.¹

If conditions are not optimal then misrepresentation can occur. For example, if I am in a state that in optimal conditions causally covaries with there being fish present but conditions are not optimal and there are no fish about, then my state misrepresents the presence of fish.

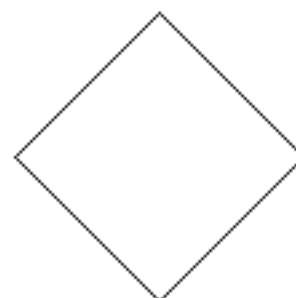
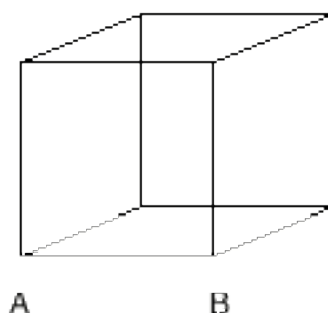
On a teleological theory, a state will represent some object, property or state of affairs if it is the function of that state to indicate (provide information about) those things. Unpacking this statement gives rise to different teleological theories. For example, Dretske holds that function is bestowed by evolutionary selection. A state can be an indicator of its being the case that something F is present, if in suitable conditions a subject's being in that state covaries with something F being present.. That condition will be satisfied if the following condition obtains: in suitable conditions the subject would be in the state if something F were present and would not be in that state if something F were not present. Another teleological theory is held by Millikan, who argues that it is the consumers' use of representations that bestow function. The use of a state determines whether it is a representation and what its content is.²

3 - Ambiguous Figures: Introduction

There are some two dimensional figures and three dimensional objects which can be seen in two sharply distinct ways. Consider the following three examples:

¹Tye claims "The conditionals in this definition should be understood subjunctively. So the definiens is to read as follows: If optimal conditions were to obtain, S would be tokened in x if and only if P were the case; moreover, in these circumstances, S would be tokened in x because P is the case." See Tye (1995a) p. 223.

²See Millikan (1993) Chapter 4.



Duck/Rabbit Picture

Necker Cube

Square/Regular Diamond

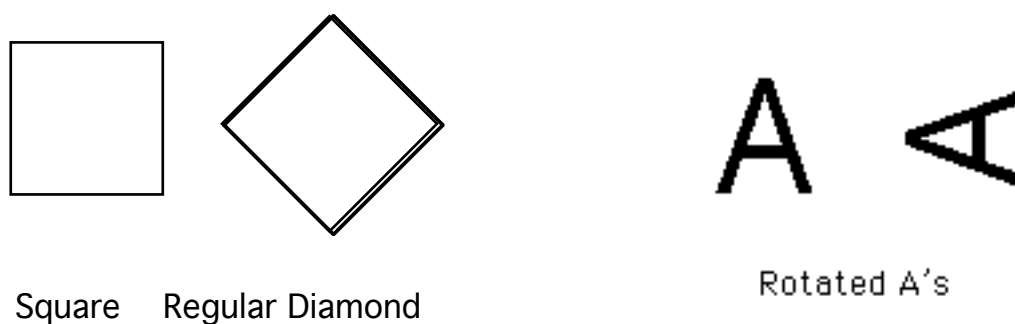
The duck/rabbit picture can be seen either as a picture of a duck or as a picture of a rabbit. The Necker cube can be seen so that the line AB is on the front plane of the cube or on the back plane. The square/regular diamond picture is such that initially one sees the figure as a regular diamond, but one can also see it as a square. Nothing in my argument turns on the pictorial nature of these examples. For my argument I could equally take square floor tiles or a three dimensional wire Necker cube as examples.

The switch from seeing the pictures in one way to seeing them in the other happens suddenly due to the saccadic nature of our visual perception, and is known as a Gestalt switch. It is most prominent in the Necker cube example. The switching can be, to some extent, under our control. It is also impossible to see the figures in both configurations simultaneously.

One might question whether when viewing the square/regular diamond figure one really undergoes a Gestalt switch. Certainly the case is not quite as vivid an example as the Necker cube. I believe it is a case nonetheless and I want to establish this with certainty because it is this particular example and types of example very similar to it that will prove problematic for the representationalists' account.

The square/regular diamond figure was first cited as a type of ambiguous figure by Mach in 1897 and is commonly held to be such by other authors.³ I mention that others hold this figure to be ambiguous because whether a figure is or is not ambiguous would seem to depend, for the most part, upon consensus among seeing creatures. If someone determinedly claims that they can see both the duck and rabbit at the same time or that they undergo no Gestalt switch, what possible evidence could one bring to bear on the case? Despite this, perhaps the best way to show that the square/diamond is an ambiguous figure is using the evidence cited by the psychologist Stephen Palmer. He considers the figures below and claims:

when a square is rotated 45 degrees, it is generally perceived as an upright diamond rather than as a tilted square. Now, if shape constancy were perfect, as presumably it would be were only invariant features detected, these two figures would be seen as rotational variants of the same shape. Their shapes are often *not* seen as the same, however, at least not in the same sense that, say, upright and 45-degree 'A's are seen as the same shape in different orientations.⁴



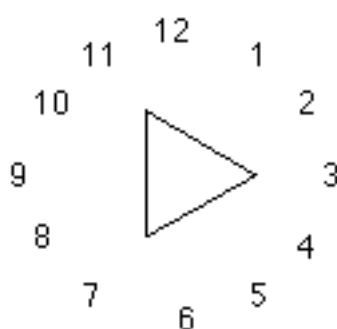
Palmer holds that lack of shape constancy is actually quite pervasive. It holds among crosses and plus signs and the direction that equilateral triangles are seen to point in.

³See Mach (1897), Peacocke (1992), Palmer (1983)

⁴Palmer (1983) p. 292



+/x in conditions that bias perceived shape.



Direction equilateral triangle points to
(3, 7 or 11 o'clock) yields ambiguity

The evidence that backs up the view that the square/regular diamond is an ambiguous figure and different from the rotated 'A's, comes from Rock and Wiser's studies on recognition of rotated objects.⁵ As Palmer reports, their studies show that when certain objects are initially presented in one orientation in space and then re-presented in another orientation, people have great difficulty recognising them as the same objects in the second presentation. This effect, however, is seen only when objects do not have their own "good intrinsic axis"⁶. As squares/regular diamonds,

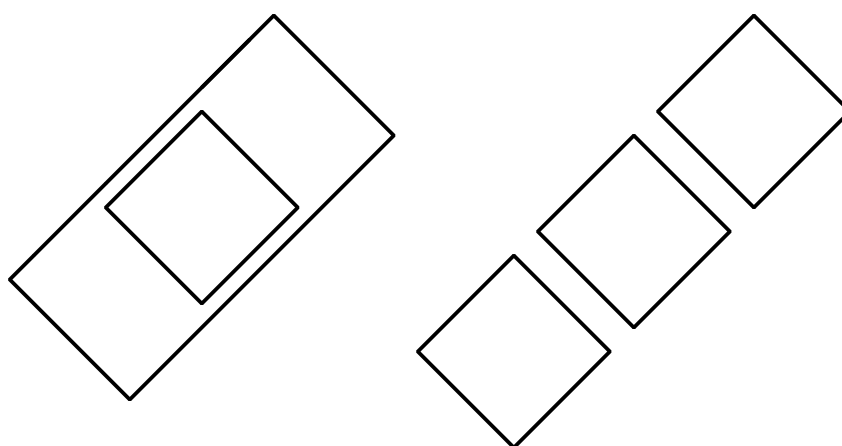
⁵See Rock (1973) and Wiser (1981).

⁶Palmer holds that an intrinsic axis is generated by bilateral symmetry and/or global elongation.

equilateral triangles and crosses/pluses have no good intrinsic axis, this places them in a different category from other shapes with such an intrinsic axis (such as 'A's).

I have noticed that not all shapes that lack an intrinsic axis are liable to be ambiguous. What seems to mark out those shapes that have no intrinsic axis and are liable to be ambiguous is that they have more than one equally good axis. (The square/diamond and cross/plus have two, the equilateral triangle has three.) Having multiple equally good axes is not, however, a sufficient condition for ambiguity, because a regular many-sided figure such as an octagon, despite having eight equally good axes, is not ambiguous. Nor is it a necessary condition, as the duck/rabbit picture exemplifies. What I hope to have shown, however, is that there is some good reason, backed up by experimental evidence on shape constancy, which shows that figures with no intrinsic axis, but a small number of equally good axes, are liable to elicit different reactions when presented in different orientations in space, and thus that there is good reason to hold that square/diamond and other similar figures really are ambiguous.

It should be noted that although the orientation of a square may affect whether it is more likely to be perceived as a square or a regular diamond, this is not the only factor. For example, in the illustrations below, although the figures' orientation would suggest that they would be seen as regular diamonds, the surrounding features make them more likely to be perceived as squares:



Moreover, as any square/regular diamond can be ambiguous, we know that orientation does not fix how things look, it only affects which perception is more likely.

4 - Ambiguous Figures and Changes in Phenomenal Character

Most authors on the subject are agreed that the phenomenon of Gestalt switching involves having two different experiences with different phenomenal characters. For example, the representationalist Michael Tye says of the face/vase ambiguous figure:



a distinction can be drawn between the phenomenal character of the experiences one undergoes when one sees the figure below as two faces and the experience one has when one sees it as a vase.⁷

Alan Millar claims:

The relation between experience and recognition has featured prominently in discussions of ambiguous figures... It is characteristic of such examples that as one looks at the drawing one sees it first in one way and then in another. Moreover, the changes in ways of seeing are genuinely visual.⁸

Many perceptual psychologists investigating ambiguous figures claim that the Gestalt switching involves top-down processing. This means that they think that high level processes in the brain, which utilise a subject's (or a subject's brain's) existing knowledge and experience, can affect the experience that one is having. Richard Gregory says:

A useful experimental trick is to use perceptual ambiguity for teasing out what is given upwards by cues present in the retinal image, from downwards contributions of knowledge and assumptions. This works because, with ambiguity, perceptions

⁷Tye (1995a) p. 140

⁸Millar (1991a) p. 37

change though the stimulus input remains constant - so top-down effects can be revealed.⁹

Gregory makes it is clear that by 'perceptions' he means conscious experiences with phenomenal character.¹⁰

While I agree that Gestalt switches involve changes in experiences and therefore changes in phenomenal character, some philosophers might be inclined to attribute the changes to a judgement either about what one sees or to a judgement about one's experience (or both). The idea would be that, for example, seeing a square as a square and then as a diamond did not involve experiences with different phenomenal characters, but rather, only differences in the categorising, cognising or conceptualisation of the object.¹¹

This view seems unsatisfactory for two reasons. Firstly, not all changes in judgement appear to lead to the special changes that occur in perceptions of ambiguous figures. Consider the case of the square/regular diamond in comparison to the rotated 'A's.



Judging the figure on the right to be a tilted 'A', as opposed to a figure that is not tilted, does not seem to generate any change, while judging the left hand figure to be a tilted square as opposed to an upright regular diamond does. Therefore one might hold that judgement alone is not sufficient to generate the special changes experienced in Gestalt switches. Similarly, we know that often one's judgement is not

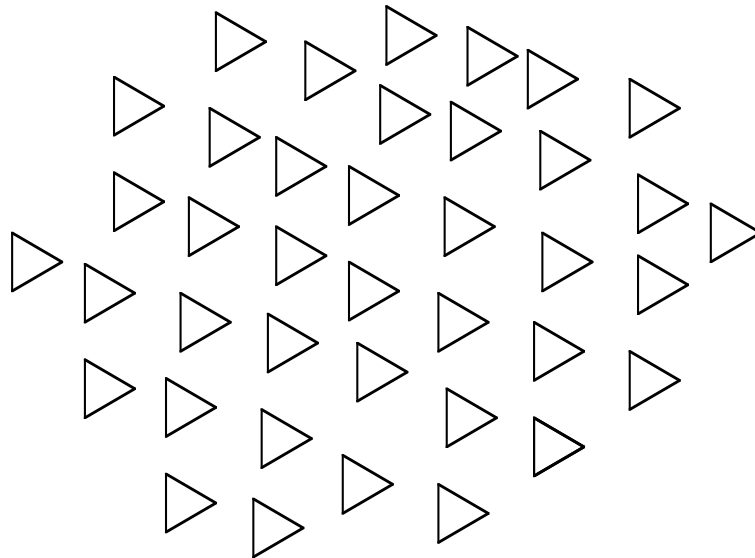
⁹Gregory (1997) p. 227

¹⁰What changes in a Gestalt switch he says are "phenomenal phenomena". See Gregory (1997) p. 195.

¹¹It must be emphasised that the view under consideration is distinct from the view that phenomenal character itself involves a judgmental or conceptual element. The view I am considering here is that one's judgement changes and one's experience does not. This is distinct from the view that one's experiences change on account of one's judgements or conceptual states changing. This latter view will be considered in the section below.

sufficient to bring about a perceptual change. Many optical illusions persist in spite of one's judgements. For example, in the Müller-Lyer and Ponzo illusions, lines continue to look of unequal length even when one has measured the lines, knows the nature of the illusion and knows that the lines are of equal length.

Secondly, although you can have a certain autonomy over the Gestalt switching phenomenon, it often happens outwith your control. Sometimes the Necker cube changes when you are trying to avoid a change. Sometimes you try to make the change happen and you cannot. Similarly, consider the triangles below. One tends to see them all pointing in the same direction. This direction can change, and to make it change you simply need to focus on one triangle and imagine that it is pointing in another direction and all the other triangles appear to spontaneously change with it. Moreover, it seems almost impossible to see the triangles as all randomly pointing in different directions. This seems to suggest that the visual system has a certain autonomy and a certain *modus operandi* which is quite unlike ordinary judgement.



The changes that occur when a Gestalt switch happens really seem to be changes in visual experiences. Indeed, this is why ambiguous figures, especially the more dramatic examples, are such interesting phenomena. In the next section I will begin to examine whether the representationalist account can explain the nature of the changes in the experiences.

5 - Ambiguous Figures: A Preliminary Challenge

If one accepts the results of the last section, then what happens when one undergoes a Gestalt switch is that while looking at the same stimulus one has an experience with a certain phenomenal character followed by another experience with a different phenomenal character. Because representationalists hold that phenomenal character is identical with the nonconceptual content of experience, they have to account for the difference in the experiences before and after the Gestalt switch by supposing that there is a difference in the nonconceptual content of the experiences.

What difference in content would there be between the experiences had before and after a Gestalt switch? The obvious way to express the difference would be in terms of how the experiences strike the subjects of the experience. For example, in the duck/rabbit picture one experience might have the content that a duck-form is present, while the other has the content that a rabbit-form is present. Similarly, in the case of the square/regular diamond picture, one experience represents a square shape, the other a regular diamond shape.

Amplification of this explanation of the difference in content, however, leads one to suspect that the relevant content here might be conceptual rather than nonconceptual content. If the content of the experiences is different in virtue of the fact that it *seems to* subjects of these experiences that a duck-form or a rabbit-form or a square shape or a regular diamond shape was present, then, as the way an experience *seems to* a subject is tied to a subject's cognitive and conceptual abilities, content ascribed on this basis would fit the specification for conceptual content.¹²

If this were correct, one might worry that ambiguous figures threaten to undermine the representationalists' identification of phenomenal character with nonconceptual content, on the grounds that one must invoke conceptual content to

¹²See chapter two sections 5.2.1 and 5.2.2. An experience is such that it seems to a subject that an F is there if and only if they would believe that an F is there in the absence of countervailing considerations.

account for the Gestalt switch and therefore a difference in conceptual content accounts for the change in phenomenal character. To explain, one might think that someone could not see the picture as a picture of a duck unless they recognised that it looked like a duck and were prepared to judge that something duck-like was present. Having such recognitional and judgmental abilities requires one to possess the concept of a duck. Therefore one might think that to undergo the Gestalt switch in response to the duck/rabbit picture, someone must see the picture as a duck and then as a rabbit (or vice versa) and this requires the person to possess the concepts of a duck and a rabbit. One might think that if one needs to possess the concepts duck and rabbit to undergo the Gestalt switch, then a difference in nonconceptual content between the experiences, which does not require the subject of those experiences to possess the relevant concepts, will not account for why the subject has to possess the relevant concepts to experience the change in phenomenal character. This observation seems to undermine the theory that the nonconceptual content of visual experiences is identical with the phenomenal character of those experiences.

There are two different types of response that a representationalist might make in order to uphold their claim that nonconceptual content alone accounts for the phenomenal character of experiences.

The first agrees with the claim of the position stated above, that in order to undergo the Gestalt switch one must see the picture as a duck and then as a rabbit (or vice versa) and this requires the possession of the concepts duck and rabbit. For example, Michael Tye claims that although what concepts one possesses may determine the character of the experiences one has, it is still possible to maintain that the nonconceptual content of one's experience is identical with the phenomenal character of the experience. He claims that to have an experience with the phenomenal character that one has when one sees the picture as a rabbit, one might indeed have to possess the concept rabbit, but he claims this concept might not form

part of the content of the experience. This is possible because a concept may cause a certain state with particular nonconceptual content to be tokened. He says:

Where a figure has an ambiguous decomposition into spatial parts, concepts can influence which decomposition occurs. This is one way in which top-down processing can make a phenomenal difference. But once a particular decomposition is in place, the way in which an ambiguous figure phenomenally appears is fixed... One cannot see something as a rabbit, for example, unless one has the concept rabbit. Likewise, it cannot appear to one that there is a rabbit by the hat unless one has the concepts rabbit and hat. What happens in cases like these is that one has a sensory representation whose phenomenal content is then brought under the given concepts. Still, the concepts do not enter into the content of the sensory representations and they are not themselves phenomenally relevant.¹³

Therefore the difference in phenomenal character when seeing the picture as a duck and seeing it as a rabbit may be due to different nonconceptual states being tokened, even if such states are caused by the conceptual abilities of the subject of those states. The contents are really nonconceptual because a state can have those contents without the subject of the state possessing the relevant concepts, it is just that those concepts cause this particular combination of nonconceptual contents to be instantiated rather than other nonconceptual contents.

An alternative reply, and one that has the virtue of explaining why certain recognitions, judgements or conceptual states occur, accepts the claim that to see a picture as a duck one must possess the concept of a duck. But it resists the claim that in order to undergo a Gestalt switch, such as the one had when looking at the duck/rabbit picture, one has to possess the concept of a duck and the concept of a rabbit. Alan Millar claims that it is by no means clear that when one undergoes a Gestalt Switch one has to recognise the picture, first as being of one form then as being of another, in any sense of 'recognise' that implies bringing the picture under a

¹³Tye (1995a) p. 140

concept. He thinks it is plausible that the switch in the phenomenal character of the experiences is what enables subjects, with appropriate concepts, to bring the picture first under one concept, say, *picture of a duck*, then under the other, *picture of a rabbit*. Differences in phenomenal character would trigger particular conceptual capacities of a subject, if they have those capacities, so that they would judge that a picture of a rabbit was present or see the picture as a rabbit. But if a creature lacks those capacities they may not see the picture as a picture of a rabbit, although they may have an experience with the same phenomenal character as someone who does.¹⁴

It does seem possible that creatures lacking the relevant concepts could undergo Gestalt switches. Many ambiguous visual stimuli seem to be of a two-dimensional nature.¹⁵ One piece of evidence that infants appear able to perceive two dimensional pictures comes from Granrud and Yonas's experiments. They showed that infants between the age of five and seven months can detect and use pictorial cues of overlap, familiar size, relative size, shading and linear perspective, and texture gradients.¹⁶ Further, Ralph Haber reports:

the reasonable likelihood is that scene perception comes first, then as soon as one aspect of scene perception can be accomplished (whether with or without the need of experience), that same aspect can be performed on pictures without further experience. The classic study by Hochberg and Brooks (1962) tested an eighteen-month old child who had never been exposed to any two-dimensional representations. When asked to identify familiar objects, he was as accurate in doing so from pictures and from drawings of the objects as he was when seeing the objects themselves... no prior experience *with pictures* seemed necessary.¹⁷

¹⁴This is Millar's strategy in outline. See Millar (1991a) pp. 39-42.

¹⁵Gregory, however, describes a three-dimensional wire Necker cube that one can see in two ways even when one is touching it. He states, "When the cube reverses, the visual and touch spaces separate: the faces of the cube *appear* in one place but are *felt* in another. This is a curious experience". See Gregory (1970) chapter 3. In Gregory (1997) p. 207 there is also a photograph of a porcelain figure that is ambiguous between a duck and a rabbit.

¹⁶Granrud and Yonas's experiments are reported in Goldstein (1996) pp. 277-281.

¹⁷See Haber (1983) pp. 217-218.

I know of no study that investigates whether creatures that lack the relevant concepts can perceive Gestalt switches, but there seems no reason in principle why they could not. Indeed, one can readily imagine an experiment designed to test this. Millar, for example, describes a hypothetical experiment where a child that lacked the concepts of duck and rabbit was tested to see if they underwent a Gestalt switch.¹⁸ Suppose the child displayed curiosity when it encountered rabbits and fear when it encountered ducks. It seems possible that shown the duck/rabbit ambiguous picture on different occasions, the child would show fear on some occasions and curiosity on others. This would be evidence for the claim that the child could see the picture first in one way and then in another.

Does the child really lack the concepts duck and rabbit if it can respond in this way? Millar says:

Clearly in our thought experiment the duck-form has a certain significance for the child - it prompts fear. But a disposition to experience fear on having a certain type of sensory experience hardly amounts to a conceptual capacity... I favour the view that to possess a concept is to have a pattern-governed capacity to form, maintain, and evaluate beliefs whose contents include the concept.¹⁹

There are some philosophers who might have a 'lower-grade' view of concepts than Millar. They might think that displaying a recognitional capacity for an object suffices to show that one has a concept of that object, and therefore that Millar's experiment does not test for evidence for Gestalt switches without the relevant conceptual abilities. There are two ways to respond to this. The first is to question whether the child really needs to possess recognitional capacities for duck-forms or rabbit-forms in order to display fear in the presence of duck-forms and curiosity in the presence of rabbit-forms - that is, in order to discriminate between them. The child may not be able to uniquely respond in one way to all and only duck-forms and in

¹⁸Millar (1991a) p. 39

¹⁹Millar (1991a) p. 39

another way to all and only rabbit-forms. For example, they may always express fear in response to duck-forms but also to a variety of other things, such as goose-forms, cow-forms and frog-forms. Yet as long as they always displayed fear in the presence of duck-forms and curiosity in the presence of rabbit-forms, their different reactions to the duck/rabbit picture could show that their experience of it changes.

The second way to respond to the worry that one could only undergo a Gestalt switch if one had recognitional abilities pertaining to what was seen, is to consider how one acquires recognitional abilities at all. It seems plausible to think, as was explained in chapter two section 5.2.2 and section 5.2.3, that in order to gain a recognitional, or even discriminatory, capacity there must be differences manifest in experience that one can learn to recognise or discriminate between. If this is so then there must be experiences that differ in some ways despite this not being in a way that demands conceptual capacities. Thus it seems quite plausible that Gestalt switches could occur without conceptual capacities coming into play.

In conclusion, in this section I have explained why the phenomenon of Gestalt switching appears to present a *prima facie* problem for the view that phenomenal character is identical with nonconceptual content. This is because one might think that the change in phenomenal character can only be explained by a difference in conceptual content. I have shown that representationalists could claim that certain concepts are required to undergo a switch but only because they are required in order to cause a particular nonconceptual state to be instantiated. Alternatively, they could claim that only a change in phenomenal character is required in order for one to undergo a Gestalt switch - concepts are not required. These two replies leave open the possibility that the change in phenomenal character could be accounted for by some change in nonconceptual content.

In the next section I will show that while the changes in phenomenal character in the duck/rabbit and Necker cube cases could be explained by a change in nonconceptual content, the case of the square/regular diamond is recalcitrant to this

type of analysis. Then in section seven, I will look at some possible responses to this problem and argue that in the end they fail to account for all changes in phenomenal character associated with Gestalt switches.

6 - Ambiguous Figures: The Second Challenge

To explain the difference between the phenomenal characters of experiences undergone in Gestalt switches by means of nonconceptual content, one should be able to name the different objects, properties or relations that feature in the contents. In the duck/rabbit and Necker cube cases, specifying the differences in content between the two experiences that one can have while viewing the pictures, and providing a theory of how experiences could come to have that content, will be reasonably straightforward. This is because there are independent occurrences of objects and properties in the world that correspond to the two contents in question. For example, ducks can be present without rabbits being present and a cube in one orientation can be present without a cube in another orientation being present. We can readily understand how an experience could covary with or have the function of indicating ducks as opposed to rabbits, or a cube in one orientation as opposed to a cube in a different orientation. When one sees a picture of a duck or a rabbit, or a picture of a cube in a particular orientation, the content of those experiences will not straightforwardly be 'rabbit' or 'duck' or 'cube in that orientation', but perhaps something like, 'duck-looking', or 'rabbit-form' or 'picture of a cube in that orientation'. Whichever, the thought that 'duck-form' and 'rabbit-form' can be genuinely different contents can be made sense of because there can be something duck-like present without something rabbit-like present. Similarly, in the case of cubes, because there can be separate occurrences of real cubes in different orientations, we can make sense of the thought that there can be experiences with different contents relating to which cube the pictured cube looks like.

Every time a square shape is present, however, a regular diamond shape is also present because a square is a regular diamond. How could an experience covary with

one and not the other, or be caused by one and not the other? How could an experience have the function of indicating one and not the other? Yet, because one can have different experiences when viewing the figure, according to the representationalist, the experiences must have different content. This is puzzling, because it seems that there are not, nor could there be, the independent occurrences of the objects, properties or relations in the world that are required in order for there to be a square shape or a regular diamond shape present.

That this really is a problem for a nonconceptual theorist can be seen by considering the theories of content which they hold. Remember the causal covariation theory. Michael Tye's formulation of the theory is as follows:

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

This view can account for many Gestalt switches as follows: one could imagine that, in optimal conditions, experiences with 'duck-form' as part of their contents would be tokened when and only when real ducks and non-ambiguous duck pictures were present and because they were present. When looking at an ambiguous duck-rabbit picture one could have such an experience, even though conditions are not optimal on account of the ambiguity of the picture. Your experience represents a duck-form. Similarly, one could go into a state that in optimal conditions covaries with and is caused by rabbit-forms. This experience would represent a rabbit-form. This difference in content would explain the different phenomenal characters that the different experiences would have.

Suppose now one tried to give an account of the difference between a square representation and a regular diamond representation based on Tye's definition. When optimal conditions obtain, a state that represents a square will be tokened in x if and only if a square is present and because a square is present. Clearly, however, every time a square is present a regular diamond is present and will equally be a cause of

the representation on the grounds that a square is a regular diamond. Thus a square representation will also be a regular diamond representation. The conditions required for a state to represent a square as opposed to a diamond are not met. Ambiguous figures show that there is a need to distinguish between representing that a square is present and representing that a regular diamond is present, but it looks as if the causal covariation theory does not have the resources to do so.

To explain the matter further it is necessary to distinguish between facts and states of affairs. Following Tye, I will hold that facts are fine-grained and states of affairs are course-grained. Tye claims facts should be conceived to be, "as fine-grained in their individuation conditions as the contents of the propositional attitudes".²⁰ He also claims that states of affairs are independent of how they are conceived and thus coarse-grained. On this view, two facts may be different when, although they refer to the same states of affairs in the world, they have different cognitive significance for the knower. Thus, 'Hesperus is bright' and 'Phosphorus is bright' can be regarded as different facts although they refer to the same state of affairs in the world.

To overcome the problem of how an experience can represent a square as opposed to a regular diamond, what the representationalist needs to show is how a state S can represent that P and not represent that Q, even though (a) the fact that P obtains if and only if the fact that Q obtains and (b) the state of affairs P' is identical with the state of affairs Q'. (Let P' designate that state of affairs that, were it to obtain, would determine that the fact that P was true, and similarly for Q' and the fact that Q.)

The causal condition in Tye's account may explain how an experience can represent that P and not represent that Q, even though the fact that P obtains if and only if the fact that Q obtains. This is because the state of affairs that determines that the fact that P is true (P') may be a different state of affairs from the state of affairs that determines Q to be true (Q'). While P' and Q' may always be co-instantiated, P' and not Q' may be the cause of the experience in question. For example, all the time

²⁰See Tye (1995a) p. 172

my computer's monitor gives out light it also gives out a humming sound and all the time it gives out a humming sound it emits light - the two are always co-instantiated. But it is the emitting of light that causes my visual experience, and thus my visual experience represents the fact that my monitor is emitting light, rather than the fact that it is humming. The fact that my monitor gives out light obtains if and only if the fact that it hums obtains, but my visual experience can represent one and not the other.

It should be noted that in general, however, that there are cases in which a state counts as representing that P, which intuitively do not fall under that description. For example, the state of having rickets is caused by and covaries with the state of lacking vitamin D, but it seems intuitively odd to suppose that the state of having rickets represents that vitamin D is lacking.

In addition, the causal condition does not show how S could represent that P but not that Q when P' is Q'. This is because if, in optimal conditions, S is tokened if and only if P and because P, then it will also be the case that, in optimal conditions, S is tokened if and only if Q and because Q.

In response to this latter objection one might invoke the idea that the 'because' in 'S is tokened if and only if P and because P' is intensional. The thought is that it may be true that S is tokened because P and false that S is tokened because Q, even though P' is Q'. Thus, the relation between S and states of affairs is irrelevant.

I think there is a plausible response to this challenge. It is customary to distinguish between a causal, non-intensional 'because' that relates states of affairs, and an explanatory, intensional 'because' that relates facts.²¹ I think that the 'because' which must be taken to be relevant in determining what a state represents must be the causal, non-intensional one and not the intensional explanatory 'because'. One reason is that the causal covariation theory is called the *causal* covariation theory - one might

²¹See, for example, Strawson (1985).

expect it to determine what is represented on account of causation and not explanation. But more importantly, the theory is supposed to give a naturalistic account of representation and intentionality. Therefore, to use an intensional notion of 'because' in providing such an account would be to explain intentionality by invoking one of the distinctive properties of intentional states, namely their generation of intensional contexts. The explanation would then be in danger of not being a fully naturalistic explanation. This can be seen clearly when we remember that the account of facts employed here, and endorsed by Tye, is that they are as fine-grained as the content of propositional attitudes. But if the representational nature of the propositional attitudes individuates facts, then one cannot appeal to the fine-grainedness of those facts to explain how something can represent one thing and not another without lapsing into circularity. Therefore I maintain that the causal covariation theory seems unable to explain how an experience can represent that a square is present and not represent that a diamond is present.

We will return to consider the causal covariation theory further below, but for now, consider whether the teleological theory fares any better. A teleological theory claims that a state will represent some object, property or state of affairs if and only if it is the function of that state to indicate that object, property or state of affairs. Two main theories of what it is for a state to have a function are Dretske's evolutionary account and Millikan's consumers' use account, both outlined above.

This theory can explain why a duck-form experience is different from a rabbit-form experience on the assumption that these states have different functions. It is plausible to think that they have different functions because it is plausible to think that these states could contribute differently to a creature's selective fitness. Similarly, it is not difficult to see how these representations could have different uses by a consumer of those representations.

The teleological account can also explain how S can represent that P and not that Q, even though P if and only if Q. This is because S could be selected by evolution

because it indicates that P and not because it indicates that Q, even if it indicates both - information to the effect that P may aid survival while information to the effect that Q may be irrelevant. Similarly, the use of S could determine that it represents that P and not that Q. For example S might represent that food is present and not that small black objects are present to a frog, even though every time food is present a small black object (a fly) is present, because the frog tries to eat when in state S and information that food is present aids its survival, while information that flies are present is irrelevant (on the plausible supposition that the frog does not also know that flies are food).

Additionally, the teleological theory has some powerful machinery to account for cases such as the rickets case where there is causal covariation but no representation. Consider that it is not the function of the state of having rickets to indicate the state of lack of vitamin D. This could be because there was no consumer of the state whose reproductive success was increased by having rickets, although rickets indicated a lack of vitamin D.

When one turns to consider the case of square/regular diamond, it looks *prima facie* as if teleological theories will fail to distinguish having a function to represent that squares are present from having a function to represent that regular diamonds are present. If something has a function to represent that squares are present, does it not thereby have a function to represent that regular diamonds are present? How could evolution select a state because it carries information about squares and not because it carries information about regular diamonds, when it seems that any selective advantage that information about squares would endow would equally be given by information about regular diamonds, because squares *are* regular diamonds. Similarly, any use by a consumer of a state that represents squares would equally be use of a state that represents squares. Anything that a square's presence could facilitate, a regular diamond's would also, because a square is a regular diamond.

It can be noted that this problem about accounting for different nonconceptual contents bears a striking resemblance to one raised by Martin Davies concerning causal covariation and teleological theories of meaning. Davies says:

on the face of it, causal covariation and teleology will not distinguish, for example, between meaning that Hesperus is thus-and-so and meaning that Phosphorus is thus-and-so, or between meaning that water is thus-and-so and meaning that H₂O is thus-and-so. Indicating the state of Hesperus is just the same as indicating the state of Phosphorus, and a need for water is just the same as a need for H₂O.²²

One might think that a theory of nonconceptual content could avoid this problem, precisely because it is a theory of nonconceptual content, rather than a theory of conceptual representation. Firstly, nonconceptual perceptual content is usually limited to observational features and properties (see chapter three, section two), so one might think that it does not have to account for the difference between Hesperus and Phosphorus as this type of content never features as the content of visual experiences. This is true, but squares and regular diamonds are clearly observational features so an account has to be provided in their case. Secondly, one might think that experiences cannot have two different nonconceptual contents which can be specified using different concepts but which have the same reference. Yet, as our ambiguous figures show, if one identifies phenomenal character with nonconceptual content, then one must suppose that there is some change of nonconceptual content when undergoing a Gestalt switch, and so the representationalist must be able to account for the difference in nonconceptual content between an experience associated with seeing the figure as a square and the experience associated with seeing the figure as a diamond. (I will call these a square-type experience and a diamond-type experience from now on for ease of exposition. In general, an F-type experience is an experience such that in the absence of countervailing circumstances it would seem to you as if an F were there *if* you possessed the concept of an F.)

²²Davies (1995) p.290

As we have seen, the problem that the square/regular diamond ambiguous figure poses appears to arise because there were never, nor could there have been, two distinct states of the world that corresponded to square representations and regular diamond representations. One way to try to overcome this problem would be to try find a property or relation that was represented when a square was represented but not when a regular diamond was represented. As long as there were some states in the world that exemplified this property or relation and some that did not, then one could use this difference to explain the representational difference, even if the square/regular diamond ambiguous figure necessarily had both properties. That is to say, although any property a square has a regular diamond will have, perhaps one property is represented when one has a square-type experience and not represented when one has a regular diamond-type experience.

In the next section I will examine whether this type of response is viable.

7 - Scenario Content and Protopositional Content

Christopher Peacocke gives an account of the difference between representing a square and representing a regular diamond along the lines suggested above. He claims that to account for many ambiguous figures two separate levels of nonconceptual content have to be introduced.²³ It should be noted that Peacocke does not argue that nonconceptual content can account for all phenomenal character, nor does he hold any particular theory of representation. However, he does try to account for the different experiences had when viewing a square/regular diamond ambiguous picture by differences in nonconceptual content. Peacocke makes use of a distinction between scenario nonconceptual content and protopositional nonconceptual content. Perhaps this can be put to use by the representationalists I have been discussing.

Peacocke states that a scenario is a spatial type, “individuated by specifying which ways of filling out the space around the perceiver are consistent with the

²³See Peacocke (1992) chapter 3.

representational content's being correct".²⁴ According to Peacocke, the difference between seeing something as a square and seeing it as a regular diamond is not capturable at the level of scenario content. That is to say, a regular diamond-type experience and a square-type experience have the same scenario content.

To account for the Gestalt switch by means of nonconceptual content, Peacocke uses protopositional content. A protoposition contains an individual or individuals and a property or relation. An experience has protopositional content when it represents the individuals in question as having a particular property. Peacocke claims that protopositional content is nonconceptual and contains properties and relations such as curved, parallel to, equidistant from, same shape as and symmetrical about.²⁵

Protopositional content appears to explain why we see a regular diamond as different from a square, because according to Peacocke, when we see a square our experience has the protopositional content that there is symmetry about the bisectors of the shape's sides. When we see the same object as a regular diamond, our experience has the protopositional content that there is symmetry about the bisectors of the shape's angles.

To use Peacocke's strategy, the representationalist has to hold that when we have a square-type experience, symmetry about the bisectors of the sides is represented, and when we have a regular diamond-type experience, symmetry about the bisectors of the angles is represented. Because there are sometimes distinct and separate occurrences of these properties (there are shapes with only side bisector symmetry and shapes with only angle bisector symmetry), the causal covariation or teleological theory might be able to account for these differences in representation, and so the

²⁴Peacocke (1992) p. 61

²⁵See Peacocke (1992) p. 77.

difference in phenomenal character could be explained by a difference in nonconceptual content.²⁶

I hope to show, however, that different symmetries do not suffice to explain the square/regular diamond ambiguous figures, nor other similar ambiguous figures.

Consider why in the case of ambiguous figures there is a characteristic Gestalt switch such that one can either see the picture as one thing or another but not both. One cannot, for example, see the Necker cube as two cubes with different orientations at the same time. An excellent explanation in terms of nonconceptual content which would explain this would be that the visual system either could not, or was such as to avoid (as far as possible), representing a set of inconsistent nonconceptual contents. One might argue also that the visual system was such as to maximise the representational interpretation. In other words, the visual system was such that it aimed for maximum consistency and completeness.

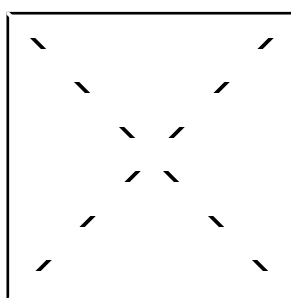
If nonconceptual contents were such that the visual system tried both to maximise the total content and avoid inconsistency, then this would help to explain why two different experiences can be had when looking at the Necker cube. In this case there are two inconsistent maximally complete and consistent contents that can be formed in response to it, and thus we can have two distinct visual experiences.

This explanation will not do, however, for the square/regular diamond ambiguous figure, for there are not any inconsistent contents when having a square-type experience and a regular diamond-type experience. Having the content, 'is symmetrical about the bisectors of its sides' is not inconsistent with having the content, 'is symmetrical about the bisectors of its angles'. One can understand why *if* a particular scenario content was compatible with two maximally complete and consistent sets of protopositions *then* there would be a sudden shift between the

²⁶For instance, the causal covariation theorist might hold that conditions are not optimal for viewing some symmetries when looking at an ambiguous figure. The teleological theorist might hold that a square-type experience has never come to have the function of indicating symmetry about the bisectors of the sides.

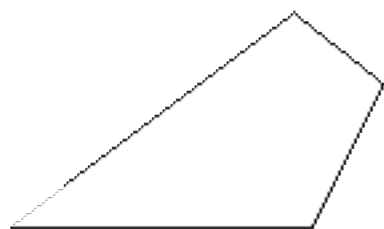
two phenomenal characters. In the case of the square and the regular diamond, however, there appears to be no reason why one's experiences could not have both contents concerning the different types of symmetry. So why do they fail to do so? Must they fail to do so? Protopropositional contents do not allow us to answer this question.

Further consider that it seems perfectly possible to see a square as a square while focusing intently on its angle bisector symmetry, as the diagram below indicates.



If this is a case where both types of symmetries are seen, then a further content would be required to distinguish seeing a square with both symmetries from seeing a regular diamond with both symmetries. Content regarding different symmetries would not distinguish the different phenomenal characters of these experiences. Therefore content regarding symmetries does not appear to distinguish the phenomenal characters of all experiences associated with seeing a figure as a square and seeing it as a diamond.

Additionally, not all ambiguous figures of simple shapes are symmetrical at all. Consider the figures below:



Distorted Square



Kite

In the same way that the square/regular diamond was ambiguous, these figures are ambiguous. The distorted square can be seen as a kite and vice versa. (I have named these shapes in this way because the names appear to capture best how one would describe the two appearances.) Note that similar to the square/regular diamond figure, these figures have more than one good intrinsic axis, although this is not an axis of symmetry. These figures are equally problematic for the representationalist theory, because like squares and regular diamonds, there is no occurrence of a kite shape in the world without the occurrence of a distorted square shape.²⁷ In these cases because the figures lack symmetry, there are no axes of symmetry to feature in the contents of the different experiences that one can have in response to the figures. Thus, axes of symmetry featuring in the content do not explain the different phenomenal characters of the two experiences.

Thus, content regarding symmetries does not seem to differentiate the two experiences had when looking at the square/regular diamond. It seems possible to see something as a square and to attend to the symmetry about the bisectors' angles. If this symmetry is not manifested in the nonconceptual content of the experience, then

²⁷Of course there can be kite shapes that are not squares that have been physically distorted, but this is not what I mean here.

why does one see that this symmetry is there? This content also does not seem to differentiate many other similar ambiguous figures that are equally problematic for the representationalist, as the kite/distorted square demonstrates.

Is there some other content that could be had by the square-type experience and not by the regular diamond-type experience? One might think that the difference between the experiences is that in one a square is represented and in the other a diamond is represented, but not a *regular* diamond. One might think that the content of the experience associated with seeing the figure as a diamond is less determinate than the content of the experience associated with seeing the figure as a square.

Evidence that supports this supposition comes from a psychological study carried out by Ferrante, Gerbino and Rock. They claim that people can accurately judge when an angle is a right angle (and just slightly more or less than a right angle) when the angle is normal, that is when the lines forming the angle are seen as close to the horizontal and vertical axes. People cannot accurately do this when the angle is not normal.²⁸



Normal Right Angle



Non-Normal Right Angle

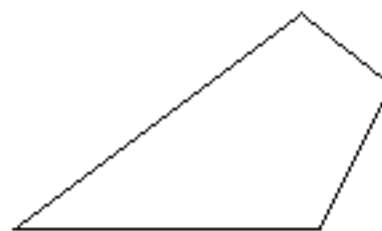
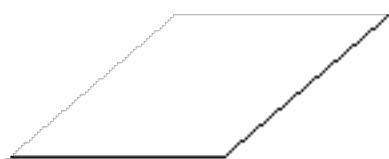
This would suggest that when people have experiences associated with seeing the figure as a square their experience contains the content that right angles are present. This is not the case when a person has an experience associated with seeing the figure as a diamond. Ferrante, Gerbino and Rock themselves say:

The effect of orientation on the perception of a right angle can be subsumed under the broad category of the effect of orientation on phenomenal shape. Indeed it provides at

²⁸Ferrante, Gerbino and Rock (1997). The effect they describe is independent of whether the image projected onto the retina forms a normal right angle or not, rather it depends on whether the subjects would judge the angle to be normal.

least a partial explanation of what was perhaps the first demonstration of this kind of effect, namely the example by Ernst Mach (1887) of the different appearance of a square when rotated 45 degrees; it then looks like a diamond.²⁹

While this would appear to be an excellent explanation of the difference in content that a nonconceptual representationalist could appeal to in order to explain the change of phenomenal character in the square/regular diamond ambiguous figure, it would not appear to explain the following ambiguous figures:



Non-Regular Diamond/Parallelogram

Kite/Distorted Square

In the non-regular diamond/parallelogram ambiguous figure there are no right angles or angles close to right angles. The angles are plainly very acute or very oblique. The effect of perception of right angles as a singularity in the normal case does not mean that one can tell the degree of any angle better when perceived as if in one orientation

²⁹Ferrante, Gerbino and Rock (1997) p. 169

rather than another. It only applies to right angles - that is why they are a singularity. In the kite/distorted square ambiguous figure there are no angles close to right angles that are perceived as close to normal angles. In both cases the top two angles are fairly close to right angles but neither are close to normal.

The conclusion therefore is that while the differing phenomenal characters of the experiences had in response to the square/regular diamond figure could be explained by a difference in nonconceptual content relating to the rightness of angles, the experiences had in response to the above two figures could not be explained in this way. Indeed there seems to be no explanation citing a difference in nonconceptual content that could explain the difference in the phenomenal characters of the experiences that can be had when looking at the above two figures. If this is the case, then there is a difference in phenomenal character that cannot be explained by a difference in nonconceptual content, and therefore phenomenal character cannot be identical with the nonconceptual content of experience.

8 - Conclusion

I have argued that causal covariation and teleological nonconceptual representationalist theories of phenomenal character cannot account for the phenomenal character switches associated with some ambiguous figures. I first showed that two different phenomenal characters could be had in response to one item in the world. I argued this was problematic for representationalists when there could not be two distinct occurrences of the different shapes in the world.

Peacocke's solution, namely, that representational differences can occur at the level of protopositional contents regarding different symmetries, looked as if it might work. Yet it seemed to leave unexplained several elements of the square/regular diamond picture, such as why one cannot be in a state with both symmetry protopositional contents. It was suggested that you can see a square as having symmetry about the bisectors of its angles in virtue of the phenomenal

character of your experience, and thus it appears that there is not the representational difference which Peacocke proposes between all the different experiences associated with the square/regular diamond. Moreover, the kite/distorted square ambiguous figure poses the same problem for the representationalist as the square/regular diamond figure. However, because it is not symmetrical, content relating to symmetry cannot distinguish a distorted square-type experience from a kite-type experience.

I then explored the suggestion that the nonconceptual content of a square-type experience might be more determinate than the content of the experience associated with seeing the figure as a diamond. This was backed by empirical evidence which shows that people can judge angles to be right-angles much more accurately when they look as if they are normal angles. As there can be occurrences of right angles without occurrences of non-right angles, this suggestion would seem to allow the representationalist to explain the difference in content between the square-type experience and the diamond-type experience. However, this explanation would not explain other cases of equally problematic ambiguous figures such as the non-regular diamond/parallelogram figure, for this figure does not contain right angles or angles close in degree to a right angle. Therefore there seems to be some changes in phenomenal character that cannot be accounted for by the nonconceptual representationalist. If they cannot be accounted for, then phenomenal character cannot be identical with nonconceptual content.

Chapter 6 - Inverted Spectra

1 - Introduction

In this chapter I continue to examine the claim that all differences in the phenomenal character of experiences are accompanied by differences in the nonconceptual content of those experiences, and all differences in the nonconceptual content of experiences are accompanied by differences in the phenomenal character of those experiences, by looking at a series of thought experiments expounded by Ned Block as putative counter-examples to representationalism. These thought experiments are all based on the inverted spectrum hypothesis.¹ Three responses have been made by the representationalist to these potential counter examples. I will argue that these responses commit the representationalists to certain claims which are implausible.

The inverted spectrum hypothesis is the hypothesis that it is possible for two people to have different conscious experiences when they look at the same colours while their behaviour is indistinguishable. Indeed, it is claimed that if one thinks of all the colours of the rainbow and the shades in between laid out in a circle - the colour spectrum - then it is possible that the experiences of one subject are exactly inverted with respect to the other. Thus, the typical phenomenal character of the experiences one person has when they look at the colour called green might be the same as the typical phenomenal character of the experiences another person has when they look at the colour red, and vice versa, and so on for all their colour experiences. Nonetheless, it is pointed out that because one person's colour experiences could bear the same relations of similarity and difference to each other as the other person's, they might make exactly the same colour identifications and discriminations, calling the sky 'blue' and the grass 'green', and saying that green was more similar to blue than it was to red. A further thought is that not only are the two people's discriminatory

¹See especially Block (1990a) and (1998).

behaviours the same, there are certain further things which they have in common. For example, it could be claimed the people are physically identical, or that they are functionally identical. The case which will be of interest to us is where it is claimed that people have different experiences but where the representational contents of their experiences are the same.

Some philosophers have worries about the coherence of the inverted spectrum hypothesis.² The version of it that is most open to these worries is one where it is claimed that the inversion could be undetectable. That is, there are no relevant differences between the alleged subjects of inversion - neither physical, functional, representational or in any of the relations that they bear to their environment. Fortunately, we do not have to examine this particular issue, for the examples of inverted spectra that will be of concern to us are ones where there could always be some difference between subjects; the question is whether this difference should lead us to suppose that the subjects' experiences are different. I intend to invoke the inverted spectrum hypothesis only to consider whether the representationalist theory is sound. I will be considering cases where our ascriptions of content to experiences and our intuitions about the phenomenal character of experiences seem to come apart.³ Many representationalists are willing to take our intuitions on these matters very seriously.⁴ They identify phenomenal character with representational content,

² See for example, Dennett (1991) chapter 12, Peacocke (1992) chapter 8 and Shoemaker (1984) chapters 8 & 9.

³It is interesting to note that Shoemaker holds that one can run an inverted spectrum hypothesis against the representationalist without holding that there have to be behaviourally undetectable spectra. He says, "the inversion scenarios that seem to show that it cannot consist in this [phenomenal character cannot consist in widely individuated content] are not limited to ones in which the inversion is behaviourally (or functionally) undetectable. If there can be differences in color 'quality space' between individuals, differences in the color similarity relations that are perceived to hold between things, there can be cases in which what it is like to see a given colour is different for different individuals, and in which what it is like for one individual to see a certain colour is the same as what it is like for another individual to see a different colour. This is enough to pose a problem - I would say a fatal difficulty - for the view that the phenomenal character of colour experiences just is their externalist representational content. It seems likely that we do not have to go to other possible worlds in order to find such cases; especially if we take other species into account, we probably have an abundance of them right here." (Shoemaker (1998) p. 672). A discussion of this case would bring out many of the same points as the discussion of behaviourally undetectable spectra, but as I and the representationalists are willing to suppose the latter are at least not incoherent, I will stick to the latter kind of inversion.

⁴The exception is Gilbert Harman, who has often questioned the coherence of the inverted spectrum hypothesis. It should be noted, however, that Harman's position seems to have softened recently. He

and therefore, according to their theories, it should be possible to determine what the phenomenal character of someone's experience is independently of their behavioural dispositions. Thus, they do not wish to dismiss inverted spectrum thought experiments as incoherent. Indeed, on their accounts it should be possible for two subjects to have different experiences but the same behavioural dispositions as long as the content of their experiences is different.

Two further elaborations of the inverted spectrum hypothesis have to be introduced to set the scene for the current debate. Firstly, often in this area, instead of considering whether two people have different experiences (the inter-subjective inversion), the focus is whether one person's experiences in response to a stimulus are different over some period of time. This intra-subjective version is often taken to have the advantage that the person undergoing an alleged inversion would be able to tell that their experiences had changed, and that this would provide (at least some) evidence that a change had occurred.

The second more complex version of the hypothesis - Inverted Earth - was initially introduced into the literature by Block, and has now become a standard example for discussion. Instead of dealing with inversions of experiences while physical, functional or representational qualities remain the same, we are invited to suppose that the experiences of a person remain unchanged while their physical, functional or representational qualities alter.

2 - The Basic Inversion and the Representationalist Response

I will start by briefly considering a basic case of intra-personal inversion. I will consider two types of response that a representationalist might make to account for the inversion. Examining these responses will prime us for investigating harder cases. It will also allow us to consider some *prima facie* objections to inversion.

now claims that he does not know whether the inverted spectrum hypothesis is coherent or not. See Harman (1996) p. 12. This seems to have coincided with the softening of his views on whether there are qualia. He now holds that there may be qualia, just not qualia of a kind endorsed by a sense-datum theorist.

An implication of the inverted spectrum hypothesis is that the following scenario is possible: Imagine a person with normal vision and normal experiences. One night mad scientists place inverting lenses in this person's eyes that have the effect of making colours look inverted. When the person wakes up they notice the difference and tell us about it. They say things like, 'The sky looks yellow'. At first confused, they soon learn to cope and compensate for the change. They relearn how to name colours correctly. After some time it is as if the inversion never happened - you would not be able to tell from the person's everyday behaviour that they had different experiences from you. We can tell that their experiences are inverted because they tell us that things still don't look the way they used to look, and we know that they still have the inverting lenses in their eyes. Next, the person suffers from amnesia and loses all memory for the time before they had adapted to the change. We are now to suppose that the person's experiences remain inverted. This is *prima facie* plausible because the person is still wearing the lenses and we can remember their previous reports. The thought is that the loss of their memory should not make us think that the person's experiences have changed and are no longer inverted.

Inversion cases like these are usually taken to show that the functional role of an experience is irrelevant to its phenomenal character. The type of experience that used to be caused by green things and caused the subject to judge that green things were present, is now caused by red things and causes the subject to judge that red things are present. If we suppose that the experiences invert and stay inverted, one explanation of this could be that we are supposing that what determines the phenomenal character of an experience is the particular brain state of the person. Green things now cause the same input into the brain that red things used to (because of the inverting lenses) and this determines which brain state and hence which type of experience will be caused. A person can learn to alter their behaviour in response to a type of experience that used to incline them to a previous behaviour.

How would a representationalist accommodate this envisaged possibility? They can do one of two things: admit that an inversion has taken place but explain the difference in experience by a difference in the nonconceptual content of the experiences, or explain away the intuition that there is an inversion at all.

Let us start with an example of the first strategy which is promoted by a teleological functionalist like Dretske. If, through natural selection, a state has a function to indicate the presence of something, then that state will continue to indicate what it does in spite of any change in its typical cause. Thus, when the person has inverting lenses fitted, green things now cause experiences that still indicate red. These experiences have the function of indicating red and will continue to do so. Thus, it is no surprise that in response to green things, the subject of the inversion now has experiences with phenomenal characters which differ from those previously had in response to green things. Green things now cause them to have red-representing experiences, that is, experiences that used to be caused by red things and have the function of indicating red things. The person learns to apply different concepts to the red-representing experience - they now judge on the basis of this experience that green things are present. However, their experience nonetheless represents red and has the phenomenal character that used to be associated with seeing red things. Thus, the person does have experiences with inverted phenomenal characters when looking at colours (relative to their experiences before the lenses were fitted), but the content of their experience is inverted too.

In this context Dretske says:

I agree, therefore, with Shoemaker (1991, p. 508), who agrees with Ned Block and Jerry Fodor (1972), that qualia are not functionally definable. But this does not mean that qualia are not capturable by a representationalist account of the present sort. For two representational devices can be equivalent in their discriminatory powers and capacities (hence, functionally equivalent) and, yet, occupy different representational states. Experiences can thus be different even though this difference can no longer

'express' itself in discriminatory performance. Though this means that qualia are not functionally definable, it does not mean that they are not physically definable. They are physically definable as long as there is a description, in physical terms, of the conditions in which systems have information-carrying functions. As long as we have a naturalistic theory of indicator functions, we have a naturalistic theory of representation and, hence, qualia.⁵

Representationalists who do not hold to a teleological theory could give a different explanation of this basic inversion case. Consider Tye's causal covariation theory.⁶ When a state tracks the presence of another by causally covarying with it in optimal conditions it represents that state. In optimal conditions, a state of a subject that tracks the presence of red will represent red and have the phenomenal character that is associated with redness. When a subject has inverting lenses fitted, the state that tracks red is now caused by green things, thus, a state that represents red and has the phenomenal character associated with redness is now caused by green things. This is why the subject notices a change in their experience. However, one might hold that once the lenses have been fitted for a while and adaptation is complete, that is, once the subject learns to adapt to their new situation completely, the state that used to track red now tracks green. It thus represents green and has the phenomenal character associated with green-representing experiences. In other words, the initial inversion that causes the confusion dissipates as the states of the subject start to track new features in the subject's environment. Tye says:

the experiences I will undergo will change their contents as they come to be causally correlated, in the new setting, with different worldly items and to give rise to behaviour appropriate to them.⁷

⁵Dretske (1995) pp. 77-78.

⁶Tye (1995a) pp. 101-103 and Tye (1998)

⁷Tye (1998) p. 462. Here Tye is supposing that the optimal conditions have changed. Before the inversion, optimal conditions would include those in which the subject was not wearing lenses. After inversion the optimal conditions would be those in which the subject was wearing the lenses. This is not the only view of optimal conditions that Tye could take. Indeed, he discusses another version of his view in the same article. I will discuss other possibilities below.

There is a clear difference between Dretske's and Tye's responses here. According to Dretske's teleological representationalism, a complete inverted spectrum is possible. A subject can have different experiences compared to another subject, in response to the same features in the world, while both display the same reactive dispositions to those features. When the subjects have different experiences, however, they are in states that represent different features. According to the version of Tye's view under discussion, this is not possible. When a subject has inverting lenses fitted, the experiences they have in response to features of the world are changed at first. But by the time the subject has fully adjusted their reactive dispositions, their states will now track different features of their environment, and so in response to red things they will once again have red-representing experiences and hence experiences with the phenomenal character associated with redness. This response explains the subject's initial reports of change but challenges our intuition that an inversion could remain when the subject's behaviour once again appears normal. The latter is explained by claiming that a physical state which previously tracked one distal feature of the environment can come to track a different feature, thus changing its representational content and its phenomenal character. Because the subject gets amnesia, they do not remember their experiences before complete adaptation, so we can explain why they do not remember the initial inversion and the change back to normal which is supposed to happen on this account.⁸

Before leaving this basic case, one objection to it should be noted. Hardin and Flanagan claim that our experiences of colours are naturally associated with warmth and distance concepts.⁹ We experience red to be warm and advancing and blue to be cold and receding. They claim that if our experiences of colour are necessarily linked to these judgements, then there would be differences of behavioural dispositions in a subject before and after inversion. Before inversion they will judge they are having a

⁸Of course one might worry what would happen if the person did not get amnesia. Would they not notice their experiences returning to how they had been before the inversion? I will discuss this problem below.

⁹Hardin (1988) p. 129 and Flanagan (1992) pp. 71-72

warm experience when looking at red objects. After inversion they will judge they are having a cool experience when looking at red objects. Thus, they claim, there could not be a spectrum inversion that was behaviourally undetectable. Similarly, Tye notes that there is no blackish yellow colour, but there is a blackish blue. If someone underwent an inversion, their behaviour could not remain the same since they would now be inclined to judge that there was a blackish yellow, but not a blackish blue.¹⁰

Most philosophers are, however, willing to let these potential spoilers pass. For one thing, it is not clear whether associations between colours and heat are necessary. Perhaps these reactions to colours are learned and could change. For another, it seems possible to imagine a colour visual system which did not have these characteristics, and argue that so long as it was possible that our visual system could have been like that then the thought experiment holds good.¹¹ Alternatively, the inversion need not be a visual inversion - it could involve experiences of some feature in some other sensory modality, which might be more plausibly invertable.

Further, it is now often held that a complete inversion (as opposed to merely uniform differences) is not required to make the point. Dretske, for example, considers that there are probably slight interpersonal differences in the phenomenal character of the experiences people have in response to the same colour. These differences might not be manifested in behaviour, but he claims they generate a version of the inverted spectrum hypothesis that a representationalist should be able to accommodate.¹²

In short, any peculiar features of the visual system that render complete colour inversions empirically implausible can be safely ignored on the grounds that these would seem to be contingent features of the particular sensory system and the particular complete inversion that we have chosen as our example.

¹⁰Tye (1995a) p. 204

¹¹See Shoemaker (1984), chapter 15, section 3 and Shoemaker (1996) chapter 7 section 4 for a detailed defence of this position. See also footnote 3 above.

¹²Dretske (1995) pp. 69-70

3 - Inverted Earth and Problems for Representationalism

I now turn to discuss Block's cases of Inverted Earth. Discussing the Inverted Earth case has a slight advantage over standard inversions because the purported changes are not changes in experiences but in other factors, and this can often be easier to think about and determine. The changes also do not involve a period of confusion for the subject of the inversion. Moreover, much of the debate in the recent literature usually concerns Inverted Earth.

3.1 - Description of Inverted Earth and Block's Construal of the Problem

Block asks us to consider a planet called Inverted Earth. This planet is identical to Earth besides the following facts. All the colours on the planet are exactly inverted with respect to those on Earth. Thus, for example, the sky is not blue but yellow and the sunset is 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 call it, 'blue', their green post boxes are called 'red' and their blue bananas are called 'yellow'. 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, it would appear that you would experience no difference to being on Earth.¹³ 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 a green post-box it appears red to you, and speaking English, you call the post-box red. This just happens to be the word that in the Inverted Earth language means green, 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

¹³As opposed to inverting lens insertion, sometimes Block supposes that some brain surgery was performed which systematically changes the colour information relayed from the eyes to the rest of the brain. Block calls this 'wire crossing'.

Earth inhabitants is that the phenomenal character of your colour experiences is inverted, relative to Inverted Earth dwellers.

Block claims that a scenario like this is not just conceptually possible, but also metaphysically possible:

many philosophers are skeptical about such fanciful examples. I will respond to only one point: feasibility. In its essential features, the Inverted Earth thought experiment could *actually* be performed with present day technology. We could substitute large isolated buildings for the two planets. And a version of the visual 'wire-crossing' could be done today with 'virtual reality' goggles.¹⁴

Despite criticisms some philosophers have raised about this hypothesis, representationalists such as Tye, Dretske and Lycan do not question the coherence of the example. They are inclined to accept the scenario, as described so far, as a metaphysical possibility, and 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.

Block thinks that the Inverted Earth hypothesis presents problems for the representationalist 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. This is the more controversial claim that Block has to make in order to show that the above scenario is problematic for the representationalist.

To explain why Block makes these claims, note that the theories of representation that we have been considering are externalist theories. That is, the content that a state has depends crucially on the relations it bears to features in the subject's environment and/or the social context or history of that state. Block compares Inverted Earth to Putnam's Twin Earth. Twin Earth is exactly like Earth except that water is made of

¹⁴Block (1998) p. 666

XYZ not H₂O, although it looks the same and has the same superficial properties. According to the standard analysis, if, unbeknown to yourself, you were placed on Twin Earth, then you would be wrong in thinking that water came out the tap. For XYZ (twater) comes out the taps, not H₂O. It is then suggested that if you stay on Twin Earth for some reasonable length of time, you start to have twater thoughts and beliefs and not water thoughts and beliefs on account of two facts - your thoughts and beliefs about the stuff that comes out of the taps is now caused by twater and not water, and you start to mean by the word 'water' what Twin Earth people mean by it, which is twater. In short, at first you have beliefs that represent water and then you slowly come to have beliefs that represent twater. The intentional content of your thoughts and beliefs change.¹⁵ Block claims that similarly, on arrival on Inverted Earth, when you think about the colour of post-boxes you will think them to be red. As you stay longer and longer the typical cause of your thoughts about the colour of post-boxes slowly becomes the colour green. You will also defer to your new linguistic community and by the word 'red' you will mean green, as that is what those around you mean. In short, your belief expressed by the words, 'the post box is red' changes from being the belief that the post-box is red to the belief that the post-box is green. Just as your states with conceptual content, such as thoughts and beliefs, will change, Block argues that the contents of your experience will change. The experience which once represented redness will now come to represent greenness. According to Block, this is because the normal cause of it is greenness and it causes you to believe that something green is before you.

Block therefore argues, on the basis of familiar considerations, about what determines content, that the content of your experiences changes as you stay on Inverted Earth. However, he also argues that as you seem to notice no difference as

¹⁵That your thoughts and beliefs could change without your noticing is often cited as showing that externalist theories cannot account for self-knowledge. The standard response is that you do know what you believe because your higher-order beliefs have the same content as the lower-order ones. Thus if you believe that twater is around, which you would express with the words 'water is around', then your higher-order belief which you would express as, 'I believe that I believe that water is around' will mean I believe that I believe that twater is around.

the changes take place, the phenomenal character of your experiences stays the same. Thus, the typical experiences you have in response to coloured objects have different representational contents but the same phenomenal character. Therefore, phenomenal character cannot be identical with the representational content of experience.

3.2 - The Teleological Response

One way to reply to Block is to adopt the strategy of denying that a change in representation occurs. As we have seen in section two above, one way to do this is to adopt a teleological account of representation. This allows one to say that what a state represents is fixed by what evolutionary function it has. Thus, no matter how long you stay on Inverted Earth, an experience of a type that was caused on Earth by red things and now is caused on Inverted Earth by green things still represents red because this state has the function to indicate red. Thus, your experiences remain phenomenally inverted with respect to those people on Inverted Earth because your experiences have different representational contents. Experiences now caused by green things still represent red because they retain their function to indicate red. Assuming that Inverted Earth people evolved on that planet, the experiences they have on Inverted Earth in response to green things will represent green, as evolution has designed them for that purpose.

A teleologist could claim that while this is their account of experiential content, their account of conceptual content is different and accords with the thoughts on content that Block has. This is precisely Dretske's account. He says:

experiences have their representational content fixed by the biological functions of the sensory systems of which they are states... Through learning, I can change what I believe when I see *k*, but I can't much change the way *k* looks (phenomenally) to me, the kind of visual experience *k* produces in me. Experiences are for this reason modular in Fodor's (1983) sense. 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. This is why the representation_s of *k* as red (a sensation of redness) is different from a representation_a of *k* as red (a belief_s that *k* is red) even though both are representations of *k* as red.¹⁶

This seems like the perfect response to Block. It endorses the intuition that the traveller to Inverted Earth has inverted experiences. It maintains the phenomenal character/content identity thesis by claiming that the contents of the experiences of the traveller to Inverted Earth differ from those of the natives, and it explains how nonetheless the traveller's beliefs could change and have the same truth value as those of the Inverted Earth natives.

There is, however, a rather large and unattractive consequence of the teleological account: it appears to countenance the existence of philosophical zombies, that is, creatures who are behaviourally and physically indistinguishable from ordinary humans, but which have no experiences (they are not conscious creatures).

In the current literature, everyone (rightly) seems agreed that the teleological account has this consequence.¹⁷ The reason is that an accidental molecule for molecule identical copy of a person ('swampman') would lack an evolutionary history. His states would have no functions and therefore no representational content. He would therefore have no experiences. Dretske himself says:

Imagine replacing a thinking-feeling being - you, say - with a duplicate, a 'person' that not only lacks your history, but lacks *any* history that would give its information-providing systems the relevant biological and learning-theoretic functions. Such a being would get the same information you get (through its 'eyes', 'ears', and 'nose'), but these systems, lacking the appropriate history, would not have the biological function of providing information - at least not if biological functions are understood

¹⁶Dretske (1995) p. 15

¹⁷See, for example, Seager (1999) chapter 7, Botterill and Carruthers (1999) chapter 7, Tye (1998), Block (1998), Rey (1998) and Dretske (1995).

(as here understood) as products of a certain selectional process. The 'senses' (if we can any longer call them that) of your duplicate would not generate representations. They would, to be sure, supply the information needed to drive the motor programs in ways that mimicked your behavior, but there would be no internal representations of the objects about which information was delivered. There would, therefore, be no experiences *of*, no beliefs *about*, no desires *for*, these objects. There would be no qualia.¹⁸

Unlike most philosophers, Dretske does not regard this consequence as a *reductio ad absurdum* of his position. Indeed, he tries to defend this position and analyse why so many people think it spurious. He holds that what underlies the conviction that a creature physically identical to a particular conscious human being must also have conscious experiences is the 'Internalist Intuition':

The Internalist Intuition gives expression to the conviction that experience (i.e., the quality of experience, what it is like to have experience) supervenes on the constitution - and for materialists this can only mean physical constitution - of the experiencer.¹⁹

Dretske devotes much of his defence of the view that a randomly created duplicate of a person might lack experiences with phenomenal character, to alleviating worries that one might have in rejecting the Internalist Intuition. This, however, seems rather misguided, for one could reject the Internalist Intuition but hold that there are no zombies or swampmen.

One reason I doubt that it is the Internalist Intuition that underlies the conviction that there could not be zombies is that many people want to hold that, which particular phenomenal character an experience has, does not supervene on the internal constitution of a creature (either the internal physical or functional constitution). At

¹⁸Dretske (1995) p. 126

¹⁹Dretske (1995) p. 145

the same time, they hold that whether or not a creature has experiences, does depend on their internal constitution.

To see this, consider Sidney Shoemaker's position, defended in a series of important articles.²⁰ Shoemaker claims that it is possible for there to be cases of inverted phenomenal character, but not cases of philosophical zombies (he calls this case the case of 'absent qualia'), by reasoning as follows: consider a conscious experience with phenomenal character that in me gives rise to the judgement that I am in pain. Call this state 'genuine pain'. Consider also a state that was not conscious or had no phenomenal character that gives rise to the same judgement that I am in pain. Call this state 'ersatz pain'. Shoemaker claims:

If absent qualia are possible, then the presence or absence of the qualitative character of pain would make no difference to its causal consequences *that would make it possible for anyone to distinguish cases of genuine pain from cases of ersatz pain.*²¹

Shoemaker's conclusion is that if philosophical zombies were possible one could not know in the case of other people, *or even in your own case*, whether you were in pain, and such a position should be rejected.

If one accepted this argument, one might nonetheless hold that, which phenomenal character your experience has, is determined by the relations you and your experience bear to the environment. It is possible to hold that a creature's internal constitution determines whether or not it has experiences with phenomenal character, but it is a creature's relations to its environment that determine what the character of those experiences are. Therefore, one might argue that molecular duplicates must both have conscious experiences if one of them does, but as the phenomenal character of those states depends on factors that lie outside the duplicates' inner constitution, they might have experiences with different phenomenal characters.

²⁰See Shoemaker (1984), chapters 9 and 14 and (1996), chapter 6.

²¹See Shoemaker (1984), chapter 14, p. 316.

In view of these considerations I do not believe that what Dretske calls the 'Internalist Intuition' explains why people suppose that the internal constitution of a creature determines whether it is conscious. Indeed, surveying the literature, the reason that most people give for rejecting the possibility of philosophical zombies closely resembles Shoemaker's reason, namely, that if a zombie is possible it would make the same claims to being conscious that we (conscious creatures) would make and, if this is possible, skepticism about other minds becomes a vexing issue. More seriously, skepticism about our knowledge of our own minds becomes worrisome. What guarantee would we have that our claims that we are conscious are caused by our being conscious, rather than caused by purely unconscious states? As Seager succinctly puts it:

To get personal about it, you face the risk that in fact you are right now utterly unconscious; whether you are conscious or not depends upon facts about the evolutionary history of your species (and ancestor species) and you cannot be sure of those facts 'from the inside' - amazingly there is no 'inside' unless these facts obtain.²²

I therefore conclude that any form of representationalism which has as a consequence the possibility that there could be swamp-people lacking experiences with phenomenal character is highly implausible and should be avoided at all costs.

Unfortunately this puts us in the position that Dretske's neat explanation of Block's Inverted Earth thought experiment should also be rejected. Its cost is too high, and we should therefore seek another representationalist explanation for the Inverted Earth Hypothesis.

²²Seager (1999) p. 167. Similar sentiments are expressed in Rey (1998), Tye (1998) and (1995a) pp. 191-207 and Block (1998). Interestingly, Millikan (1984) p. 92, who holds a teleological theory of content similar to Dretske, holds that a swampwoman identical to herself would have no beliefs, fears, intentions or aspirations because its history would be wrong. However, she allows that it would in some sense be in the same state of *consciousness* as herself.

3.3 - The Causal Covariation Response

3.3.1 - Initial Moves

Let us now try to account for the Inverted Earth hypothesis by means of a response on the part of a causal covariation theorist, in the spirit of the response that was made to the basic case of spectrum inversion. Recall that the basic idea is that a state represents what it causally covaries with - what it tracks - in optimal conditions. (For ease of exposition I will call an experience 'red-representing' if it has content pertaining to redness, and I will call an experience 'red-feeling' if it has the phenomenal character which is normally associated with seeing red things. This terminology is taken from Byrne and Hilbert.²³)

When you have inverting lenses placed in your eyes and are moved to Inverted Earth, you notice no difference. This can be explained by a causal covariation representationalist because as soon as you arrive on Inverted Earth, the experiences which on Earth tracked redness, and therefore were red-representing and red-feeling, are now instantiated in response to green things. You expect things that were typically red on earth to look red in your present environment, because you don't know that your environment has been changed. For example, you expect post-boxes to look red. At first, the experiences you have on looking at post-boxes continue to represent red, so when you look at a post-box on Inverted Earth it looks red because actually it is green - green things cause red-representing experiences in you (because you are wearing the inverting lenses). And, according to the representationalist, such experiences are also red-feeling. When you first arrive on Inverted Earth your experiences are inverted phenomenally with respect to the natives when you look at certain objects, but your experiences also have inverted representational contents.

²³Byrne and Hilbert (1997a). This terminology is supposed to provide a neutral but convenient way of describing various positions. Representationalists hold that all red-feeling experiences are red-representing and vice versa. Block is claiming that red-representing experiences may be green-feeling.

After some time in your new environment, however, new tracking relations begin to be established. The state you go into when you look at green things (e.g. post-boxes) starts to track green things. After some time has passed, when you look at a (green) post-box on Inverted Earth you go into a state that tracks green and therefore represents green. Your experiences when looking at green things have the same contents as the experiences of a person from Inverted Earth as they look at green things. Yet, in Block's example, we were to suppose that you notice no difference at all on Inverted Earth as time went by. You don't realise that you have moved from Earth to Inverted Earth and you don't notice that your experience changes in any way. Therefore we are to suppose that the phenomenal character of your experiences remains inverted with respect to Inverted Earth inhabitants. But if we are to equate content and phenomenal character as the representationalist does, then we must suppose that the phenomenal character of your experiences changed in response to colour properties as the content of your experiences changed.

In short, this type of representationalist reply must assume that there is a change in the phenomenal character of your experiences as time passes when you view a colour, because there is a change in the content of your experiences. Yet, according to Block, it seems feasible that there is no change in phenomenal character - the subject would not judge that the colours of objects had changed. This is why Inverted Earth looks to pose a problem for representationalism.

In response to this *prima facie* problem for representationalism, Tye considers whether a mixed teleological and causal covariation theory would solve the problem. For example, one might hold that for creatures that have states with functions bestowed on them by evolution (or by whatever means) the function of those states remains fixed, and therefore, when they go to Inverted Earth, neither the content nor the phenomenal character of their experiences change. For creatures that have no states with a function (such as swampmen), it is suggested that their states can acquire content in virtue of what their states track in conditions where those states help them

to flourish. This suggestion would seem to avoid positing swampman duplicates that lack conscious experiences while, at the same time, accounting for the Inverted Earth scenario.

However, as Tye himself notes, this does not solve all problems. The content of Swampman's experiences can change when his environment changes as long as he continues to flourish. His states may start to track different features while he continues to thrive. Thus:

if we can travel from Earth to Inverted Earth, so too can swamp creatures. The case of the travelling swampman, equipped with inverting lenses, lies beyond the resources of the above mixed, strong representational theory. Here representational content will change, but phenomenal character will remain the same. Strong representationalism, it seems, is in deep trouble.²⁴

3.3.2 - Defending Content Changes

If the teleological response is ruled out on the grounds that it countenances swampmen with no conscious experiences, and the causal covariation theory cannot account for why it seems one's experiences do not change their phenomenal character on Inverted Earth, and a mixed theory cannot explain swampman travelling to Inverted Earth, then what should a representationalist do? Michael Tye claims that one strategy is to argue that when the content of your experiences on Inverted Earth changes, the phenomenal character changes also. As we have already seen, to make this move one has to explain why, despite the fact that the phenomenal character of your experiences changes, you apparently notice no difference in your experience. This is precisely what Tye decides to try to explain.

Tye accepts the fact that after a long time on Inverted Earth you will say and believe that there has been no change in your experience whatsoever. You will say

²⁴Tye (1998) p. 464. By 'strong' representationalism, he means representationalism which identifies content and phenomenal character, as opposed to one which merely states that phenomenal character supervenes on representational content.

and believe that the way things look has not changed. You will say that the colour of the sky today looks just the way it did forty years ago. This is of course *prima facie* evidence that the phenomenal character of your experience has not changed, but Tye questions whether it is conclusive. He argues that it is possible that your memory of your experiences on Earth is defective.

To make the point, consider what is true when you are on Inverted Earth and have been there for, say, forty years. You express your sincere belief by uttering the words 'the sky looks blue', but, because the content of your thoughts and beliefs about colour have inverted, what you mean and believe is that the sky looks yellow. This belief is true - the sky on Inverted Earth is yellow. We also know that because you are unaware of the changes that have happened to you, you are likely to utter the words, with sincere intent, 'the sky I saw forty years ago looked blue'. In this case, however, Tye claims that what you say is false and your belief is mistaken. This is because these words mean the sky you saw looked yellow forty years ago and express your belief that the sky you saw looked yellow then. But forty years ago, when you looked at the sky on Earth it looked blue, not yellow. Thus when it comes to propositional memories, your recollection of what was the case will be false. Forty years after arriving on Inverted Earth, you will believe and claim that forty years ago the sky you saw looked yellow. But your belief is false: the sky on Earth looked blue. Thus, when thinking of the Earth sky, your propositional memories are incorrect. You misremember what the colour of the sky was. Tye says:

Thought experiments like this one and corresponding thought experiments that extend Tyler Burge's well known Twin Earth case to memory, naturally lead to the conclusion that, where past and present environments come apart, propositional memory contents are fixed in many cases by present factors. This should not be all that surprising. If propositional memory consists in writing down and storing an inner sentence (in the language of thought), the content of that sentence can be made to

change by changing the external setting appropriately, just as in the case of public sentences like 'Water is wet'.²⁵

To summarise, Tye's response to the Inverted Earth scenario is that, when you arrive, your red-representing and red-feeling experiences are caused by green things. After some time on Inverted Earth, the experiences you have when looking at green objects now track green; they are thus green-representing and green-feeling experiences. You do not notice this change in phenomenal character in response to green things, however, for as this change is happening, the intentional contents of your conceptual states are changing. Therefore, your memory of how things used to look is changing. You once believed that the sky on a particular day looked blue, you now believe that the sky looked yellow that day. Therefore, you do not notice that the phenomenal experience you are having in response to the sky is changing as your memory of how the sky was is changing too. You end up having experiences with the same content and the same phenomenal character as the Inverted Earth natives and noticing no difference because your memory is defective.

I believe that Tye is right about propositional memory contents. That is to say, I believe that it is correct that *if we assume* that your present belief about the sky is that it is yellow now and you would express this belief by uttering the words, 'the sky is blue now', then when you remember something that you would express with the words 'the sky I saw forty years ago was blue', then the belief you express is that the sky you saw forty years ago was yellow. Your belief memory contents are externally individuated and so you misremember the past. Yet, one could question the assumption that your present belief, which you express by uttering the words 'the sky is blue', really is the belief that the sky is yellow. One could do so precisely because you still remember and have thoughts about Earth. Although, we might suppose, both the majority and all the recent samples of what determines the content of your beliefs expressed using the word 'blue' are samples of the colour yellow, still, because you

²⁵Tye (1998) p. 466. Note that Lycan (1996) also appeals to external memory content to explain Inverted Earth.

remember Earth, you might think that some of the samples that determine the content of your beliefs expressed using the word 'blue' consist in samples of the colour blue. In other words, as long as you have some memories of Earth, those memories could determine that the content of your beliefs, expressed by the word 'blue', are neither straightforwardly about yellow or about blue.²⁶

If these considerations were correct, then they would pose serious problems for Tye's account. If it is not clear how to correctly specify the content of your colour beliefs and memories then would you notice that there had been a shift in how things looked? Even if one could specify the content by specifying the different contributions made from the different aspects of the environment (call such a content a 'partial' content), this might make us worry that the content of one's experiences was 'partial' in just the same way. This would cause problems for the representationalist, because it is not clear how the phenomenal character of experience could be 'partial' in just this way. What would an experience that was to an extent yellow-representing and to an extent blue-representing be like? What could an experience that was sort of blue-feeling but sort of yellow-feeling be like? Moreover, even if we accept that there is a complete inversion of the content of one's beliefs and the content of one's perceptions, there will, it seems, still be a period of indeterminacy on Tye's account when your experiences are shifting their contents. Perhaps Tye could claim that, as the content of your perceptions change, the content of your beliefs and memories will change to the same extent, so you will not notice any difference. This is fine, but still, the problem remains of how it could be possible that the phenomenal character of your experiences could be 'partial' as the contents are changing. The idea that the phenomenal character could be partly blue-feeling and partly yellow-feeling is difficult to comprehend. Tye nowhere gives an account of how we should understand this to be the case.

²⁶The same would apply to Burgean considerations about your language community. In a sense you straddle two communities. This type of response to Tye actually has been made previously and independently by Jane Heal (1998), although she considers only propositional memories and not points about phenomenal character as I do below.

An alternative reply open to Tye would be to claim that the content of experience is such that it cannot be indeterminate in this manner. Perhaps the shift in content is rather sudden, once a certain threshold has been reached. In this case, in order to explain the continuity of your behaviour, it might seem that Tye would have to assume that the contents of your memories underwent a sudden shift too - in which case the content of all your beliefs would have to shift suddenly. However, as this response is not open to Tye (precisely because here we are supposing that he is trying to account for the slow shifting, and perhaps indeterminate, nature of the content of belief), perhaps he could claim that your non-propositional memory of past experiences undergoes this sudden shift, while your propositional memory (and the content of your beliefs) undergoes the gradual shift.

Tye himself claims, in a slightly different context (see below), that there could be two different kinds of memory. He says:

it might be suggested that a distinction needs to be drawn between memories of the sort that parallel thought and memories of the sort that parallel experience. The latter are what might be called 'phenomenal memory images'. In the most basic case, they represent to us, in phenomenal form, the past colours, tastes, smells etc. we have encountered (or take ourselves to have encountered).²⁷

Thus, one way to escape the worry that shifts in content are gradual, and/or could never completely occur, for a traveller to Inverted Earth, would be to claim that this is true only for conceptual states - beliefs, thoughts and propositional memories. The content of nonconceptual states - experiences and phenomenal memories can shift suddenly, once a certain threshold is reached.

Before exploring this suggestion any further (which I will do in the section below), let us return to and remind ourselves of the dialectic before we digressed to consider the problem of whether contents could completely invert in the manner that Tye suggests.

²⁷Tye (1998) p. 468

We were considering Tye's suggestion that after some time on Inverted Earth, the content of your experience inverts and thus the phenomenal character of your experience inverts, because he identifies content with phenomenal character. To explain why you would not notice that your experiences had changed, Tye proposes that the content of your memories change. He claims that because the content of your beliefs will change, the content of your memories will change too.

It is at this stage in the debate that Tye considers a possible response to his position, by distinguishing phenomenal memories from propositional memories. He claims that someone might think that while an externalist account of propositional memories is plausible, it is not plausible for phenomenal memories. They might claim that the source of your remembering how things were on Earth is a mental image that can be directly compared with the experience you are now having. Why should one think that just by travelling and having inverting lenses inserted into your eyes you can no longer recall the ways things looked to you in this sense?

Tye says that a source of the intuition that phenomenal memories are not externalistically individuated is that one may be inclined to think of such memories as being like photographs - fixed in time and available for comparison like a picture to one's present experience. He argues against this conception by claiming that there is psychological evidence that this is not how memory works.²⁸ Moreover, he claims that such a conception of memory is incompatible with the transparency of experience and introspection - namely that when attending to experience (present or remembered) one is only attending to features that the world is represented as having. One does not attend to some quality of experience which is not also a way in which the world is represented as being. In short, Tye claims:

It is worth stressing that if strong representationalism is true anywhere, then it should be true for phenomenal memory images. For trivially such memory images are

²⁸Tye claims that there are many experiments, "that strongly suggest that visual images are not photographic but rather are constructed piecemeal with the aid of concept driven processes" (Tye (1998) p. 475, footnote 12).

phenomenal states. They share phenomenal qualities with perceptual experiences. If these qualities of perceptual experiences are representational in nature, they must be representational whatever their bearers. So, any of a number of independent arguments for strong representationalism with respect to experience can be appealed to in support of the application of the view to the phenomenal character of phenomenal memory images.²⁹

In the next section I will outline why I believe that Tye is wrong to think that this externalist conception of phenomenal memory is correct.

3.3.3 - Arguments Against Tye's Conception of Phenomenal Memory

One reason why one might think that phenomenal memory is not subject to the kind of changes of content over time which Tye postulates, stems from Tye's own considerations about phenomenal character. On Tye's account, phenomenal character is identical with the content of experience. All we are aware of when we are aware of our experiences is content (this is Tye's point about the transparent nature of experience). One might think, therefore, that when you remember your experience, what you remember is the content of that experience. For example, if you remember what your experience was like when you looked at the sky on a particular occasion, why don't you remember that the content of that experience was the content 'blue'?

One might think that the difference between propositional memory and phenomenal memory is that when you propositionally remember that the sky looked blue, we suppose that you remember the words 'the sky looked blue' and therefore the vehicles of content. When you recall these vehicles at a later date they now represent that the sky was yellow. One can understand on this model how the content of your propositional memory could have changed. But, according to Tye, when we are aware of phenomenal character, we are aware only of the content of the experience, we are not aware of the vehicle for the content. Therefore one might think that it is the

²⁹Tye (1998) p. 476, footnote 18

content itself that can be remembered in phenomenal memory, not the vehicle for the content. If one is not aware of the vehicle, it cannot be remembered and then come to take on a different representational content. Thus, phenomenal memory should remain accurate even if states with those contents change from tracking blue things to tracking yellow things.

It becomes clear that Tye's conception of the way phenomenal memory works must suppose that it is the vehicle for experiential content which is remembered or, better, 'stored', and that in this way the content associated with this vehicle can change.³⁰ This is in fact what we find Tye claiming. During your stay on Inverted Earth, it is not simply that those states individuated by their contents as red-representing states cease to be caused by green objects and come to be caused by red objects. Instead, Tye thinks that states, individuated by their being those states that were vehicles for red-representing states when you first arrived, continue to be caused by green objects, but those vehicles change from representing red to representing green. In other words, Tye thinks experiences have syntactic properties. These syntactic properties can change what they represent. Tye says:

phenomenal memory images... have a fundamentally matrix-like structure, the cells of which are filled with symbols for such simple perceptible features as colour... On an account of this sort, if the constituent symbols for color and other such qualities in phenomenal images change their meanings, then the content of those images shift and diverge from their perceptual sources.³¹

It should be stressed that on Tye's account, one is never aware of the vehicles of content. One is only aware of the content of those vehicles. Thus, what is in common to your experience of the sky on Earth at the time you were having it and your phenomenal image of that experience after years on Inverted Earth - namely the same symbol-filled arrays (the vehicles of content) - is something you are never aware of.

³⁰ I mean here that any 'remembering' is not conscious remembering.

³¹ Tye (1998) pp. 469-470

To attack Tye's position here, I will show that it has a very unwelcome consequence. Consider the following thought experiment.

Inverted Earth has become a popular tourist resort for philosophers. Many take their holidays there to verify the results of thought experiments. Some, investigating representational content, insert inverting lenses in their eyes; others do not, trying to see if they can adapt to their new colour inverted environment while retaining all their reactive dispositions.

Morag is a philosophy student working to earn extra money. She has taken a job as a courier. She meets philosophers at the spaceport on Earth, accompanies them on the spaceship and takes them to their hotels on the resorts of Inverted Earth. She spends a few days on Earth and then a few days on Inverted Earth. Morag reckons that this is a good job. Not only does she get to meet many famous philosophers and converse with them but she can also try out her own experiments on Inverted Earth. After some time, it strikes Morag that she is in quite a unique position to carry out an experiment. After the initial amazement at how different Inverted Earth looks to Earth, Morag finds that it is much more convenient to wear inverting lenses when on Inverted Earth. Being on Inverted Earth without your lenses is generally quite disturbing and can cause headaches, mental confusion and so on. Furthermore, just as you are getting used to it, you return to Earth and experience the same 'inversion sickness'. Indeed, the company she works for recommends it as good health and safety policy. Morag takes her lenses in and out on the space shuttle which is decorated in a subdued shade of grey. According to Morag, her experiences do not appear to be different on Earth and Inverted Earth. Indeed, this is precisely why she bothers to take in and out the lenses on the space shuttle.

Yet Morag notes that when she is on Earth the experiences she has when she looks at the sky represent blue, but when she is on Inverted Earth they represent yellow. That the representational content of her experiences does alter can be deduced from the externalist considerations that Tye promotes. When on Earth and speaking to

locals, the word 'blue' said by Morag means just that. When on Inverted Earth and speaking to its inhabitants, the same word means yellow. If the representational content of experiences is to be given a similar externalist treatment then it must change in a similar way. On Earth, optimal conditions are when the lenses are out. On Earth, the experiences of the type she has normally when looking at the sky track blue. Optimal conditions on Inverted Earth are when she has the lenses in. There, the experiences of the type she normally has when looking at the sky track yellow. Now if Morag believes that phenomenal character is identical with the content of experience, it seems she must think that her memory for the way things look on Earth is flawed when she is on Inverted Earth, and flawed regarding the way things look on Inverted Earth when she is on Earth, for she notices no difference in the way things look.

If Morag is on Earth and remembers what the sky on Earth looks like, and keeps remembering this all the way on her journey to Inverted Earth, by the time she steps off the space shuttle, although she seems to have been having a memory with the same phenomenal character all along, she must be mistaken, for now she is misremembering how things looked on Earth.

Recall that with respect to Block's standard case of Inverted Earth above, Tye's position commits him to holding that there can be changes in phenomenal character that can go undetected. Some philosophers reject his position on the grounds that it is not plausible to think that changes in phenomenal character can go unnoticed. For example Block and Shoemaker, respectively, claim:

it is a necessary feature of phenomenal character that if a change is big enough and happens fast enough, we can notice it.³²

it is constitutive of the notion of phenomenal character that one does have introspective sensitivity to changes in it, whatever the sources of the changes.³³

³²Block (1998) p. 668

³³Shoemaker (1998) p. 677

Of course, this is just what Tye rejects. One might think that Block and Shoemaker's position is more plausible because it is generally acknowledged that we have special knowledge of the nature of our thoughts and experiences. But even Tye admits this:

we can know in a direct and authoritative way what we are thinking; we normally have a kind of 'privileged access' to our thoughts. Likewise, we normally have a kind of privileged access with respect to the phenomenal character of our experiences.³⁴

To explain, however, why in Block's case of Inverted Earth we seem not to have knowledge that our experience has changed *after a long time* on Inverted Earth, Tye appeals to the fact that privileged access pertains only to present mental states, not to knowledge of past mental states. He says:

privileged access pertains to our *present* mental states. It is not a thesis that pertains to past mental states... The first person judgement that phenomenally nothing has changed requires a comparison between the present and the past. And privileged access fails for past mental states, whatever their type. We do not know in a direct and authoritative way what *used* to be going on in our minds.³⁵

Now, there is a clear sense in which what Tye says here is correct. When I remember what I saw some time ago, I could be mistaken. However, Morag's case invites us to consider a slightly different scenario from the standard Inverted Earth case. What Morag does not know (at least through introspection) is that the phenomenal character of her *current* memory experience is changing. She is constantly remembering how the sky looked to her just before she left Earth as she travels to Inverted Earth, and during that time she notices no change. But we know that her experience must have changed at some point. Should we count this sort of case as lack of privileged access to present or past experience?

³⁴Tye (1998) p. 467

³⁵Tye (1998) p. 467

One might consider it simply as lack of privilege about past experience. After all, as Tye says, the judgement that phenomenally nothing has changed requires a comparison between the present and the past. But, at the same time, holding that there could be unnoticed changes in your experience within your attention span is exceedingly unattractive. The privileged access that we think we have to our phenomenal character includes not only what my experience is like *now*, but to changes to my *current* experience. If it did not include changes to my current experience then our experience could be changing all the time without our knowing it through introspection. If that were the case then the thought that we had privileged access at all to our experiences would appear to be put in jeopardy. This is because knowing what my experience is like now requires recognitional and discriminatory abilities. That we have such abilities seems to have to be explained by our being able to tell successfully via experience whether things appear similar or different to us. But if it could be that our experience is changing all the time without our knowing it, then it becomes hard to see how we could possess recognitional or discriminatory abilities at all.³⁶

Indeed, Tye seems want to avoid the claim that changes could occur to your present experience without you noticing it:

the above response commits the strong externalist to supposing that there can be large changes in the phenomenal character of experiences that are inaccessible from the first-person perspective. And that may seem rather counter-intuitive. But the relevant changes are ones that occur through time, not at a single time, and they only occur in switching cases. In my view the core intuition here is only that within a single context, a single external setting, no unnoticeable changes in phenomenal character can occur.³⁷

³⁶This point is made by Shoemaker (1984) Chapter 8, p. 179.

³⁷Tye (1998) p. 471

What the case of Morag seems to bring out is that if one accepts Tye's account of the original Inverted Earth, then the case of Morag seems to commit one to holding that one's present experience could be changing without one noticing it. Such a conception of phenomenal character is more than unpalatable.

Let me now briefly consider an objection that someone like Tye might have to the Morag thought experiment. Tye could claim that when Morag repeatedly goes from Earth to Inverted Earth her experiences do not have one content on Earth and another content on Inverted Earth. This could be argued on the grounds that Morag's experiences need to constantly track one feature in her environment to have a particular content. The problem with this objection is that, if true, then neither Morag's experiences on Earth nor her experiences on Inverted Earth can have content pertaining to the colours. None of her experiences can represent red or represent green for none track that quality. If tracking does not occur, do her experiences represent anything? Do her experiences have phenomenal character? If they do, what is the nature of that phenomenal character, given that she cannot be having red-feeling or green-feeling experiences? In short, we have hit upon the problem for Tye's position that we encountered in the previous section, where I was discussing whether we could ever hold that a complete change in content could occur at all. If the tracking of a single quality breaks down, it becomes problematic then whether the experiences can have content. What that content is, and what the phenomenal character of such experiences could be like, is also problematic. Recall that in section 3.3.2 I suggested that to overcome this problem Tye might suppose experiential content can change suddenly, once a threshold has been reached. Yet, if one adopted this suggestion, it would no longer be problematic to accept that the content of Morag's experiences can change swiftly on route from Earth to Inverted Earth, in which case it seems that her current experience must be able to change without her noticing it.

In light of the Morag story, I suggest that Tye's account of Inverted Earth, namely, that as a what a state covaries with changes there is a relevant change in the phenomenal character of that state, should be rejected.

Before concluding this chapter, however, I wish to consider an alternative explanation which Tye gives of the Inverted Spectrum hypothesis. In recent writings Tye has claimed that he finds both the externalist memory response and what I will call the 'counter-factual response' both plausible. Therefore we should examine this other account to fully assess whether the inverted spectrum hypothesis does threaten the representationalist position.

3.3.4 - The Counter-Factual Response

Recall that Tye's definition of representation was as follows:

S represents that P = df If optimal conditions obtain, S is tokened in x if and only if P and because P.³⁸

In a later article, 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. Further, he suggests that it is plausible to hold that the relevant counter-factuals here are ones that *accompany* a traveller to Inverted Earth.³⁹ In short, Tye claims that when considering a traveller to Inverted Earth we should take it that the insertion of inverting lenses into their 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. As a traveller's experiences continue to represent the same things, so they continue to

³⁸Tye (1995a) p. 101.

³⁹Tye (1998) p. 472

have the same phenomenal character. This explains why the subject notices no difference as they stay on Inverted Earth. Tye says:

Intuitively, the lenses *deceive* the traveller (in Block's original version of the story) so that when he first arrives, he has false beliefs on the basis of the phenomenal character of his visual experiences. He believes that the clear sky is blue, when really it is yellow. Of course through time the traveller's beliefs adjust. But no matter how long he stays, it remains the case that the scientists from Inverted Earth have tampered with his visual transducers. Their operation is altered by the insertion of the lenses and, at no later time, is the system restored to its initial, natural state. The insertion of the lenses interferes with the operation of the sensory transducers. Accordingly, the transduction process is not in itself normal or optimal.⁴⁰

How is the present account supposed to avoid admitting that swampman has no conscious experiences, while allowing also that we can account for swampman travelling to Inverted Earth? Tye thinks, rightly, that he can avoid this problem. When swampman materialises on Earth, the optimal conditions are those in which he flourishes. We suppose that he gets on well on Earth as he is identical to some human person. This sets up optimal conditions in which his visual experiences track and thus represent colours. When this swampman now has inverting lenses inserted and goes to Inverted Earth, Tye says:

The insertion of the lenses *interferes* with the operations of the sensory transducers... This is true not just for me, where the insertion of the lenses prevents my visual transducers from functioning as they were designed to do, but also for my swamp duplicate. In his case, there is still outside interference. Of course Swamp Tye functions well after the interference in his new environment, but intuitively the lenses, considered in themselves, distort his colour experiences.⁴¹

⁴⁰Tye (1998) p. 472

⁴¹Tye (1998) pp. 472-473

So Tye claims that we can fix optimal conditions for swampman's visual system in his initial environment and then consider changes to those initial conditions as non-optimal. This seems like a good response to the swampman scenario.

I wish now to raise one problem for this response to the Inverted Earth hypothesis. It will focus on the human traveller to Inverted Earth and not swampman. The problem (again) concerns whether the traveller has privileged and authoritative access to his current experience.

When the subject travels to Inverted Earth, at first he has blue-representing and blue-feeling experiences when looking at the sky. At this time, he will say and believe that the sky is blue. If we ask him what his experience is like when looking at the sky, he will say that his experience is such that things look blue to him, and it seems reasonable to take this to be reflective of the knowledge he has of the nature of his 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 he is right about the nature of his experience which misrepresents the colour. Secondly, the typical way we express our knowledge of the phenomenal character of our experience (and therefore, if the representationalist is correct, the content of our experience) is to say how things appear or seem to us. Thirdly, Tye's account of introspection is that we know what our experience is like by applying phenomenal concepts to it. Phenomenal concepts are concepts such as 'shade of blue' that we can apply both when thinking about the nature of our experience and thinking about properties objects in the world possess.

Now consider the traveller forty years after he has been on Inverted Earth. Recall that Tye says in the quotation above that the traveller's beliefs will adjust. He means that the conceptual content of his beliefs will adjust to fall in line with those people on Inverted Earth. But consider the responses that the traveller will make to the same questions we asked before. He 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 by his present language community (and his present environment), then the traveller will mean and believe that the sky is yellow and that the sky looks yellow to him. This means that he believes the sky is yellow, which is correct, but he also now seems to believe that his experience is yellow-feeling and yellow-representing, if we take it that he can tell us about the nature of his experience by saying how things look to him. But he is wrong. We know that his experience is blue-feeling, because according to Tye it still represents blue. Thus, it appears that the traveller is mistaken about his current experience. According to Tye his experience is blue-representing and therefore blue-feeling, but the traveller will believe that it is yellow-feeling and yellow-representing.

One could respond to this point by claiming 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'. This would allow the traveller to have true beliefs about his experience after he has been there for some time. (It is true that the sky looks to him the way yellow things typically look to him.) But such a response would be inadequate given Tye's theory of representation. This is because after initial conditions for experiential representation are fixed, a person could move to an environment where there is no longer any one typical cause of their experiences that share a phenomenal character. According to Tye's theory of representation under discussion, your experience represents what it does and has the phenomenal character that it does whether or not there is one typical cause of it in the present, as these circumstances simply may no longer be the ideal or optimal circumstances. What the experience represents is only what would cause the experience and covary with it under optimal conditions established at some initial period of time. To illustrate this point, imagine that someone grew up on earth as we know it and was then transferred to a special room

where the colours of things changed all the time, but where this was compensated for (so that things looked not to be changing colour) by various different lenses placed in front of their eyes. If the person said 'my experience is such that things look red to me' and by this meant that their experience was such that it was typically caused by red things, they would be radically mistaken.⁴² It is false that red things typically cause that experience. If we reject this suggestion about what people mean when they express knowledge about their experiences, because it too leads to circumstances in which a person could be radically mistaken about their experiences (as I believe we should), then the conclusion that the traveller to Inverted Earth is radically mistaken about their experiences appears to hold good.

Is there another reply that a representationalist could give to the worry that the traveller to Inverted Earth is radically mistaken about their experience when they have been there for some time? 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 'shade of red'. Perhaps Tye could argue that concepts like these are not externally individuated by your present language community. So when the traveller (who has been on Inverted Earth for 40 years) expresses his belief about his experience by uttering the words, 'things look blue', perhaps he means things look blue and not things look yellow, as I assumed was correct (on the grounds that Tye himself says the content of his beliefs will alter).

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

⁴²We can specify conditions such that there is little doubt that the person still has beliefs about red when they have beliefs that they would express including using the word 'red' in this type of case. For example, the room could be on earth and not Inverted Earth and we could suppose that the person was still speaking to earth inhabitants by, for example, telephone.

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 red object.⁴³

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, for Tye clearly states 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.

One might now wonder whether Tye might not alter his position about colour concepts in general (and hence phenomenal concepts). Perhaps colour concepts are not externally individuated in the manner Tye suggests. Perhaps on Inverted Earth a traveller keeps believing that the sky is blue and that it looks blue. In other words, perhaps the content of their beliefs does not change after time on Inverted Earth with respect to what they believed on Earth. They are mistaken and remain mistaken on Inverted Earth about the colours of objects (as long as they wear the inverting lenses) but never about their experience. They do not come to use words the way the Inverted Earth inhabitants do.

This reply, however, conceals two independent factors that can still seem to pull in different directions in fixing the content of one's beliefs - one's *initial* language community, and the content of one's experience. If a change of language community cannot alter the contents of one's beliefs, does one's initial language community have any role to play? If the move to Inverted Earth along with the insertion of the lenses happened after initial ideal conditions for perception had been fixed on Earth without lenses, but before the person had learned to speak language or had been exposed to language or had a capacity for language, and if they learned Inverted Earth English on their arrival, what are we to make of their beliefs? They say the words 'the sky is blue and looks blue' and, according to Tye's account, their sky experiences represent blue

⁴³Tye (1995a) p. 167

and are blue-feeling. One might think that they are correct about the colour of the sky on Inverted Earth (that it is yellow) due to their apparent agreement with those on Inverted Earth, but this thought is put under strain because they have blue-representing and blue-feeling experiences. (This option is in any case unpalatable as it would mean the person was radically mistaken about their experiences, as was explained above.) On the other hand, the thought that they are right about their experiences and wrong about colours is put under stress because of their apparent agreement with those on Inverted Earth. (This option is unpalatable too, and for several reasons. Not only do we have to reject Burge's externalist considerations regarding how one's present language community use words, we have to reject these considerations wholesale, for they do not apply to one's initial language community. We also have reject externalist considerations concerning what one has causal contact with at the time one acquires language (and uses language) that would suggest that the person has correct beliefs about the objects in their environment. In short, unless we are prepared to reject, in quite a radical way, the traditional externalist conception of the meanings of words and the propositional attitudes, this option should also be rejected.⁴⁴)

Further discussion of the correct way to ascribe content to the propositional attitudes lies beyond the scope of this thesis. If we note that Tye and Dretske both seem keen to accept the traditional view - they accept that the contents of beliefs are determined by one's present and/or past linguistic community and one's environment - then Tye's response to Inverted Earth presently under discussion would commit him to holding that a person who had been on Inverted Earth for a long time would have false beliefs about the nature of their current experience.

⁴⁴We would have to reject it for all terms that correspond to what might feature in the content of experience.

4 - Conclusion

I have argued that representationalist accounts of Inverted Earth are unsatisfactory. The teleological account has the conclusion that there could be swamp-people that lack conscious experiences. This should be rejected as such a position invites radical skepticism about our own and others' minds.

I also outlined Tye's explanation of the Inverted Earth thought experiment that appeals to an externalist conception of memory. I argued firstly that it is unclear whether one could suppose that there is a complete change in the content of someone's experiences when they moved to Inverted Earth, on the grounds that they can still remember Earth; and I outlined problems one might have in conceiving the nature of phenomenal character in this 'partial content' case. I then showed that acceptance of Tye's position seemed to suggest, in light of the Morag thought experiment, that our access to and ability to notice changes in our current phenomenal character must be threatened. This is unpalatable, as it would seem to undermine the very idea that we can recognise and discriminate between our experiences at all.

Lastly, I considered another response which Tye holds to plausibly account for the Inverted Earth hypothesis - the counter-factual response. I argued that unless the representationalists give up their externalist account of the individuation of conceptual content, this response also has the consequence that subjects can be radically mistaken about their current mental states. Tye does not wish to countenance this conclusion and he is right that one should reject it.

Thus, none of the representationalist accounts of Inverted Earth should be accepted, as they all lead to unacceptable conclusions. This ends my investigation of the representationalist claim that all changes in phenomenal character are accompanied by changes in experiential representation and vice versa. I will discuss what relationship one should hold exists between content and phenomenal character in the light of the findings of this chapter and the previous ones, in chapter eight.

Before doing so, however, in the next chapter I will examine whether all aspects of phenomenal character are representational. If we can show this not to be so, it will place further strain on the representationalist claim that phenomenal character is identical with the content of experience.

Chapter 7 - Novel Colours

1 - Introduction

The central concern of this chapter is the representationalist claim that all features of phenomenal character are representational. I will firstly examine two examples of experiences put forward by other philosophers, which, they claim, show that not all features of phenomenal character are representational. These examples were briefly outlined in Chapter two:

- (1) After-images, phosphenes and swirling visual shapes seen after staring at the sun
- (2) Phenomenally impressive experiences such as pains or orgasm.

I will argue that these examples are not conclusive.

I will then present what I believe to be a good reason to think that there are some experiences which the representationalist cannot maintain have representational content that accounts for their phenomenal character. This will be followed by a discussion of the consequences of this conclusion.

2 - Afterimages, Phosphenes and Swirling Visual Experiences

I discussed these experiences in chapter 3, section 1. I claimed that representationalists can give a plausible account of what is represented in such experiences. This is because they can specify conditions of the world, the veridical perception of which would yield identical experiences of flashes and swirls. For example, such experiences could be produced in a darkened theatre showing psychedelic flashes and swirls on a cinema screen.

In response to this type of reply, Ned Block makes two points.¹ Firstly, he claims that there is no guarantee that one could produce conditions in the world that would give rise to experiences identical to phosphene experiences. Here it seems we reach deadlock. To remove it we would need to carry out an experiment to see if we could produce experiences identical to phosphene experiences by means of veridical perception. However, I see no reason in principle why experiences could not be produced by creating the right conditions in the world. There may be some doubt that they could, but this is highly speculative. Thus, the example proves to be inconclusive. We may, however, be able to draw some lesson from it by considering Block's second claim, namely:

phosphenes do serve to remind us that not all of visual experience is clearly and obviously diaphanous.²

Recall that one argument on behalf of representationalism was the argument from transparency to the conclusion that experiences have no introspectible features over and above their representational content. In other words, when introspecting one seems only to see objects and properties in the world before one's eyes. Block is claiming that since there is doubt about whether phosphenes could represent objects and properties in the world, there is doubt as to whether such experiences are transparent or diaphanous. If they were not transparent then attending to one's experience would not be just attending to the content of experience. If this were the case, some features of phenomenal character would not be representational.

What this seems to show is that we cannot tell, simply by introspecting our experience, whether we are aware of features of the world or features of our experience. If we could tell, then introspection should be able to yield a clear verdict in the case of phosphene-like experiences - but it does not.

¹Block (1996)

²Block (1996) p. 35

In conclusion, cases of phosphenes, flashes, swirls and other similar experiences prove inconclusive against the representationalist. They rest upon the intuition that there are features of these experience that are not representational, but this intuition is one that the representationalist can quite easily resist. Instead, the conclusion one should draw from this example is that introspection cannot by itself settle the question of whether phenomenal character is identical with the content of experience.

3 - Pain and Orgasm

In chapter 2, section 5.1 and chapter 3, section 1, I discussed pains and other sensational experiences. Recall that Block thinks that pains and orgasms have a "phenomenally impressive" nature which cannot be accounted for by representational content.³ Block holds that sensational experiences may have some representational content, for example, with regard to felt location, but that this does not suffice to account for all the phenomenal character of sensations.

Recall that Tye accounts for the phenomenal character of pains by claiming that they represent disorders or damage in certain locations in the body. These disorders can be more or less acute and can increase or decrease in intensity to various degrees over time. Tye gives a similar account of orgasms - they represent physical changes in the body:

In this case, one undergoes sensory representations of certain physical changes in the genital region. These changes quickly undulate in their intensity. Furthermore, they are highly pleasing, They elicit an immediate and strong positive reaction.⁴

In general, the representationalist claim about sensational experiences is that they represent states or changes in state of the body.⁵

³Block (1995a), (1995b) and (1996)

⁴Tye (1995a) p. 118

⁵Other philosophers (Dretske (1995) and Lycan (1996))who wish to maintain that phenomenal character is representational content allude to this kind of account of pain and bodily sensation but none elaborates on it. Thus, I will focus on Tye's account in Tye (1995a), (1995c) and (1996).

Let us agree, for the sake of argument, that sensations do represent changes in the body. The question raised by Block's challenge is whether this account can explain the highly pleasing aspect of orgasm or the highly unpleasant aspect of pain. What explanation is given of the intensesness or the 'phenomenally impressive' nature of these experiences as Block puts it? Prima facie the large difference between an experience of pain and an experience of the skin merely being touched is not captured by a difference in the content of the state one is in. This is especially so when one remembers that for a state to represent X is simply for it to causally covary with X in optimal conditions or to have the function of carrying information about X.

Although this is Block's challenge to the representationalists, and I believe one worth investigating, Block pushes this point in a misguided way. Rather than insist on an account of the difference between an itch and a pain in one subject (myself), he asks for an account of the difference between experiencing my own pain and having a visual experience of another's pain. He thinks both experiences will have virtually the same content (with only a slight difference in content regarding location), but he thinks that this small difference cannot account for the great phenomenal difference between experiencing your own pain and seeing another's pain.⁶ This is misguided because Tye and the other representationalists have a straightforward response to this.⁷ When I see you in pain, I have an experience which nonconceptually represents general observational features. But your pain is not nonconceptually represented in my experience as this is not a general observational feature. Instead, I form the conceptual belief that you are in pain based on my visual experiences. The two cases are therefore very different. When I am in pain I have a nonconceptual representation of damage to my body. When you are in pain, I have a conceptual belief that you are in pain.⁸ In one case I have a belief about pain, in the other I have an experience of

⁶Block (1996) pp. 33-34. In fact Block makes these points in terms of orgasm experiences, but this appears slightly gratuitous, when the same point can be made in respect of pains. Therefore I will stick to the example of pain when discussing this matter and when discussing Tye's reply to Block too.

⁷Tye (1996)

⁸Tye (1996) p. 54 says, "I do not experience an orgasm when I see that my partner is having one. Here I represent something about *her*; moreover, my representation is conceptual. I form the belief that she is having an orgasm on the basis of associated visual sensations. Feeling an orgasm, however, requires

pain. This appears to adequately account for the difference. What needs to be focused on to push Block's point about the 'phenomenally impressive' nature of some experiences is the difference between my sensations. Why should an itch be a 'mild' feeling, when a pain is 'strong' and exceedingly vivid one? Can a difference in content capture this difference?

Looking at the above quotation from Tye about the content of orgasm experiences, it seems as if we are to suppose that the experience of orgasm causes a further state in ourselves, namely, a 'strong positive reaction' to the experience. Similarly in the case of pain, to account for the *painfulness* of pain Tye says:

When it is said that a cut or a burn or a bruise is painful, or hurts, what is meant is (roughly) that it is *causing* a feeling, namely, the very feeling the person is undergoing, and that this feeling elicits an immediate dislike for itself together with anxiety about or concern for, the state of the bodily region where the disturbance feels located. Now pains do not themselves cause feelings that cause dislike: they *are* such feelings, at least in typical cases. So pains are not painful in the above sense. Still they are painful in a slightly weaker sense: they typically elicit the *cognitive* reactions described above.⁹

Therefore, according to Tye, a pain is a feeling that normally causes us to have a certain cognitive reaction to it - that of dislike. This is likely to give rise to other beliefs and desires, for example, the desire to avoid the stimulus.

However, there seems to be a certain ambiguity in Tye's account. It is not clear whether the nastiness or the phenomenal impressiveness of pain is attributed to the experience itself, or whether it is attributed in virtue of our subsequent cognitive reaction to the experience (the cognitive reaction of disliking and concern for the

the right sort of nonconceptual representation of the pertinent bodily changes, not conceptual representation of the generic state."

⁹Tye (1995a) p. 116

body). Could one undergo an experience that represented bodily damage (therefore a pain experience) and not dislike that experience on Tye's account?

Tye often stresses that pains, tickles and itches normally have a standard reactive component, in a way that suggests they might fail to have this effect on some occasions.¹⁰ Would pains fail to be painful if they did not cause their standard effect? We are not informed. Are there other indications in Tye's account? Sometimes Tye attributes the quality of *intenseness* to how much we like or dislike an experience:

itches cause in their owners reactions of dislike (less intense than for pains)¹¹

But at other times intenseness is a characteristic that is represented by experience itself:

In this case, one undergoes sensory representations of certain physical changes in the genital region. These changes quickly undulate in their intensity.¹²

So again it is not clear whether the 'phenomenally impressive' nature of some experiences occurs in virtue of the pain experiences themselves or the cognitive reactions which these experiences usually invoke.

Nonetheless, it is not clear that this is a large problem for Tye's account. One could imagine a representationalist claiming that there is an ambiguity in the phrase, 'phenomenally impressive'. A representationalist could supplement their account as follows: There are some experiences that we like and some we dislike to varying degrees - for example, the taste of chocolate, looking at blood, getting a big hug. That we like or dislike experiences such as these is due to a cognitive reaction directed towards these experiences. There are also some experiences that represent large

¹⁰Tye (1995a) pp. 114-117. He also suggests that sensory experiences are subject to top-down processing. That is, one's cognitive state can determine how much information about the body is represented, and thus can affect the pain one feels. But it is still in virtue of nonconceptual representational states that one undergoes experiences. Tye's account of top-down processing effects makes them irrelevant in this context.

¹¹Tye (1995a) p. 117

¹²Tye (1995a) p. 118

changes in the body - for example, pains, orgasms, high states of arousal (after exercise, when startled), etc. When we call an experience 'phenomenally impressive' we could be either referring to the fact that we take a cognitive stance of liking or disliking that experience to a high degree, or we could be referring to the fact that the experience is representing large changes in the body. The most noticeable 'phenomenally impressive' experiences are ones which exhibit both components - they both represent large changes in the body, and we tend to like or dislike them to a great extent.

This type of supplementation to the representationalist account appears to be the most feasible way to try to account for the 'phenomenally impressive' nature of some of our experiences. Does it do so adequately? It is hard to say. On the one hand, one is tempted to think, why should a state which causally covaries with or has the function of indicating large changes, give rise to any different *feelings* from one representing small changes? Why should having a state which represents one thing rather than another cause feelings of like or dislike? Moreover, what is it to like or dislike in these cases? Is it simply to have a desire to continue to be in that state or a desire to avoid being in that state? In other words, there are intuitions that may lead one to think the representationalist account does not fully account for the nature of experience. In opposition to this, however, one might think that a state which represents large changes in the body is likely to have more of an effect on the subject of that state than one representing small changes. As to the question of cognitive reactions to experiences, it is simply a matter of fact there are some experiences which we do like or dislike. This could be traced to the type of creatures we are, where we seek what we seek because it is good for our survival, or because of tastes we have cultivated. But this is a different area of investigation from the one at hand, and it is not clear one should be able to provide an account of this in order to account for the nature of experience. In short, there are intuitions to the effect that the representationalist account could be supplemented in the way I have indicated that would account for the 'phenomenally impressive' nature of experience.

In conclusion, the 'phenomenally impressive' nature of some of our experiences is not given enough attention by representationalists. I believe, however, that it is possible to supplement their account in the way I have indicated above. This gives some account of the difference between 'phenomenally impressive' experiences and those which are not. Whether it can account for all the differences between these experiences or not is unclear. One can imagine people having conflicting intuitions on this matter. Therefore, experiences of pains and orgasm prove to be an inconclusive case against the representationalist claim that all aspects of phenomenology are representational.

4 - Experiences of Novel Colours

I will now propose a counter-example to the representationalist claim that all phenomenal character is representational, based on experiences of novel colours reported by Crane and Piantanida. Firstly, because my proposed counter-example concerns colour experiences, I will explicate in more detail the representationalists' account of colour. Besides Tye and Dretske, Lycan and Byrne and Hilbert offer purely representationalist accounts of colour experiences.¹³ Secondly, I will describe the experiences of novel colours and how they are brought about. I will then explain why I think they constitute a counterexample to the theory. Next, I will consider some replies that a representationalist could make to my claim and show that they are inadequate. Lastly, I will reflect more generally on the results of Crane and Piantanida's experiment.

4.1 - The Representational Account of Colour Experiences

A subjective view of colour properties holds that there are a priori links between colour properties and colour experiences.¹⁴ For example, it is a priori that red objects have a disposition to look red. On this view it is part of the meaning of colour terms

¹³The most detailed accounts of colour experiences are to be found in Tye (1995a), Lycan (1996) and Byrne and Hilbert (1997a) and (1997b). My explication will draw mostly from these sources.

¹⁴Byrne and Hilbert (1997a) p. xxiii

that they are disposed to look a certain way to observers. The thought behind subjectivist accounts of colour is that while properties such as shape are intrinsic properties of objects that can be analysed without reference to perceivers of shape (as geometrical properties), colour properties have to be defined in part by their effects on subjects of experience. This conception of colour is supported, to a certain extent, by modern science, which has shown that it is unlikely that there is one physical property of objects that is responsible for their looking to have the colour that they do. In all likelihood objects that are the same colour exhibit highly complex disjunctions of physical properties. There are two prominent subjectivist views. Either a colour property, say red, is a disposition to look red to normal perceivers in standard conditions, or it is the categorical base of such a disposition.¹⁵

If it were correct, the subjectivist conception of colour properties would undermine the representationalist theory. 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.¹⁶

For example, a subjectivist view of colour would be as follows: experiences of red objects typically have a similar phenomenal character. Call experiences with this phenomenal character *E_r*. The property red is the property of objects which disposes them to produce *E_r* experiences (or is the categorical base of such a disposition). The problem arises because the representationalist holds that *E_r* experiences are to be

¹⁵Locke (1690) is often cited as holding the former main-stream dispositionalist view, while Jackson and Pargetter (1997) hold that colours are categorical bases of dispositions.

¹⁶Tye (1995a) p. 144. See also Dretske (1995) and Byrne and Hilbert (1997b).

analysed in terms of representation of the property red, 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 worry, the representationalists reject any view of colour that holds it to be a subjective property. Michael Tye, for example claims that:

the colours we see objects and surfaces to have are simply intrinsic, observer-independent properties of those objects and surfaces.¹⁷

Dretske, on the other hand, claims:

color is whatever property it is the function of colour vision to detect. The fact that so many different conditions cause us to experience red does not show that what we experience when we experience red is not an objective property. It only shows that which property it is may no longer be obvious from the variety of conditions that cause us to experience it.¹⁸

The obvious candidates for objective colour properties are the physical properties of objects that science tells us are relevant in colour vision.¹⁹ A central tenet of objective physicalist accounts of colour is that colours are identical with certain physical features of objects and colour perception consists in the detection of these properties. To find out what property all red objects have in common, objective physicalists will normally rely on the judgements of many standard perceivers and specified good conditions to pick out red objects. Once the red objects are selected,

¹⁷Tye (1995a) p. 145

¹⁸Dretske, (1995) p. 93

¹⁹Because the representationalists are naturalists they adopt this physicalist line. It is possible to be an objectivist, but hold that colour properties are objective nonphysical properties of objects, but I will not consider this view here. James Cornman (1975) adopts this objectivist nonphysicalist line. It is outlined in Hardin (1988) pp. 60-61. The main problem with this view is that either such properties are causally connected to the physical and have physical effects, in which case one should be able to test for such properties by physical means and add them to one's physical theory. Or if they are not connected then either they are epiphenomena, or cause only mental (non-physical) effects. The first option appears to render them physical, the second seems non-naturalistic and is unattractive.

they look to see what physical property they have in common. William Lycan exemplifies this strategy for identifying physical colour properties. He claims:

my idea is to take as given (1) standard human visual physiology, (2) normal viewing conditions understood in Shepard's way or something like it, and (3) subjects' verbal judgements about the colours of objects. Together, these three factors should in principle yield a reference-fixing triangulation of any given Armstrongian colour property.²⁰

Although colour properties are picked out in this way, it is held that there are no a priori links between colour properties and colour experiences or judgements. 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 red experiences) 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"²¹. Similarly, in this context, 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 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.²²

Colour words such as 'red' are held to rigidly designate physical properties of objects that are identified with colour properties. Colour words refer to those physical colour

²⁰Lycan (1996) p. 74. By an Armstrongian colour property, he means an objective physical colour property that bears contingent, a posteriori links to experience (see main text below). Shepard's normal viewing conditions are specified in evolutionary and ecological terms, roughly, those that existed on the earth's surface when colour vision was evolving.

²¹Armstrong (1997) p. 45, fn. 13

²²Lycan (1996) pp. 73-74

properties even in a possible world where those properties bear no relationship to human (or to any) perceivers. Colour properties have only contingent, a posteriori links to our colour judgements and experiences. This is required in order to provide a noncircular account of colour experience.

It is generally accepted by most physicalists that the physical properties identified with the colours will not form natural kinds or genuine universals. The properties in question are likely to be highly disjunctive micro-physical properties. Many representationalists do not hazard a guess at what properties the colour properties will in fact be, but of those that do, the consensus is that colour properties will turn out to be types of surface spectral reflectances (SSRs) of objects. An SSR is specified by the percentage of light the object reflects for every wavelength in the visible spectrum.²³

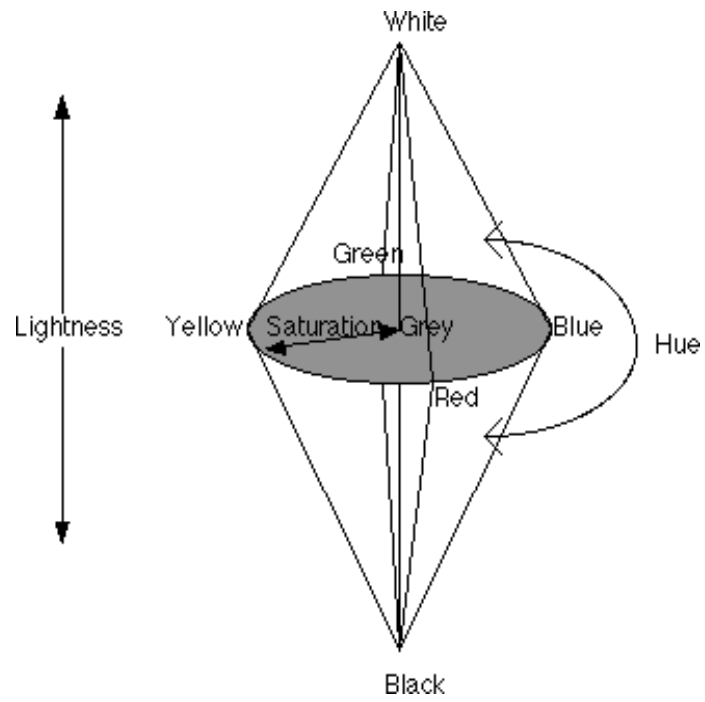
If we call the objective physical property identified with the colour red Pr, then the representationalist will provide the following account of experiences that have the phenomenal character associated with seeming to see red things: all and only such experiences represent Pr.

4.2 - Experiences of Novel Colours

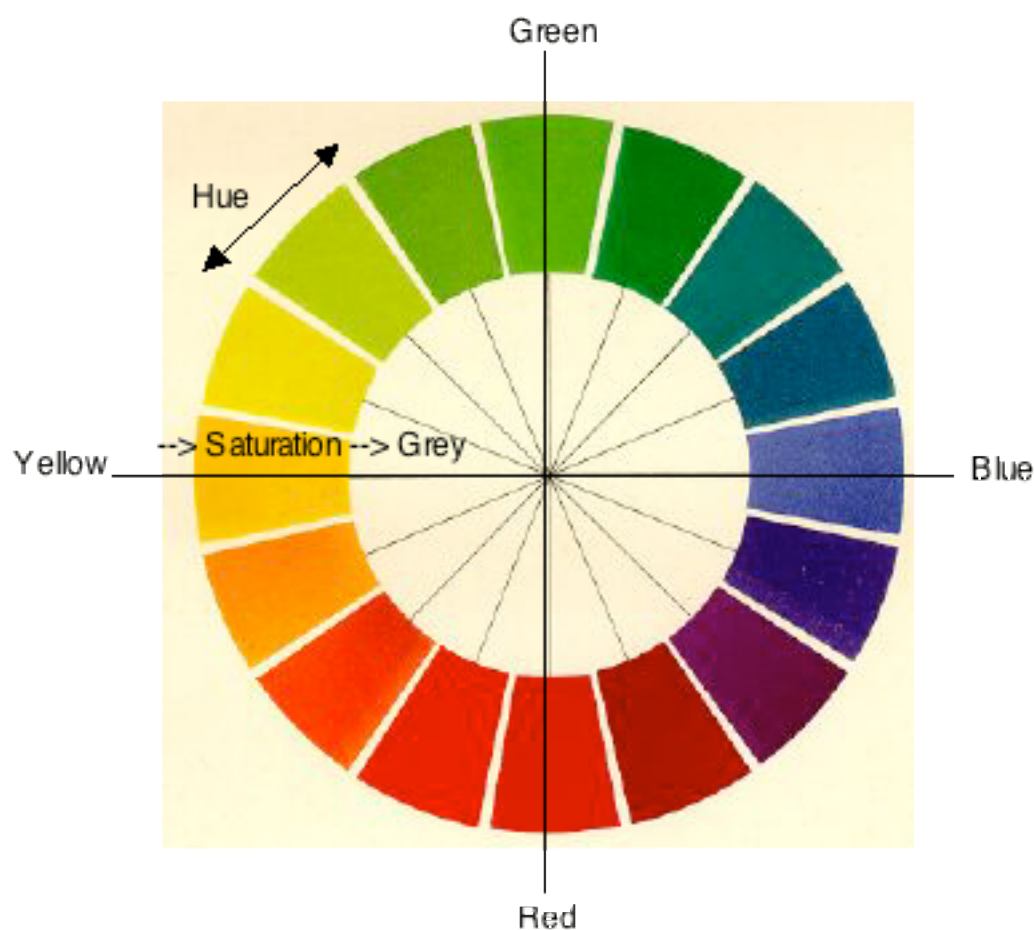
I now want to introduce to you the experiment that was carried out by Crane and Piantanida, in which they reported that people claimed to see colours that they had never seen before. To understand the experiment fully, I will describe one other experiment to you first, together with some modern colour theory.

We can consider colours in terms of their location in a space of relations known as the colour space. Such spaces are constructed in virtue of the resemblances that are noted between colours. There are many geometrical representations of the relations that compose the colour space which are not incompatible. The most well-known one is the colour sphere, and it reflects some well-established views on the relations between the colours.

²³Tye, and Byrne and Hilbert put forward this suggestion, the others do not.



All colours on the same horizontal plane have the same lightness or brightness. The central disk shown here can be represented two dimensionally thus:



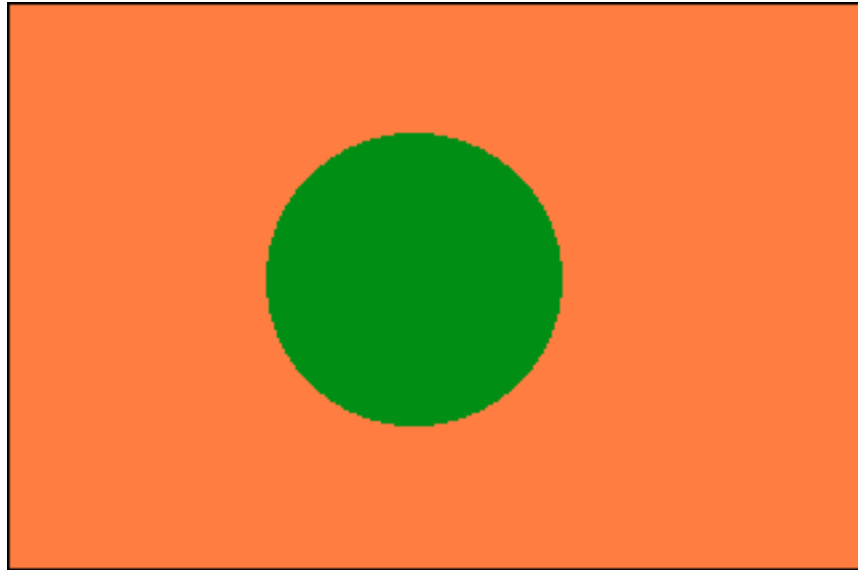
The properties of this disk, and the colour sphere in general, have been quite successfully explained by reference to the details of the physiology of our visual system. There are four chromatic detectors working as opponent processors in the brain - a red-green detector and a yellow-blue detector. Detection of red is at the expense of detection of green light and detection of blue, at the expense of yellow. This appears to explain why we do not perceive reddish-green colours and yellowish-blue colours. This is also why red and green appear diametrically opposed on the above colour disk.

Opponent processor theory also helps to explain the difference between unique and binary colours. The unique colours are red, green, yellow and blue. They are said to be unique because it is possible for there to be shades of these colours that do not look as if they contain any other colours. For example, there are shades of red that look neither yellowish nor bluish. All the other colours are binary and always look to

be a mixture of other colours. Orange, for example, always looks reddish and yellowish; purple looks reddish and bluish. Opponent processor theory helps to explain this because when we see the unique colours, only one opponent processor need register something. When we see a binary colour such as orange, both the red and yellow opponent processors have to be excited.

With this background in place, I will now consider a preliminary experiment that will help us to understand the following one. Normally the colours we see objects as having depends to a large extent on the wavelengths of light emitted from those objects. In some situations, however, the colour perceived does not in any way so correspond. It has been noted by many psychologists that an image that is stabilised on the retina fades from view, and the brain then 'fills in' the faded region according to the surrounding unstabilised area.²⁴ The psychologist Krauskopf, for example, stabilised a green disk on subjects' retinas. This disk was surrounded by an unstabilised orange area. At first the subjects reported seeing a green disk on an orange background, but within several seconds they reported that the green disk faded from view to be replaced by a uniformly orange surface. When retinal cells receive no change in the information that they detect, they cease to respond. The device used to stabilise an image on the retina is called an eye-tracker. It is important to note that what gets 'filled in' depends on the area surrounding the stabilised area. A similar, but not quite so prominent, effect can be seen by fixating one's eyes in the centre of a green disk on an orange background. After a time, the green disk fades from view and is 'filled in' with orange.

²⁴See for example, J. Krauskopf (1963) and A. L. Yarbus (1967)



Crane and Piantanida decided to carry out a filling-in experiment. They presented subjects with joining red and green stripes, as below. They ensured that the boundary between the two colours was stabilised on the subjects' retinas (the area indicated by hatched markings below), while the outer portions of the areas of colour were not stabilised.



The thought behind the experiment was that the area that was to be 'filled in' was surrounded not by one colour, but by two opposing colours, therefore providing conflicting information to the brain when it tried to 'fill in' the area corresponding to

the stabilised part of the image. Observers of the image reported different things that they saw in the stabilised area, which fell into the following three categories:

- (1) The entire field was covered in a regular array of very small (just resolvable) red and green dots;
- (2) The field contained either islands of red on a green background or vice versa;
- (3) The field contained a novel hue that subjects reported never having seen before.

The experiment was repeated with blue and yellow areas, with corresponding results.

The response that is of interest to us is the third one. Here is a quote from Crane and Piantanida, which describes that response further:

some observers indicated that although they were aware that what they were viewing was a color (that is, the field was not achromatic), they were unable to name or describe the color. One of these observers was an artist with a large color vocabulary.²⁵

Other observers of the novel hues described the first stimulus as a reddish-green, and the second as a yellowish-blue.

Such results appear in conflict with the opponent-processor model of colour vision, which predicts that one cannot have experiences of reddish-greens because when responding to redness, one is simultaneously responding negatively to green. However, Crane and Piantanida speculate that the opponent-processor model applies only in cases where the retina is stimulated by light and not to the filling-in phenomenon, where the retina is not stimulated. They think that the filling in phenomenon results from purely cortical activity unrestrained by lower-level retinal-cortical processes that display opponency. In other words, experiences of colour

²⁵Crane and Piantanida (1983) p. 1079

produced by the filling in phenomenon are not restricted to opponent channels and can thus appear reddish-green or yellowish-blue.

4.3 - Why Reddish-Green is a Counter-Example to Representationalism

If one can have experiences of novel hues such as reddish-green, these threaten the representationalists' account of phenomenal character. To explain why, consider again the accounts of red and of experiences of red that the representationalists would give. Experiences with the phenomenal character typically associated with redness represent that objective physical property which red objects share. But how does one go about determining whether there is such a property, or what property that is? Recall that the first step was to identify red objects with reference to normal perceivers in standard conditions. The second step was to identify the physical property that all those objects had in common.

Turning now to try to give the same account of reddish-green experiences, one faces an immediate difficulty. There are no reddish-green objects that can be identified by normal perceivers in standard conditions. Experiences of reddish-green are illusory. The stimulus used to produce reddish-green experiences is half red and half green. One can make it look reddish-green using an eye-tracker, but the stimulus remains half red and half green. Moreover, we know that because our visual system detects colours on the opponent-processor model, there could be no object in our world that looked reddish-green, whatever combination of physical properties it had, unless we viewed it in non-standard conditions. Our best judgements yield the conclusion that there are no reddish-green objects. If there are no reddish-green objects, then how can we be assured that reddish-green is an objective physical property that experiences can represent?

It would be tempting at this point to admit that experiences of reddish-green are counter-examples to the representationalists' theory. One might hold that reddish-green is a subjective property because no objects are reddish-green. Alternatively, one

might hold that experiences of reddish-green do not represent anything, on the grounds that there is no such colour property. Thus, in order to defend their position and provide an account of the phenomenal character of reddish-green experiences, representationalists have to come up with a plausible account of what objective property experiences of reddish-green represent. It is my contention that there is no plausible candidate. I will try to show this by considering what I hope to be an exhaustive list of prima facie plausible candidates, and show why none of them is acceptable.

4.4 - 1st Reply - There is a Reddish-Green Objective Property

One response the representationalist might give is to claim that although standard perceivers in standard conditions would never judge an object to be reddish-green, this does not mean that there are no reddish-green objects. The representationalist might hold this on the grounds that colour properties are perceiver-independent, and constitute colour properties regardless of whether anyone ever judges them to be so. (This would be in line with the objective physicalism about colours that they must endorse.) The idea would be that there is a physical property identical with reddish-green, despite the fact that this property does not normally cause us to have experiences of reddish-green.

I think that this attempt to evade the problem of reddish-green experiences will not work. A preliminary problem for this account is that it is not clear what would in fact motivate a choice of colour properties if we do not rely on our judgements, for the physical properties associated with colour are highly disjunctive. David Hilbert, a physicalist, backs this conclusion also:

Since colour is a property that is typically discussed only in the context of the interactions of human beings and other kinds of living things with their environment we cannot look to the physical sciences to help us motivate the identification of a

property with colour. If there were no living organisms there would be little need to talk of colour in describing and explaining what goes on.²⁶

This actual problem is not decisive, however, for colour science might one day reveal that objects possess certain properties that affect how they reflect light, and these properties could fall into certain natural groupings. If that came about, perhaps one might identify colours with those properties, irrespective of their bearing any strong relations to our colour judgements.²⁷

So, say that, for whatever reason, an objective physicalist identified reddish-green with the physical property P. Could our experiences of reddish-green not represent P? The answer is that they could not, given the accounts of representation that are held by the representationalists. Recall Dretske's account first. An experience E will represent that P if and only if it has the function of providing information about P, which it has gained from its evolutionary history. Because the human colour detection system evolved as an opponent system, there is good reason to think that humans could not and did not detect P until a way of by-passing the opponent channels was invented. If reddish-green experiences were first had in the 1980s, and can be produced only with equipment invented in the last forty years, it would be exceedingly implausible to think that evolution had selected this experience for some adaptive advantage. However, Dretske allows that some experiences may have implicit functions in virtue of being part of a system, some of whose states have been given functions by evolution. The example Dretske uses to illustrate this is that if we put a 12 on a clock face, all the other hand positions now acquire an implicit function to indicate the time. Perhaps normal colour experiences have explicit functions to

²⁶Hilbert (1992) pp. 358-359

²⁷Note that if such a strategy were adopted to account for colours (and reddish-green in particular) it could turn out that some of our colour judgements are fundamentally mistaken. It could turn out that some objects, which in ideal conditions we judge to be pink, could turn out to be reddish-green. Alternatively, it could turn out that some objects have two colours - they are both pink and reddish-green. Although this may be seen by some to be an unattractive and unintuitive consequence of this view, an objective physicalist could embrace such a possibility. I do not wish to reject representationalism on the grounds that it must hold an objective physicalist view of colour. My argumentative strategy here is not to reject objective physicalism, but instead to show that if it were true and combined with representationalism, not all experiences can be accounted for by representationalism.

represent and this novel colour experience gains an implicit function in virtue of being part of this system.

To reply, I draw on an argument put forward by William Seager.²⁸ He argues that to show that a state has an implicit function, one must show that the state does not just accidentally provide information. For example, imagine a speedometer built to represent speeds between 20 and 40 miles per hour. If the pointer positions at 20 and 40 miles per hour are marked then the pointer positions in between will have implicit functions to represent speeds in between. Imagine that this same speedometer is not designed to provide information about speeds below 20 miles per hour and that the pointer jumps around erratically until 20 miles per hour is reached. Nonetheless, suppose that an accidental feature of this speedometer is that there is a position where the pointer points when and only when the speed is 10 miles per hour. Seager argues that obviously the speedometer does not have the function of indicating 10 miles per hour - it is a mere accident. In the case of experiential representation, he urges that one should be able to explain the evolutionary advantage of having such an implicit representation. I would argue that it is an accidental feature of the colour perceptual system that reddish-green experiences provide information about a physical property (if indeed they do²⁹). There seems no evolutionary story to tell about the selective advantage of being able to detect reddish-green only when wearing an eye-tracker.

Now consider Tye's account. He claims that an experience will represent P, if and only if it is caused by and covaries with P, in optimal conditions. We know that reddish-green experiences may be caused by and covary with P when wearing an eye-tracker, but they do not do so otherwise. Because these conditions are not the optimal conditions for viewing colour (Krauskopf's experiment outlined above shows that

²⁸Seager (1999) p. 158

²⁹It is not clear that such experiences do carry information about a property on the grounds that, unlike the speedometer indicating 10 miles an hour in the example, the novel experience does not reliably indicate the presence of P because P can occur without the relevant experience occurring if you are not wearing an eye-tracker.

wearing an eye-tracker is positively detrimental to viewing colour), the idea that reddish-green experiences represent property P looks, *prima facie*, suspect.

Perhaps a representationalist might reply that we should not think of reddish-green as a colour property, or at least as a normal colour property. Thus, perhaps optimal conditions for viewing reddish-green should not be taken to be those for viewing ordinary colours. Say that a representationalist held that reddish-green experiences represented some property P of a stimulus that was half red and half green. Many properties of objects can only be seen under peculiar conditions. For example, some aspects of the surface structure of a material may only be seen under a microscope. Optimal conditions for viewing these properties will be those in which the object is magnified. The representationalist could hold that when wearing an eye-tracker, one is in optimal conditions for seeing reddish-green, and in these circumstances one's experience would be caused by and covary with P.

There are two related responses to this suggestion. The first is to question whether wearing an eye-tracker really is the optimal condition for seeing reddish-green. Not all people saw reddish-green under these circumstances, therefore it is plausible that there is no optimal condition. The second response is that the optimal conditions specified here are *ad hoc*. They are chosen only to account for this particular experience. In order to view very small things we need to magnify them. This is not *ad hoc* because it applies to anything small. Moreover, we can explain why we don't normally see small things because of the eye's limited resolution. Thus, one can build these specific viewing conditions into the general optimal viewing conditions for objects and properties. For example, optimal conditions for seeing must be such that what is seen must reflect a sufficiently large area of light onto the retina. This would also explain why some properties of large objects at a distance are not seen. If optimal conditions for seeing reddish-green are too specific and *especial* and cannot be related to general requirements for seeing, then the charge - that optimal conditions for seeing reddish-green are simply gerrymandered - sticks. To explain what reddish-

green experiences represent, the representationalist should not rely solely on the existence of that experience to provide conditions for representation. Some independent grip of optimal conditions is required, and I believe this cannot be had.

Thus, one should not hold that there are reddish-green objects in our world, the physical properties of which can be represented in experience. However, this conclusion appears to suggest another defence that the representationalist might adopt. Perhaps they could claim that although there are no reddish-green objects, this is a contingent fact. Perhaps it is possible that there could be reddish-green objects, and perhaps what our experiences represent are the physical properties that such objects would have. I will now consider just this proposal.

4.5 - Are Reddish-Green Objects Possible Objects?

Could there be another possible world in which objects were reddish-green?

Two reasons for thinking that there could be spring to mind. The first is that we can imagine a planet where there are creatures with a different physiology from ours. If their visual system did not work using opponent processors, then perhaps some objects would look reddish-green to them. A second reason is that we could imagine a planet where there are different laws of physics. Perhaps in this world, there are reddish-green looking objects because things look coloured in virtue of very different physical properties from our world.

Unfortunately for the representationalist, possible worlds cannot be invoked to explain what reddish-green experiences represent. This is because, on an objective physicalist theory, once we have singled out the physical properties which in our world are responsible for colour, those physical properties are the colour properties in all possible worlds. Words for colours, such as 'red', are taken to rigidly refer to those physical properties, so that in other possible worlds, the judgements of any perceiver is irrelevant to the identity of the colours. It is crucial to the objectivity of the theory

that colour words rigidly refer in this way and that the logical independence of colour properties from colour experiences is maintained.

This interpretation of objective physicalism is backed up by C. L. Hardin. He says that objective physical properties identified with colour properties,

would constitute the colours in a possible world in which they did not bear the causal relationships to human perceptual systems that they bear in the actual world. Those who take this point of view are thus, in our present sense of the term, *objectivists*.³⁰

The same would hold for any sentient creature. Byrne and Hilbert, who are physicalists, suggest that in a world with a very different physics from our own, the best description of objects in that world is that they merely look coloured.³¹

To summarise, for an objective physicalist the judgement that an object looks reddish-green made in any possible world is irrelevant to establishing the physical identity of reddish-green. Thus, the representationalist cannot appeal to other possible worlds to establish what reddish-green experiences represent.

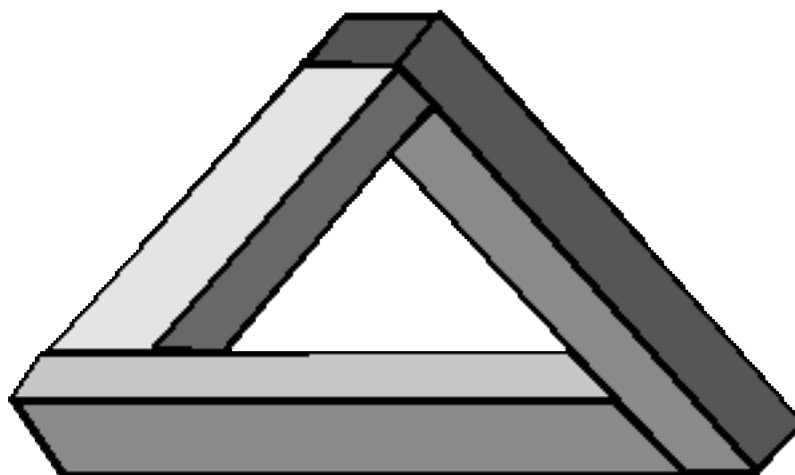
4.6 - Reddish-Green Experiences as Representations of Red and Green

Let us now turn to consider a different position that the representationalist might hold. One might claim that reddish-green experiences in some sense represent that both the properties red and green inhere in an object. How might one interpret such a claim?

One way that it might be taken is as the claim that the object is represented to be both red and green all over at the same time. It might be thought that an object could be represented as being red all over and green all over at the same time, despite the fact that no object could be so. This thought could be backed up by noting that experiences can represent physical impossibilities. Pictures of impossible objects might be thought to yield such experiences.

³⁰Hardin (1988) p. 65

³¹Byrne and Hilbert (1997b) p. 282, fn. 8



This attempt to account for reddish-green experiences fails to account for subjects' reports of the phenomenology of their experiences. Subjects do not report that they see the stabilised area as being both red and green at the same time. What they report is a novel binary colour that looks similar to both red and green. Consider the following description by Crane and Piantanida:

The appearance of the field can best be described by using an analogy to colors that can be perceived under normal viewing conditions. An observer viewing a field composed of an additive mixture of red and blue light such that the proportion of red and blue light varies across the field - from strongly red on the left side of the field to strongly blue at the right side of the field - might describe the field as lavender near the blue edge, purple in the middle and magenta near the red edge ... This analogy is a good description of the field seen by those observers who describe the stabilized field as simultaneously red and green, although greener near the unstabilized green boundary and redder near the unstabilized red boundary.³²

Thus, subjects describe their experience as similar to other binary colours and this is supported by their reports of the variation of hue across the stabilised region.

³²Crane and Piantanida (1983) p. 1079

An ordinary binary colour, such as orange, is not a combination of two properties, namely yellow and red. No self-respecting representationalist takes orange experiences to represent red and yellow. Here, for example, is what Byrne and Hilbert say:

Take orange. We say it is a binary colour because it is, or appears to be, a mixture of red and yellow. But what does that mean? Is orange a combination of the two properties red and yellow? No: a "combination" of two properties A and B is presumably the property A&B (if it's not that, then what?). Everything that has the property *red&yellow* is red, but (many) orange objects are not red.³³

If reddish-green is seen as a binary colour, as the evidence suggests, then it is implausible to suggest that reddish-green experiences represent that surface as being both red and green.

Perhaps, one might read the claim that reddish-green experiences represent that both red and green inhere in an object slightly differently. To help us here, consider what accounts representationalists give of why binary colours look similar to two unique colours. There are two such accounts. Michael Tye suggests that the binary distinction can be accounted for simply as a truth about colour mixing. Orange is the colour one gets when one mixes red and yellow pigment, but red is not obtained from mixing purple and yellow.³⁴ Unfortunately, not all truths about the binaries can be accounted for in this way. Green can be obtained from a mixture of yellow and blue pigment, but green is not a binary colour.

Byrne and Hilbert's account is more interesting. Firstly, they distinguish between colours and hues. A particular uniformly coloured object will look to have a certain colour, say red, but it will also look to be a determinate hue of red, say red₂₁. Hues stand to colours as determinates to determinable, and thus as pigeons stand to birds and birds to animals. They claim an experience of red₂₁ will represent both the hue

³³Byrne and Hilbert (1997b) p. 280

³⁴Tye (1995a) p. 148. Byrne and Hilbert (1997b) point out its deficiencies.

red₂₁ and the colour red. They also claim that properties such as 'reddishness' can be represented in experience. This is the property of being either red-or-orange-or-purple. Experiences of orange objects will represent both the properties reddishness and yellowishness, while experiences of red will represent only reddishness.

Could we adapt this account for reddish-green experiences? Do they represent the properties reddishness and greenishness? Well, suppose that they do. This, however, does not solve the problem. According to Byrne and Hilbert, an experience of a particular shade of red, say, red₂₁ will represent: red₂₁, red, and reddishness. Similarly, an experience of a particular shade of orange, say, orange₄₅ will represent: orange₄₅, orange, reddishness, and yellowishness. What of a reddish-green experience? It may represent reddishness and greenishness, but we have not yet found determinates for the particular hues that these experiences represent. We need to find such determinates, because the experiences of reddish-green varied from more reddish, to less reddish. The experience consisted in particular hues of reddish-green. All we have succeeded in doing is explaining the binary nature of reddish-green. We have not yet found properties that experiences of particular reddish-green hues represent.

Note also that one cannot say that a particular reddish-green experience represents forty percent reddishness and sixty percent greenishness. Reddishness and greenishness are physical properties. Reddishness is that physical property that objects that are red-or-orange-or-purple share. Such properties are an all-or-nothing affair. For the same reason that an object cannot be forty percent square or represented to be forty percent square, an object cannot have forty percent reddishness. Thus, one cannot fully account for particular reddish-green hues by claiming that they in some sense represent both reddishness and greenishness.

4.7 - Considerations Regarding the Experiment and Possibilities

I have tried to show that no plausible candidate can be found for what objective physical property reddish-green experiences represent. I have argued that there are no reddish-green objects in this world. Moreover, even if a representationalist claimed that there is a property in this world which is identical with reddish-green, they cannot make a good case for holding that reddish-green experiences represent that property. I have also shown that considerations of possible worlds are irrelevant in establishing the physical identity of colour if one is an objectivist. Lastly, I considered trying to account for reddish-green experiences by holding that in some sense they represented both red and green. I argued that such attempts fail. I therefore believe that experiences of reddish-green constitute a counter-example to representationalism.

Faced with this counter-example a representationalist could do one of two things. They may continue to try to find a property that reddish-green experiences represent. I hope to have made plausible the case for thinking this cannot be done. Secondly, a representationalist might directly question Crane and Piantanida's results. It should be noted that Crane and Piantanida's experiment has been carried out only once. Although it was reported in Science, a well respected journal, the representationalist might argue that they do not have to take the results of such an experiment seriously until the results are repeated. Moreover, not all subjects of the experiment reported having a novel experience. On these grounds some representationalists might dispute the experimental paradigm and the reports of its subjects.

These concerns about the experiment in question appear reasonably grounded; however, I do not believe that they ultimately undermine the force of the example. To explain why, I will firstly address the question of whether it is reasonable to conclude that if subjects undergo a novel experience as in the experiment, the experience is a

novel experience of colour. Secondly, I will address some more general worries concerning the experiment.

Three contemporary authors discuss novel colours, namely, Hardin, Thompson and Westphal.³⁵ They are primarily concerned with the question of whether alleged experiences of novel colours could be considered to be experiences of *colours*. Both Thompson and Westphal are subjectivists, that is, they define colours by reference to the experiences of subjects. Yet, interestingly, these two subjectivists disagree as to whether experiences of reddish-green are experiences of colour. Evan Thompson argues that they are experiences of colour, while Jonathan Westphal argues that they are not. (Hardin is an eliminativist about colour properties, but broadly agrees with Thompson that reddish-green experiences are colour experiences.)

Both parties in this debate are agreed on what would decide whether a novel experience was an experience of colour. Recall the colour space that represented the resemblance relations among the colours as experienced. It is difficult to know which of these relations are necessary or essential to the colours being the colours that they are. Hardin, for example, says that the number of just noticeable differences between unique red and unique yellow are not essential to them, but that there is some path of hue resemblance between them might be thought to be necessary.³⁶ Similarly, that orange lies between yellow and red might be thought to be essential to orange being orange. Another necessary proposition might be that all saturated colours must have a hue and a lightness.³⁷ What the two sides in the debate are agreed upon is that if a purported novel hue really is a colour, then it must find a place in colour space. Thus, if a novel experience is a novel experience of colour, there must be a resemblance between the novel experience and other experiences of colour, and this resemblance must be of the kind that non-novel colour experiences bear to each other.

³⁵Hardin (1988), Thompson (1995), Westphal (1987)

³⁶Hardin (1988) pp. 126-127

³⁷See Thompson (1995) pp. 269-271. Note that it was often thought to be necessary that red and green were mutually exclusive colours. Crane and Piantanida's experiment casts doubt on this.

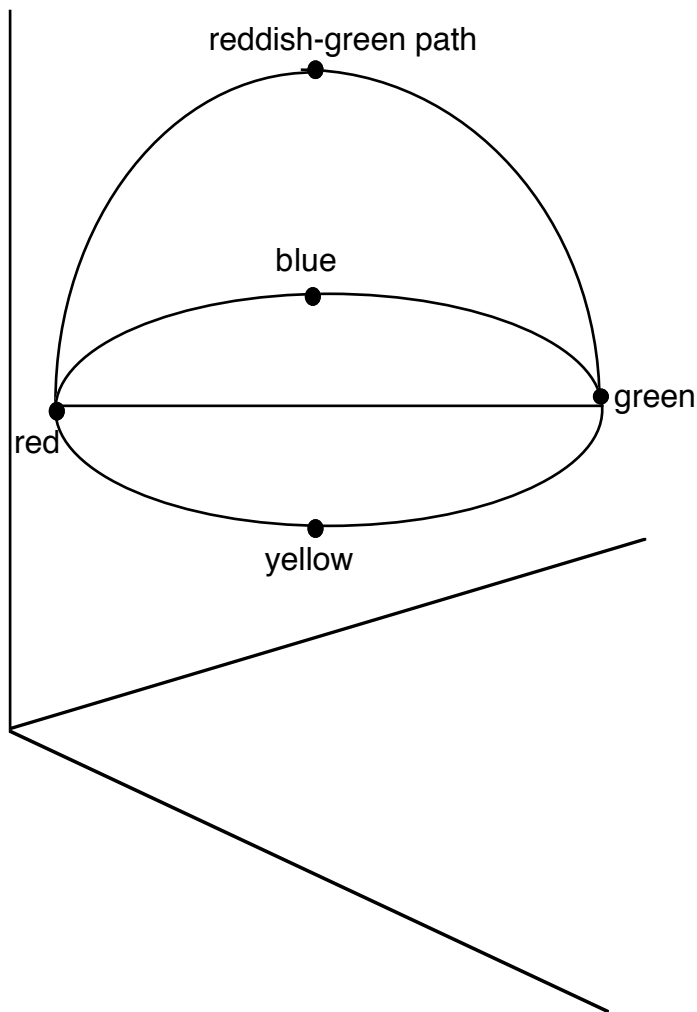
Westphal claims that any alleged novel hue could not find a place in our colour space and thus that there can be no novel colours:

It is possible ... to show that the insertion of a fictitious colour into our three dimensional colour space will disrupt the order and prevent us from conceiving some other colour or group of colours in the space, independently of the explanation of this fact in the generative basis of the space. For colours and the similarity colour space are inseparable. The positions of the colours on the hue circuit, for example, are determined by the positions of their intermediaries and vice versa, and these together determine the geometry of the space.³⁸

In response to this, Thompson argues that while no other colours could be inserted into the familiar three-dimensional colour space, they could be fitted into a four-dimensional colour space that contained the three-dimensional space. Four dimensions is hard to think about and illustrate. The following diagram represents the two-dimensional colour wheel and an added third chromatic dimension (therefore suppose that lightness lies in the unrepresented fourth dimension), and illustrates the kind of extension that must be envisioned by Thompson.³⁹

³⁸Westphal (1987) pp. 100-101

³⁹Note that in this diagram colours at opposite ends of an axis are no longer to be considered to be mutually exclusive.



Settling the issue between Thompson and Westphal would entail deciding whether extensions to the colour geometry such as this are permissible. I can think of no good reason why an extension like the one suggested, which encompasses the original geometry and leaves its internal relations intact, should not be permitted. If our experience is really a colour experience, then this would suggest that colours, or not all colours, are physical properties of objects, and, that they must, at least in part, be defined by reference to the phenomenal characters of the experiences that are associated with them.

In any case, even if the novel experiences are not colour experiences, the question of what property is represented by the experiences still remains for the representationalist. The novel experiences elicited in Crane and Piantanida's experiment seemed to represent some property of the surfaces of objects. Whether

this property is a colour property or not, for the representationalist to give an account of it, it must still be specified in objective terms (to prevent circularity) and, given that it is a property of the surfaces of objects, it should also be specified in physicalist terms (given the naturalism of the representationalists)⁴⁰. Thus the arguments against the representationalist given in sections 4.4 and 4.5 above still hold. Whether we classify this experience as one of colour or not is irrelevant to the experience providing a counter-example to representationalism.

Turning now to a potentially more worrying criticism of this counter-example, a representationalist could dispute Crane and Piantanida's experimental paradigm or the reports of the subjects with a view to claiming that a novel experience was not elicited at all. There are anecdotal reports that raise the question of whether a genuinely novel experience was had at all.⁴¹ If the experimental result proved false, would the representationalists still have a case to answer?

I think the answer is clearly yes. The reason is that Crane and Piantanida's experiment shows that there is a metaphysical possibility that we could elicit a novel experience in a subject, by by-passing the normal way that sensory or experiential information is processed in the brain. Consider again Crane and Piantanida's explanation of why novel experiences could be elicited by the eye-tracker. They held that normal colour experiences are subject to opponent channels, while filling-in involves high-level cortical processes not subject to opponency. It seems clearly possible that a creature could have developed a visual system that did work on opponent processes at lower levels and that this could be by-passed in some way (perhaps by direct stimulation of the brain at higher-levels) to elicit a novel

⁴⁰Could representationalists claim that what was represented by reddish-green experiences was not a physical property of objects, but a particular brain state? After all, eliminativists claim that there are no colours because they believe there are no properties of objects which account for our experiences of colour. This, however, sits badly with the representationalists' claim that visual experiences deliver information about (represent) the *environment*, rather than brain states themselves. Brain states would be being misrepresented in a location in front of the subject. Moreover it would be a difficult task to explain why brain states are seemingly not represented as *brain states*, rather than as apparent surface features of objects.

⁴¹See Hardin (1988) p. xxix

experience. Indeed, it appears feasible that there could be a number of different possible ways the brain could work, which would allow for eliciting novel experiences of the kind imagined here. Further, it is quite possible that these experiences do not represent anything in the creature's environment as they do not, and could not, stand to any property in any of the required relations that a naturalistic representationalist specifies as necessary for representation. Therefore, even if Crane and Piantanida's experimental results proved unfounded, they nonetheless seem to illustrate the metaphysical possibility of such experiences. If what is described is a genuine possibility then it undermines the representationalists' claim that necessarily phenomenal character is identical with the content of experience and that all experiences are representational.

With regard to this point, note the following comment that Tye makes regarding the possibility of what empirical research might show:

if further empirical research suggests that there are phenomenally identical states that do not causally covary with a single feature in optimal conditions, the conclusion I should draw is either that there is some further, higher-level feature, as yet undiscovered, that is common to the putatively different cases and that does covary appropriately covary or that PANIC theory is false.⁴²

Tye makes this comment while considering whether empirical research could show that different occurrences of experiences with the same phenomenal character covary with different features. While we are not considering a case of this type here, we are considering whether empirical research suggests that one type of experience might not covary with any feature at all, or have the function of indicating a feature. I hope to have made this case very plausible indeed. If Crane and Piantanida's experimental results are true then we have an actual case of this. If they are not true, then their experiment shows that such a state is a metaphysical possibility. Thus, I hold that the case of novel colours is a counter-example to representationalism.

⁴²Tye (1995a) p. 228, fn. 4

Chapter 8 - Phenomenal Character, Content and Consciousness

1 - Introduction

In the previous three chapters I have been examining reasons to doubt the identification of representational content, as it is conceived by the particular representationalists I have been discussing, with the phenomenal character of experience. I argued that some ambiguous figures show that two experiences can have the same content but different phenomenal characters. The case of Inverted Earth showed that the claim that differences in content of experiences will always be accompanied by differences in the phenomenal character of those experiences should also be rejected, as it entails either that there could be philosophical zombies or that people can be radically mistaken about their experiences. Experiences of novel colours appear to show that for some experiences there may be no representational content to account for their phenomenology. Given these considerations I believe that we should reject the claim that phenomenal character is identical with nonconceptual representational content which is specified by teleological or causal covariation theories.

In this chapter, I want to do two things. Firstly, I will consider in light of these findings the relationship between phenomenal character and the type of content that the representationalists espouse. Secondly, I will examine the further representationalist claim that their theory can explain why some states with content are conscious states.

2 - The Relationship Between Content and Phenomenology

Despite the findings in the previous chapters, one should recognise that there are close links between phenomenal character and the kind of content I have been supposing experiences to have. One might be tempted to think that my conclusions so

far entail that there is no longer any relationship between content and phenomenal character; but this is not true, as I hope to show.

2.1 - Initial Considerations: Inversions and Experiences that Lack Content

The representationalist arguments about the relationship between phenomenal character and content make a good case for holding that in many cases, but not all, experiences with different phenomenal characters will have different contents, and experiences with different contents will have different phenomenal characters. One can be more precise about the relationship between content and phenomenal character by considering in turn the cases in which this relationship breaks down. Therefore, I will start by considering the following proposal, and proceed to modify it by a series of steps which draw on the conclusions from the previous chapters.

P1: All differences in the phenomenal character of experiences are accompanied by, or indicative of, differences in the content of experience, and all differences in the content of experiences are accompanied by, or indicative of, differences in the phenomenal character of those experiences.

I will begin by considering why this principle should be rejected in light of my discussion of Inverted Earth.

Rejection of the teleological representationalist theory relied on rejecting the consequences that would follow from adherence to it, namely, the possibility of swamp people or philosophical zombies. If one rejects the teleological theory's *identification* of states with phenomenal character with states that have been selected for carrying information, one might nonetheless hold that states which antecedently have phenomenal character can be selected for by evolutionary process to have the function of indicating features of the world, and hence can become states with representational content. In this case, it would seem possible for evolution to select states with different phenomenal characters to have the same function to indicate in different populations or different segments of populations of creatures. Therefore,

experiences with different phenomenal characters could have the same representational content. Similarly, it would seem that evolution could select states that have the same phenomenal characters to have different functions to indicate in different groups or families of creatures.

This kind of position receives support from some people's intuitions on how evolutionary selection works. For example, Seager asks us to consider the following scenario. Imagine that a person is born with a gene mutation that allows them to discriminate the presence of a chemical when it is placed on their tongue. Call this chemical PTU.¹ Suppose that this ability contributes positively towards this person's survival. Seager claims that a teleological representationalist who holds that all states with phenomenal character are states that have a function to indicate the presence of something, cannot hold that the person so described flourishes because they can taste PTU. For according to teleological representationalists the person cannot have an experience of PTU (therefore taste PTU) until their state gains the function of indicating PTU. Seager claims that this model violates our intuition that having experiences of new things or consciously discriminating new qualities such as PTU can and does account for the enhancement of our survival. Seager says:

Suppose we endorse some kind of bio-functional theory of representation... It seems to follow that consciousness of new sounds, smells or colours, or the ability consciously to discriminate more finely among sounds, smells or colours cannot be what accounts for evolutionary advantage. It is rather the reverse - evolutionary advantage accounts for the consciousness of new sensory features. On the face of it, this seems backwards.²

Normally, I think we would say that survival was enhanced by the fact that those receiving the mutated gene could *taste* PTU... It is natural to suppose that it is

¹In fact PTU (phenylthiourea) is a chemical which only about two thirds of the population can taste and discriminate its presence. The ability to do so is thought to be linked to the presence or absence of a single dominant allele. See Seager (1999) p. 158

²Seager (1999) p. 160

because we come to be able to taste new tastes that our taste-systems can fulfil new functions (discriminatory or otherwise).³

Hence, I believe that the idea that evolution selects states that have phenomenal character, as opposed to the idea that a state acquires a phenomenal character in virtue of evolutionary processes selecting for that state, seems an intuitively attractive position. If we hold this model of the relationship between phenomenal character and content then it would appear possible for two creatures (at least ones that belong to different populations or segments of populations subject to different evolutionary forces) to have experiences with the same phenomenal character but different contents, and vice versa.

By holding this new model of the relationship between content and phenomenal character we can modify our original principle in the following manner to account for interpersonal differences that may exist between different people or different creatures:

P2: Within one individual, all differences in the phenomenal character of experiences are accompanied by, or indicative of, differences in the content of experience, and all differences in the content of experiences are accompanied by, or indicative of, differences in the phenomenal character of those experiences.

We can modify this principle again on account of the further conjecture of the new model, namely, that it is possible for a person to have experiences that lack content because experiences of that type have not yet been selected for by evolution, as they are have only just become possible on account of a new genetic modification. Indeed, on the new model, it would seem reasonable to suppose that there may be some aspects of the phenomenal characters of our experience that have been in existence for a long time which have never been selected for. Perhaps our experiences have

³Seager (1999) pp. 159-160

these nonrepresentational aspects of phenomenal character because they are accidental correlates of some feature that has been selected for by evolution. (A radical, and possibly actual, version of this thought was explored in detail in the chapter on novel colours.) The further modification would yield the following principle:

P3: Within one individual, all differences in the content of experiences are accompanied by or indicative of differences in the phenomenal character of those experiences, and within one individual, for those experiences that have content, it will be true that all differences in the phenomenal character of experiences are accompanied by, or indicative of, differences in the content of experience.

Now let us turn to consider the causal covariation theory of content. Rejection of the causal covariation view relied on rejecting the consequence that it was possible for people to be radically mistaken about the nature of their current mental states. I argued that one should respect the principle that people have first-person authoritative knowledge of the phenomenal character of their current mental states. More specifically, I argued that changes in the phenomenal character of experiences should be noticeable by a person who has those experiences. Further, *if one identifies content and phenomenal character*, then a person should be able to have true beliefs and knowledge concerning the phenomenal character and hence the content of the experiences they are undergoing (assuming they have the capacity to have the appropriate beliefs).⁴ Subscribing to the principle that people have first-person authoritative knowledge of their mental states is not meant to imply that someone always does have knowledge about their mental states. For example, if they are distracted, they might not realise that their headache had disappeared. Nor should this

⁴If one rejects this identification, then the question of whether one has knowledge of the content of one's current experience becomes much more complex. Whether one holds that one has knowledge of the content is complex and depends on what one believes determines the content of the propositional attitudes, and on one's intuitions about Inverted Earth. In addition, the question of whether knowledge of the phenomenal character of our experiences is propositional knowledge or expressible in public language may become pertinent.

principle be taken to imply that someone could never be wrong about their mental states, if they were not paying sufficient attention, for example, or were temporarily confused, and so on. The principle implies that if one's attention is properly focused and one is not confused in some relevant way, then one cannot be radically mistaken about the phenomenal character of one's own mental states.⁵

Recall that there were two versions of the causal covariation theory that were discussed in the chapter on spectrum inversion. One account was that ideal conditions for representation were fixed at the time when a person first started to have the relevant experiences. (It was held there that optimal conditions were established when the first covariations occurred between one's experiences and objects and properties in the world. This was what I called the counter-factual version of the causal covariation theory.) On such an account, the experiences of a person who went to Inverted Earth when wearing lenses would always misrepresent the colours. In this respect, the theory is similar to the teleological theory which has this same consequence. The other causal covariation account was such that the experiences of one person, individuated by their physical description as vehicles of content, could change their representational content in certain circumstances. (Recall that one suggestion that Tye made was that after enough time had been spent on Inverted Earth, the contents of the typical experiences one had that were caused by a particular colour would alter. This suggestion relies on interpreting the causal covariation theory to be one where the optimal conditions for representation depend on the present and recent past environment of the subject of those states.) If one accepted such a view of content, but rejected the representationalist supposition that phenomenal character and content were identical, then it seems reasonable to think that when a person goes to Inverted Earth with inverting lenses in their eyes, the phenomenal character of their typical experiences had in response to a particular colour remains the same, but

⁵Of course, it is open to a defender of representationalism to argue that a traveller to Inverted Earth is confused about the meanings of words, but I dealt with this particular objection in chapter 6 by suggesting that slow switching and ascriptions of 'partial content' brought their own problems for the representationalist.

slowly the content of those experiences changes. Thus, one could hold that a person's experiences, individuated by their phenomenal character, could come to have a different contents from that which they had previously. If one favoured this view then one would have to reject principle P3, on the grounds that differences in content will not necessarily always be accompanied by differences in phenomenal character for all the experiences of one person. (Note that one could accept all the modifications to P1, culminating in P3, on the grounds that one person could be spectrum inverted relative to another person, and that experiences of novel colours show that some experiences have no representational content at all. On this theory, though, a further modification to P3 is required for the reason just stated.)

What modification to P3 could be made that would account for inversions being possible within the experiences of one person? One can see that if someone underwent a spectrum inversion there would still be a period of time before the inversion and a period of time after the inversion when differences in the phenomenal character of their experiences would be accompanied by differences in content and vice versa. This is because according to the theory of content under consideration, a state must have established some pattern of tracking in order to represent. For example, in elucidating this version of the causal covariation theory, Tye says:

What a state normally tracks can be understood to be what it usually tracks after sufficiently deep embedding in a given socio-environmental setting. If, for example, I move to a new community and through time come to defer to experts in the community with respect to whether items fall within the extensions of terms I use, then, according to many externalists, the concepts I express by those terms will come to mirror those of others in the community. Likewise, the experiences I undergo will change their contents as they come to be causally correlated, in the new setting, with different worldly items and give rise to behaviour appropriate to them.⁶

⁶Tye (1998) p. 462

Therefore, it is consistent with holding that there can be content/phenomenal character inversions of this type that one nonetheless subscribe to the following principle:

P4: For the experiences of one individual over some period of time t , all differences in the content of experiences are accompanied by, or indicative of, differences in the phenomenal character of those experiences, and within one individual, for those experiences that have content, it will be true for the period of time t that all differences in the phenomenal character of experiences are accompanied by, or indicative of, differences in the content of experience.

For the sake of argument, I will take principle P4 to specify the relationship between content and phenomenal character (in light of the considerations that I have discussed this far). I do this because I do not wish to express an opinion as to which theory of content I favour. I choose P4 simply because it expresses a weaker relationship between content and phenomenal character than P3. It is weaker because it allows that the experiences of one subject, which share a particular phenomenal character, can change their content over that person's lifetime.

Principle P4 resulted from modifications to the idea that content and phenomenal character were strictly correlated, due to considerations from novel colours and from the Inverted Earth thought experiment. In the next section, I will consider how one should modify P4 in light of the ambiguous figures that proved to be problematic for the representationalist.

2.2 - Further Considerations: Ambiguous Figures

Principle P4 has to be modified if we accept the results of the chapter on ambiguous figures, namely, that there can be two experiences that have different phenomenal characters but the same contents. In particular, it is the second half of the principle that has to be rejected. Is there any thing that can be put in its place? We can note that

within a given time period, even if *different* phenomenal characters can be indicative of the same content, experiences with the *same* phenomenal character will, nonetheless, still be indicative of the same content (supposing, of course, that they do have content). This yields the following modification of P4:

P5: For the experiences of one individual over some period of time *t*, all differences in the content of experiences are accompanied by, or indicative of, differences in the phenomenal character of those experiences, and within one individual, for those experiences that have content, it will be true for the period of time *t* that experiences that have the same phenomenal character will have the same content.

Principle P5 can be restated in a slightly more elegant formulation thus:

P5': For the experiences of one individual over some period of time *t*, all differences in the content of experiences are accompanied by, or indicative of, differences in the phenomenal character of those experiences, and experiences that have the same phenomenal character will either all have no content or all have the same content.

Note that P5 and P5' express a supervenience relation between phenomenal character and content. Supervenience is a relationship between two sets of properties, say, A and B. The A properties are said to supervene on the B properties if no two things could be alike with respect to B properties and different with respect to A properties, or if there can be no change in the A properties of a thing without there being changes in the B properties. We can see that for the experiences of an individual within some time period *t*, no two experiences could be alike with respect to their phenomenal character without being alike with respect to their content, and that there can be no change in the content of an experience without there being a change in the phenomenal character. Thus, the content of experience will supervene of the phenomenal character of experience within some time period *t*.

Given this result, a reasonable conclusion would be that, rather than phenomenal character being identical with the content of experience as the representationalist would have it, phenomenal character is, or rather can be, the vehicle for the content of experience. Recall from chapter two that vehicles of content are the properties of a state that, in part, enable it to have the content that it does. The vehicle of content may not alone allow it to have the content that it does, because there may be features external to the state that are required in order for the state to have the content that it does. Such features may include the context or the environment in which the vehicle of representation is tokened.

In the next section I will compare and contrast the idea that phenomenal character is the vehicle for content, with the representationalist view that it is identical with the content. I will argue that there is a prima facie problem for the representationalist view. In later sections, I will then go on to consider how the representationalist accounts for that prima facie problem and whether it is a viable approach. Finally, I will discuss further the view that phenomenal character is the vehicle for content.

3 - Consciousness

3.1 - The Problem

Aside from the arguments that have been the focus of this thesis so far, are there any reasons to prefer the view that phenomenal character is the vehicle for experiential content, over the view that they are identical? I think the answer is yes. To make my point, however, a note on terminology is required.

Recall that the representationalists hold that when one is undergoing an experience, one is in a conscious state. To say this is not to say that one is conscious *of* that state. To be conscious of that state would be to have introspective awareness or consciousness of that state, which is to have a belief about that state according to the representationalists. Now when one is undergoing a conscious state, either the subject of that state is aware of some feature of the world, or in the case of an illusion or

hallucination, the subject seems to be aware of some feature of the world. We can capture this thought by saying that when a subject undergoes an experience, the subject is conscious of, or aware of, what their experience represents. (In line with Dretske, I will take 'conscious of' and 'aware of' to be synonymous in this context.⁷)

These thoughts are expressed by Dretske thus:

states are conscious (I have alleged) not because the creature in whom they occur is conscious of them (this may or may not be so), but because they make this creature conscious of something. They make one conscious of whatever properties the representation is a representation of and, if there is such, whatever objects (bearing C to the representation) these properties are properties of. That, if you will, is the representational theory of consciousness.⁸

One should also note that the representationalists hold that being conscious *of* what one's experience represents, is to be distinguished from being conscious *that* such and such a feature seems to be present. The latter involves forming beliefs pertaining to the content of one's experience, which, the representationalists claim, one need not do in order to have a conscious experience. Again, the following quotation from Dretske is illustrative:

one can be aware of an F (see or smell an F) without thereby being aware that it is an F - without, therefore, being aware that one is aware of an F. One can be aware of (hear) the sound of a French horn without being aware that that is what it is... Hearing a French horn is being conscious *of* a French horn - not necessarily that it is a French horn.⁹

To return now to the question of whether it is preferable to think of phenomenal character as the vehicle of content or as identical with the content, an initial thought which one might have is that, while one can understand how one could be aware of

⁷See Dretske (1995) p. 98

⁸Dretske (1995) p. 104. 'C' is specified simply to be a contextual relation which obtains between an object and an experience when an experience is veridical.

⁹Dretske (1995) P. 99

what one's experience represents if one was aware of the vehicle of that representation, it is not clear how one can understand how one could be aware of what one's experience represents, if one was not aware of any vehicle.

One can elaborate on this worry by considering how one comes to be aware of or conscious of what non-mental states represent. In the case of natural indicators, one becomes aware of the wind speed by being aware of the angle of smoke, or one becomes aware of the age of a tree by being aware of the number of rings in the trunk. One becomes aware of what is represented by being aware of the vehicles for the representation. Similarly, I am aware of what pictures and words represent, only by being aware of features of the pictures and the words - the colours and lines of pictures and the sounds of the words or their shape on the page.

According to the representationalists, experiential representation is identical with some types of natural indicator representation. The problem, then, is to understand how one could be aware of what one's experience represents, without being aware of the vehicle of that representation (the vehicle of the content). On the view I am recommending, where phenomenal character is the vehicle of experiential content, we at least have models - in the natural indicator and pictorial and linguistic representations - for how we could become aware of what such states represent, namely, by being aware of the vehicles of representation.

This sentiment is echoed by Seager thus:

According to the theory, there is nothing mysterious about the way that brain states represent - they get to be representations in fundamentally the same way that speedometers or bee-dances do... However, the combination of ideas that brain states are 'normal' representations and that we are aware of what these states represent is deeply mysterious. For it is obviously true that we come to know what a particular

normal representation represents by being aware of (some of) the non-representational properties of that representation.¹⁰

A similar worry, namely, that it is problematic to understand how nonconceptual content could be content available to, or for, the subject of experience is raised by Hamlyn and McDowell. Rather than being concerned about whether one has to be aware of the vehicles of content to be aware of what one's experience represents, they focus directly on the worry that it is not clear how nonconceptual content could be conscious at all. They think that nonconceptual content can be ascribed to states on theoretical grounds, but that this content is never accessible to the subject of those states. (This is why McDowell thinks that ascription of nonconceptual content should only be to subpersonal states and not experiences.) In particular, this is taken to be the case when a theory of nonconceptual content is given which likens experiential content to the information carried by natural indicators. Consider the following quotes by Hamlyn and McDowell respectively:

if it be said that the idea of information so invoked indicates that there is a sense in which the processes of stimulation can be said to have content, but a nonconceptual content (Evans, 1982, chs 5 and 6; Peacocke 1983, ch. 1), distinct from the content provided by the subsumption of what is perceived under concepts, it must be emphasised that that content is not one *for* the perceiver. What the information-processing story provides is, at best, a more adequate categorization than previously available of the causal processes involved. That may be important but more should not be claimed for it than there is.¹¹

it is hard to see how cognitive psychology could get along without attributing content to internal states and occurrences in a way that is not constrained by the conceptual capacities, if any, of the creatures whose lives it tries to make intelligible. But it is a recipe for trouble if we blur the distinction between the respectable theoretical role

¹⁰Seager (1999) p. 175

¹¹Hamlyn (1994) p. 462

that non-conceptual content has in cognitive psychology, on the one hand, and, on the other, the notion of content that belongs with the capacities exercised in active self-conscious thinking - as if the contentfulness of our thoughts and conscious experiences could be understood as a welling-up to the surface of some of the content that a good psychological theory would attribute to goings-on in our cognitive machinery.¹²

In chapter two I explained why I thought it was reasonable to think that conceptual content could not account for all aspects of the phenomenal character of experience and that nonconceptual content looked to be a more plausible candidate. One could accept this point, but still take some part of McDowell's and Hamlyn's worry here seriously. In other words, one could think that it is problematic to conceive of how nonconceptual content, of the kind specified by teleological or causal covariation theories, could be available to, or could become conscious to, a subject of a state with that content, while still maintaining that phenomenal character should not be conceived of as a (perhaps wholly) conceptual phenomenon. The way to do this is to think that the nature of phenomenal character cannot be captured by conceptual phenomena, but also to think that it cannot be identical to the experiential content posited by the representationalists.

The most intuitive way to bring out what I take to be Hamlyn's and McDowell's worry is to consider how one could be aware of what one's experience represents, if to be so aware is just to be in a state that causally covaries with what is represented in optimal conditions. Similarly, how could one be aware of what one's experience represents, if to be so aware is just to be in a state that evolution has selected to indicate the presence of what is represented? It does seem reasonable to doubt how this could be possible.

¹²McDowell (1994) p. 55

3.2 - The Representationalist Solution

The obvious place that one should look for an answer to the problem of how one can be conscious of what one's experience represents, is to the representationalist accounts of what it is that makes some states in the brain, which have representational content, conscious states. That is, one should look to their account of what differentiates representational states in the brain that are experiences from those that are not.

Both Tye and Dretske hold that those representational states that bear a particular relationship to the cognitive system of a subject are experiences. Those that do not bear this relation are not experiences. Their accounts of this relationship are similar in many respects, although not all.

According to Dretske, experiences are representational states that have the function of interacting with the cognitive system to produce beliefs and desires that will have an effect on motor controls and the behaviour of the subject of those states. Dretske says:

Experiences are those natural representations_s that service the construction of representations_a, representations_s that can be calibrated (by learning) to more effectively service an organism's needs and desires. They are the states whose functions it is to supply information to a cognitive system for calibration and use in the control and regulation of behaviour.¹³

Dretske stresses that these representations need not, on every occasion, have an impact on the cognitive system, but that they must have the function to do so.

Tye holds that experiences are representations which are outputs from the sensory modules which stand poised to serve as inputs into the cognitive system. Tye says:

¹³Dretske (1995) p. 19. The subscripts 's' and 'a' indicate systemic and acquired representations, as explained previously in chapter two section 6.

The claim that the contents relevant to phenomenal character must be poised is to be understood as requiring that these contents attach to the (fundamentally) map-like output representations of the relevant sensory modules and stand ready and in position to make a direct impact on the belief/desire system. To say that the contents stand ready in this way is not to say that they always do have such an impact. The idea is rather that they supply the inputs for certain cognitive processes whose job it is to produce beliefs (or desires) directly from the appropriate nonconceptual representations, *if* attention is properly focused and the appropriate concepts are possessed. So, attentional deficits can preclude belief formation as can conceptual deficiencies.¹⁴

Thus, Dretske's and Tye's accounts are similar because they require experiences to bear some relationship to the cognitive system. Tye's requirement, that the experience is poised to interact with the cognitive system, is similar to Dretske's claim, that the experience has the function of interacting with the cognitive system in a specified way, because both allow that an experience may not actually interact with the cognitive system, but the experience must either be poised, or have the function of doing so.

One might think that this type of account looks promising because one thinks that all and only experiences bear this sort of relation to the cognitive system. Moreover, one might think that it explains how one can be aware of what one's experience represents precisely because it requires the content of experience to stand in some relationship to the cognitive system of the subject whose states they are.

In the next two sections I will consider whether this response is adequate by considering the following questions in turn:

- (1) Are all and only experiences representational states that interact with the cognitive system in the manner that the representationalists suppose?

¹⁴Tye (1995a) p. 138

- (2) Even if the contents of all and only experiences are poised to interact, or have the function of interacting, with the cognitive system, does this explain why the subject of such states can be conscious of what their experience represents, that is, be the subject of a conscious experience?

3.3 - Experiences and the Cognitive System: Dissociation Phenomena

One might simply answer the question whether all and only experiences are representational states that are poised to interact, or have the function of interacting, with the cognitive system in the negative, on the grounds that, as I have argued, not all experiences have content. But rather than take this simple line, I wish to consider what answer should be given to the question even if we assume all experiences have content. The reason I wish to do this is to show that it is problematic to hold that content, as the representationalists conceive it, could be available to the subject of a state with that content, (that is, that a subject could be conscious of what their experience represents).

The major problem with the representationalist claim that all states with the appropriate content which are either poised to interact, or have the function of interacting, with the cognitive system are experiences, is that the claim does not seem specific enough to assess properly. To illustrate this, I will describe a variety of psychological phenomena that have been studied by psychologists and neurophysiologists and show how they might be thought to be problematic for the representationalist theory.

There is a large variety of psychological deficits where it seems that what a subject is aware of is dissociated from what the subject can discriminate. Lawrence Weiskrantz reports that:

in every area of cognitive neuropsychology there are preserved capacities of which the patients remain unaware. These range from perception and attention, meaning,

long-term memory, and language, and within each of these categories there are several different varieties.¹⁵

Cases of a perceptual nature will be of interest to us in the present context. This is because, *prima facie*, these are cases where a subject is unaware of anything and therefore is not having experiences yet, in some way, perceptual information is actually reaching and interacting with their cognitive systems. The worry for the representationalist is that here there appear to be cases of subjects who have states with the appropriate content, which do interact with the cognitive system, but which are not experiences.

The most well-known of such phenomena is called blindsight.¹⁶ Subjects with blindsight report that they are blind in a portion of their visual field and, for the most part, this is borne out by their behaviour. If objects are presented to fall on their blind field and a subject is then asked what is before them, they will report that nothing is before them and that they cannot see. Moreover, if they are thirsty, they will not reach out for a glass of water, so presented. These patients are known to have suffered lesions or damage to the primary visual cortex area V1. However, if these subjects are asked to guess at what is before them, and given a forced-choice paradigm (that is, asked to guess whether A rather than B is before them), their guesses are surprisingly accurate, and in some cases exceedingly close to the performance achieved in the non-blind field. Yet the subjects are incredulous about their own performance - they thought they were merely randomly guessing and that their guesses would have the same results as flipping a coin would. It is now known that

taken together, subjects with V1 damage have been reported who are able, in their blind hemifields, to detect the presence of stimuli, to locate them in space, to discriminate direction of movement, to discriminate the orientation of lines, to be able to judge whether stimuli in the blind hemifield match or mismatch those in the

¹⁵Weiskrantz (1997) p. 228

¹⁶There are parallel cases in other sense modalities, such as 'blind touch' and 'deaf hearing'. See Weiskrantz (1997) pp. 23-24.

intact hemifield, and to discriminate between different wavelengths of light, that is, to tell colours apart¹⁷

There is another group of patients who also have damage to the V1 area of the visual cortex. These patients also claim to be blind in a portion of their visual field. While blindsight subjects demonstrate that visual information is preserved without them being aware of it by guessing tasks (either verbal or behavioural in a forced choice paradigm), these subjects can demonstrate that visual information is preserved *only* by carrying out some gross physical actions appropriate to the object presented in their blind field. Weiskrantz reports Milner and Goodale's experiment on this type of subject, who is said to have 'fractionated' perception, as follows:

[the] hemianopic patient could not make perceptual judgements of the orientation of a slot verbally or by manual matching when the slot was projected to his blind hemifield - he performed at chance in this mode. However, when asked to place a card in an open slot, like a mail-box with its aperture skewed to different test orientations, the subject could perform reliably above chance.¹⁸

Milner and Goodale argue that there is a sharp distinction between what they term 'perception for making explicit judgements' and 'perception for action'. Perception for action they argue is not accompanied by acknowledged awareness, while that for judgements is.

When a blindsight subject, or one with fractionated perception, has an object presented to them in their blind field, it is reasonable to think that they are in some brain state that has content of the kind representationalists suppose experiences to have. Weiskrantz notes that in normal subjects, the optic nerve is connected to area V1 by the majority of neural pathways leading from the optic nerve. However, there

¹⁷Weiskrantz (1997) p. 23. Descriptions of blindsight subjects are to be found throughout the book but see especially chapter one.

¹⁸Weiskrantz (1997) p. 138. The experiment was carried out by Milner and Goodale and reported in Milner and Goodale (1995). A hemianoptic patient is defined as one who is blind in one half of their visual field.

are nine other parallel target areas in the brain to which the optic nerve connects. He claims that in blindsight patients, although information never reaches V1, it can reach the other target areas. It seems to me that, plausibly, states of these other nine target areas do causally covary with objects or properties in the subject's environment and equally plausibly, that such states indicate the presence of objects and properties and have been selected to do so by evolution. Furthermore, it might be plausible to speculate that these states have some impact on the cognitive system. They cause the blindsight subjects to give accurate guesses and they cause the subjects with fractionated perception to reach out and act in the correct manner. If this is a correct description of these subjects and it is true that the subjects are not undergoing conscious experiences, then we should reject the representationalist claim that it is interaction, poisedness for interaction, or having the function of interacting with the cognitive system which tells apart experiences from nonexperiential states.

The representationalist could resist this description of these subjects in many ways. One way would be to claim that while the subjects are having conscious experiences, they fail to have introspective awareness of them, which is why they report being blind. I believe, however, that this reply commits the representationalist to the supposition that someone could be radically mistaken about the nature of their experience. For the subjects don't simply fail to notice their experience, say, due to lack of attention. They can pay all their attention to introspecting and consistently judge that they are blind and having no visual experiences. In this respect, blindsight and fractional perception can be contrasted with the condition known as unilateral visual neglect. Subjects with this condition routinely fail to notice things that are presented to lie in one half of their visual field (either the right or the left). This can lead them to incorrectly judge two objects to be the same, when the objects are similar on one side and different on the other. Similarly, these subjects often describe only one half of their visual field and fail to notice that they have described only one half. But in certain circumstances, the idea that they were mistaken about their experiences merely due to inattention can be made plausible. These subjects can have

their attention drawn to the other half of their visual field and come to notice what they did not previously, although it may be exceedingly difficult to draw their attention to it.¹⁹ Thus, although subjects with unilateral visual neglect can make gross errors about their experience, they can come to realise that they are mistaken. We also have evidence to suggest that in their case it is merely lack of attention (although this has serious consequences for the subject) which explains why they are wrong about their experience. This is because their lack of attention pertains not only to present visual stimuli. Subjects with unilateral neglect will describe one half of a familiar visual scene when asked to *imagine* the scene from one view point and describe the other half when asked to describe the scene from a different view point.²⁰ This suggests that while they have all the information about the scene, they fail to report it all due to an impairment in their capacity to think about or pay attention to the left or right hand side of things. Weaker evidence also comes from the fact that some subjects with unilateral visual neglect also show neglect for the same side in the other modalities such as audition and touch.²¹

Thus, while one can understand or appreciate how subjects with unilateral neglect can be wrong about their experiences due to lack of attention, this explanation does not seem available for the blindsighted subject. The subject with unilateral neglect does not notice that anything is amiss. They do not usually realise that they are neglecting one side. Even when they intellectually grasp the nature of their condition, they don't think they have gone blind in a portion of their visual field. They simply fail to pay attention to that side. On the other hand, subjects with blindsight instantly notice that they have a blind area of their visual field. If they were simply neglecting this area, one would expect them not to notice their condition, or, if they did notice it, to then be able to report what was there (as the unilateral neglect subjects could do). The idea that blindsight subjects could be having visual experiences which they consistently failed to notice and were unable to notice, not in the sense that they failed

¹⁹See Tye (1995a) pp. 8-10 and Ellis and Young (1988) p. 79.

²⁰See Weiskrantz (1997) p. 221.

²¹See Ellis and Young (1988) pp. 77-78 and Tye (1995b).

to report what was there, but in the sense that they reported that nothing was there - that they were blind - pushes our conception of experience beyond breaking point. I do not believe we should countenance the idea that such a radical lack of self-knowledge about phenomenal character is possible.²² Hence, I think that the representationalist should not defend their position by claiming blindsight subjects and subjects with fractionated perception do have experiences pertaining to their 'blind' field.

Another way the representationalist could resist my description of the blind-sight and fractionated perception cases is to claim that the states of these subjects that carry information about the world do not have the appropriate interaction with the cognitive system. For example, Tye claims that the states of blindsight subjects that carry information are not appropriately poised to interact with the cognitive system on the grounds that the blind-sight subjects do not form beliefs about objects and properties in their blind field. (Recall that subjects were only guessing at what was before them and were incredulous about their success.)

This proposal seems inadequate because it is not completely clear that these subjects do not form beliefs. Perhaps they form unconscious beliefs. Nor is it clear that a representationalist should insist that a subject must be able to form beliefs in order to demonstrate that they have states that are poised for interaction. I will explain the former point first.

It might seem reasonable to suggest that the blindsight patients form unconscious beliefs about the way the world is. These unconscious beliefs affect their guessing. Similarly, one might suggest that in fractionated perception the person has unconscious beliefs about the angle of the slot. This would explain why they cannot report the angle, but can act appropriately towards it.

²²Tye explicitly agrees with this and with the conception of blindsight subjects as lacking experience altogether. See Tye (1995a) pp. 192-193 and pp. 209-218. Dretske explicitly agrees that blindsight subjects lack experiences. See Dretske (1995) p. 119 and p. 182 footnote 17.

In truth, it seems rather difficult to decide between these accounts. On the one hand, one is tempted to think that because the blindsight subjects never seem to form conscious beliefs about objects and properties in their visual field in the normal viewing situation, they lack beliefs altogether. On the other hand, if a subject knows about his condition they may come to form beliefs about what is before them in a forced choice paradigm, guided by this knowledge. This is not the usual way of gaining beliefs about the world, but nonetheless, the fact that the information has some affect on the subject's verbal responses may lead us to think that the information has at least some impact on the conceptual system and thus could be classified as coming to affect an unconscious belief.

Tye explicitly rejects the unconscious belief suggestion on the grounds that this model suggests that there is something wrong with the introspective capacities of blindsight subjects. He claims that there is nothing to suggest that their introspective capacities have gone awry. Yet, it does not seem clear that one has to suppose that introspection is at fault when merely unconscious beliefs are formed, if, as I am assuming, the subject has no conscious experience. That would simply be to presuppose that the representationalist account is correct. One could suppose that unconscious beliefs are formed by nonintrospective processes because there is no experience to introspect. If nonexperiential states can affect verbal guessing and a subject's gross physical actions without being considered to be a species of introspection, why cannot they affect the belief formation processes in a similar manner?

To return to the second of the two options outlined above, it is unclear why one would have to suppose that a representationalist account of what picks out experiential representations from nonexperiential representations requires beliefs to be actually formed by a subject who possesses the relevant concepts. On a strong interpretation of Tye's claim that experiences have to be poised to interact with the cognitive system and Dretske's claim that experiences need only have the function of

interacting with the cognitive system, one might suppose that they mean that a subject *must* form appropriate beliefs *if they possess the relevant conceptual capacities and if their attention is properly focused*. On the other hand, on a weak interpretation, one might suppose that other deficiencies can allow for a sense in which representational states might be poised or have the function to interact, and thereby be experiences, without fulfilling the criteria for the strong interpretation.

Some empirical studies suggest that the weaker interpretation is the correct account of experiences. This is because there are cases where subjects seem to possess the appropriate conceptual capacities and seem to be having visual experiences relevant to those capacities, but who fail to form appropriate beliefs. There is also no good reason to think that the subjects are failing to pay attention to their experiences either. These cases are of colour anomia.

There is a variety of colour anomia where subjects believe their colour vision to be entirely normal. They can accurately group together coloured tiles according to their similarity and difference. We therefore have reason to believe that they are having colour experiences and that their attentional system is not malfunctioning, as in the case of visual neglect. These subjects, however, make radical, frequent errors (60-65%) in naming the colours of the tiles. Moreover, they show a marked tendency never to be prepared to commit themselves fully to their replies. (A typical response would be that the colour is sort of blue, or that they were not quite certain what the colour was. Further, when the correct colour of the object is suggested to them, they typically fail to agree that the object is that colour.) The subjects also make frequent errors when asked to point to objects of a given colour. Surprisingly, the subjects do not realise that they are wrongly naming the colours and seem surprised that anyone should be interested in their colour perception. In some cases of colour anomia, we have reason to suppose that the subjects possess normal concepts of colour, because they know what the colours of familiar objects are (for example, they can tell you that bananas are yellow and post-boxes are red) and their speech and speech

comprehension appears normal.²³ Psychologists studying these cases suppose that there is an anatomical disconnection between the visual input and the areas of the brain which subserve language function. Both these areas are taken to be intact, it is simply the connection between them that is reckoned to be damaged.²⁴ But although the states of these subjects fail to interact with their linguistic capacities, they nonetheless interact with other capacities to allow for the matching of coloured objects.

These subjects fail to form true beliefs about which colour an object is, based on their experiences, even though they possess concepts of colours - if, indeed, they ever do form firm beliefs of this nature at all. (The subjects are hesitant about committing themselves to a statement of what the colour is and appear to randomly assign colours to objects in a manner that seems like guessing.) It seems reasonable to surmise that these subjects have visual experiences of colour, and therefore, according to the representationalist theory, one should hold that they have contentful states which are poised to interact with their cognitive systems or have the function of doing so. This, however, does not allow them to form beliefs about colours, at least in the normal manner. Therefore, it appears that a representationalist should not *straightforwardly* elucidate the notion of poisedness to interact with, or having the function of interacting with, the cognitive system that is required for experience so that it requires subjects who possess the relevant concepts and the relevant attention to form appropriate beliefs. If they do so, they may exclude the experiences of a subject with colour anomia.

If one accepted the weak interpretation of the poisedness clause or the having-the-function clause, then one could suggest that the states of a blindsight subject or a subject of fractionated perception are poised to interact with, or have the function of

²³Thus it is said that the subjects perform well on visual-visual tasks (e.g. matching seen colours) and verbal-verbal tasks (e.g. answering questions about colours verbally). They perform poorly on visual-verbal tasks (e.g. naming samples of seen colours) and verbal-visual tasks (e.g. pointing to seen objects of a given colour).

²⁴These cases were reported in Oxbury, Oxbury and Humphrey (1969).

interacting with, the cognitive system, but due to some malfunction in the cognitive system or at the interface between the cognitive and perceptual system, they never actually interact with it, or never interact with it in the right way. It does not seem clear to me that such a suggestion is obviously flawed. Therefore, the representationalist strategy of explaining why the representational states of a blindsight subject are not experiences - by claiming they do not fulfil the criteria for being experiences - is put in doubt.

Finally, consider a last proposal by Tye. He claims that experiential states which are poised to interact with the cognitive system must do so by being realised in part of a grouped array of cells organised in a functionally topographical manner to represent local features, such as the presence of a surface or a colour. He says:

There is strong evidence that images and visual percepts share a medium that has been called the 'visual buffer'. This medium is functional: it consists in a large number of cells, each of which is dedicated to representing, when filled, a tiny patch of surface at a particular location in the visual field.²⁵

Tye suggests that the visual buffer is in the V1 damaged area of blindsight subjects. While some perceptually caused states that have content (i.e. states in areas other than V1) may interact with the cognitive system in blindsight subjects, Tye argues that because the visual buffer is damaged, the correct vehicle of experiential content is not activated, and this explains why the blindsight subjects fail to have experiences.²⁶

This solution seems rather an extreme move away from what is presented as the main explanatory focus of the representationalist theory. Now it is being suggested that some functional specification or some particular physical realisation of states that have content is required in order to explain why such states are conscious experiences. Tye does present this view as a tentative empirical speculation in an appendix to his book, which suggests that it is an optional addition to his theory. But

²⁵Tye (1995a) p. 122

²⁶Tye (1995a) pp. 217-218

it would seem that if one has to resort to this type of explanation of experience, as opposed to merely speculating that there is such a functional or physical specification that can be given of where experiential content resides in the brain, then it marks a radical departure from representationalism. Moreover, the question of why a particular physical or functional brain state is required in order to realise experiential content, remains unanswered.

Even if one went along with Tye's suggestion here, one might wonder whether the intact pathways leading from the optic nerve to areas other than V1 do not end in grouped arrays of cells of the kind Tye supposes. Tye suggests that they do not, on the grounds that some psychologists have thought these pathways only lead to areas that subserve appropriate eye-movement. But if we suppose, as Weiskrantz does, that these pathways support guessing about local features, such as orientation, location, colour and all the features that blindsight subjects can discriminate (as outlined above), we might think these pathways do lead to grouped arrays of cells of the type Tye suggests.

It is not clear how Tye might respond to this. He comes close to suggesting that the *particular* sensory module in V1 is crucial to his story, but in the end his account is presented as drawing on all the factors that I have been discussing in this section. Tye says:

A further hypothesis, due to Lawrence Weiskrantz (1986), is that blindsight subjects can use the tecto-pulvinar pathway to extract information about features like movement, orientation and position with respect to stimuli in the blind field. This capacity underlies the accurate guesses blindsight subjects make (in response to instructions). The information has neither the right vehicle nor the right role to count as phenomenal, however. It does not attach to activity in the grouped array (the locus, I maintain, for the output representations of the pertinent sensory module); nor is it appropriately poised. This is because the information is not accessible to those cognitive processes whose job it is to generate beliefs directly from the cognitive

processes whose job it is to generate beliefs directly from the nonconceptual representations at the interface with the conceptual domain. The cognitive processes at work when the subjects are forced to guess are not *belief*-forming processes at all.²⁷

In conclusion, I do not take cases of blindsight and fractionated perception to disprove the representationalist claim that states with appropriate content become experiences when they are poised to interact with, or have the function of interacting with, the cognitive system. Rather, I take these considerations to show that the representationalist thesis as it stands is not detailed or specific enough to explain why blindsight and related phenomena do not involve the subject having experiences. I hope to have shown that working out an appropriate account would be a complex and difficult task, and it is uncertain whether an account could be produced that stayed faithful to a purely representationalist account. One would like to see a more detailed discussion of what the cognitive system is and what it is to be poised to, or have the function of, interacting with it. Moreover, there are a plethora of perceptual dissociation phenomena, where subjects are apparently unaware of things they can in some sense identify or discriminate. For example, automatisms that occur after some epileptic fits and somnambulism seem to involve unconscious subjects that nonetheless make use of perceptual information about their environment to guide complex behaviour.²⁸ Any account that differentiates experiential representational

²⁷Tye (1995a) pp. 217-218

²⁸'Somnambulism' refers to sleep-walking and the various other activities that people can do when asleep, such as talking and moving purposefully. People have been known to navigate their way through an environment, perform quite complex tasks and even drive cars. These people seem to be in a dazed or trance-like state and do not remember their activities. It seems plausible to suppose that these people are not conscious while somnambulating. This, in any case, seems to be the legal view, as pleas of somnambulism have been accepted as defences in cases of murder in both Britain and America. Moreover, psychological evidence suggests that somnambulism occurs when the brain produces the signals that it produces in deep sleep (long slow waves on an EEG). Therefore it is unlikely that the subjects are conscious. Moreover, the brain is not emitting the signals which it does in REM (rapid eye movement) sleep, which is thought to be sleep in which dreaming occurs. Therefore it is unlikely that sleep-walkers are acting out conscious dreams.

A similar form of automatism can occur after epileptic fits. Subjects perform more or less complex actions, of which the usual description is that they are unconscious. The subjects report no memory for the events and act as if dazed and in a trance. Similarly to somnambulism, pleas of automatism have been used as successful defences in courts of law, in this instance against charges of grievous bodily harm.

If this is a correct description of the phenomena, then it would appear that states which carry information about the environment are playing a role in allowing a subject to perform complex

states from nonexperiential representational states, would have to examine the large number of these dissociation cases and provide an account that did justice to these phenomena.

3.4 - Appropriate Explanations

Let us suppose, for the sake of argument in this section, that the representationalist is right in thinking that experiences are all and only those states with the appropriate content, which are poised to interact, or have the function of interacting, with the cognitive system to produce beliefs and desires and to control behaviour. Is citing this fact sufficient to explain why such states should be conscious states? That is, why should we think that the fact that a state with a certain content is poised to interact with, or has the function of interacting with, the cognitive system to produce beliefs, desires and behaviour makes that state a conscious state (i.e. an experience, a state with phenomenal character)? In other words, should we be convinced that having such a state instantiated in us explains why we should be conscious of what that state represents (in the sense explained above in section 3.1)? I think that the answer is no. To explain, I will consider Tye's account and Dretske's account in turn.

3.4.1 - Tye's Explanation

According to Tye, a representational state (of the kind elucidated by the causal covariation theory) is a conscious experience when it is poised to interact with the cognitive system.

What is it for a state to be poised? The answer seems to be that the state would have some *direct* impact on the cognitive system if certain further conditions held. Tye claims that experiential representations :

activities. If subjects can avoid obstacles, drive cars, and murder, then detailed information about their environment must be being used to guide their actions. This information is reported in Whitlock (1987) pp. 65-66 and Davis (1987) p. 723.

supply the inputs for certain cognitive processes whose job it is to produce beliefs (or desires) directly from the appropriate nonconceptual representations, *if* attention is properly focused and the appropriate concepts are possessed.²⁹

I think that it is not clear why being in a state with content which bears this relation to the cognitive system explains why the state is conscious. To explain, it seems true that experiences do not have to actually interact with the cognitive system to be experiences. This is because experiences are independent of belief on the following grounds: one may lack the appropriate concepts required to conceptualise the content; the phenomenology of experience seems to have a richer, analogue grain than conceptual abilities; or one may simply fail to form beliefs when undergoing an experience due to lack of attention. Now, if one does form beliefs in response to an experience, then one is aware of what the experience represents by being aware *that* a certain feature seems to be present. One can understand how one could be aware of what is represented in this manner: it is just to have a belief. But, on the representationalist account, to have an experience is to be aware of what is represented in a nondoxastic sense; it is not to be aware that a certain feature is present. Now while it seems correct to say of experiences that they are the states which enable us to form beliefs directly about the way the world is, this appears to be a contingent feature of experiences, in the sense that one can have a conscious experience with a particular nonconceptual content, even if one never forms beliefs pertaining to that content, and even if one could never form such beliefs, because one is not conceptually sophisticated enough to do so.

Recall from chapter three, section six, that Tye held that experiences are states with the higher-level property of being conscious states with phenomenal character. Experiences have this property *in virtue of simultaneously* having the lower-level property of being a certain kind of representation. Physical states can also have the property of being this kind of representation. Physical states can therefore be said to

²⁹Tye (1995a) p. 138

realise experiences. But to *explain* how a physical state could realise a mental state we have to hold that conscious states are necessarily representational states of the kind representationalists suggest, and necessarily bear the stated relations to cognitive systems.

If we think that the fact that experiences allow us to form beliefs is a contingent feature of those experiences, then the fact that they do so does not explain how representational states could be conscious states. No doubt Tye would claim that it is necessarily true that experiences would lead us to form beliefs if our attention was poised and if we possessed the appropriate concepts. I have already explained why one might claim that this is not true due to colour anomia in the section above, and therefore we have reason to doubt that the explanation here is a good explanation. But even if it was true, why should one think that it is necessarily true? Tye provides no argument for this claim being a necessary claim.

In fact, the representationalist explanation here can seem to get things entirely the wrong way round. That we can undergo a conscious experience or be conscious of what our experiences represent could explain why we may form beliefs pertaining to what our experiences represent and why we don't form such beliefs about our other representational states. This seems a rather more plausible suggestion than the one which claims that the fact that we may form beliefs pertaining to the content explains why we should antecedently be having a conscious experience and, in that sense, be conscious of what the experience represents in a nondoxastic way.

3.4.2 - Dretske's Explanation

Turning now to Dretske's account, recall his claim that an experience has the function of interacting with the cognitive system when it has been selected by evolutionary processes to do so. One objection to his position that Dretske discusses is that it seems correct to say that natural selection does not create anything. That is, we can suppose natural selection chooses certain features to become more prevalent in a

population, but it cannot bring a feature into existence itself. Therefore one might think that a state cannot become conscious when it has been selected for by evolutionary processes. At best, evolutionary processes can only select already existing conscious states and make them prevalent. Therefore, we cannot explain why states are conscious experiences by claiming they have the function of interacting with the cognitive system.

This objection mirrors the intuition expressed in section 2.1 above, namely that it is plausible to think that evolution works by selecting for people's abilities to taste, smell and see things - that is, it selects for people's ability to have conscious experiences. Consciousness of certain features accounts for evolutionary advantage; evolutionary advantage does not account for consciousness.

Dretske claims that this objection fails to appreciate the role of evolution on his theory. He claims that natural selection does select for already existing features, since it selects for states that provide information:

The objection misidentifies the role that the Representational Thesis assigns to natural selection. Natural selection is not supposed to select for consciousness. That is not how the story goes. It selects for something else, something that, by being selected, becomes conscious.³⁰

I believe that this reply only alleviates part of the worry expressed by the above objection. It shows that evolution is working by selecting already existing things, but it does not explain how being selected for can bring some new feature into existence, namely the feature of being conscious.

Dretske provides an analogy that is supposed to help us understand how selection can bring a feature into existence. He claims that a variable resistor becomes a volume control by someone selecting and installing it in their amplifier. The resistor was not a volume control before it was selected for this purpose. In this way, Dretske

³⁰Dretske (1995) p. 163

says we can see how selection can bring a feature into existence. (Dretske calls selection that occurs due to someone's intentions or purposes 'artificial selection'. This is to be distinguished from natural selection where selection occurs without the intentions and purposes of a conscious agent.)

It seems to me that the important feature of the variable resistor/volume control story is that selection places some piece of hardware into a system where it can perform certain tasks (adjusting volume). This is what I think makes it plausible to think that the resistor becomes a volume control. Before selection the resistor had no way of altering volume, after selection it does.

In some places, Dretske's account of the selection of experiences exactly replicates the account of the resistor. He says:

What natural selection does with this raw material [an organism's needs and its information carrying states] is to develop and harness information-carrying systems to the effector mechanisms capable of using information to satisfy needs by appropriately directed and timed behavior.³¹

This makes it sound as if natural selection places some information carrying states into a system where they can then interact with beliefs and desires to produce appropriate behaviour. But this account is at odds with what Dretske stresses is an important feature of natural selection:

Natural selection is quite different. Unlike artificial selection, an item cannot be naturally selected to do X unless it actually does X. It has to do X because the way it gets selected is by having its performance of X contribute in some way to the survival and reproductive success of the animals in which it occurs.³²

For an information-delivery system to acquire the natural function of delivering information, for it to produce natural representations, then, the information it delivers

³¹Dretske (1995) p. 164

³²Dretske (1995) p. 165

must actually *do* something. It must make a positive contribution to fitness. It must be useful to and actually used by (or have been used by) the organisms to which it is delivered.³³

It therefore seems a very misleading description of what natural selection does to say it *develops and harnesses* states that carry information to states that control appropriate behaviour. Natural selection can only select for existing features. It cannot develop new connections or harness one state to another. The information carrying states must already contribute to the behaviour and fitness of a creature in order to be selected for.

Thus, the analogy between creating a volume control by artificially selecting it, and creating conscious states by naturally selecting them, breaks down. This is because prior to becoming experiences, the information-carrying states must already be in place and be affecting behaviour in order to be selected for. When one creates a volume control, one places the resistor in a situation where it comes to have different causal effects. It can now change the volume of your music. When one creates a volume control, one makes the resistor have a different causal impact on the world, which it did not previously when it was sitting on the shelf. But when natural selection creates a conscious state, it does not make a representational state have any different causal impact than it did previously. It is therefore hard to see how a new feature, such as consciousness, could be created by selection when the intrinsic properties of the selected states remain the same and the causal impact of these states remains the same.

One might object to this line of thought on the grounds that my explanation of what was relevant in the case of artificially selecting a resistor to be a volume control (and thereby creating a new feature, namely, volume controls) was incorrect. I said that what was relevant was that the resistor was actually placed in a system so that it could alter volume control. Dretske constantly stresses, however, that someone can

³³Dretske (1995) p. 166

artificially select something to be something or to do something, in the absence of that thing performing effectively. He says:

I can, for example, choose (or design) something to be a volume control (thus giving it that function) even when it is utterly incapable of controlling volume. Through ignorance or carelessness, I can select a variable capacitor to be my volume control, wire it to my amplifier, and wonder why it won't do the job I gave it.³⁴

Thus, one might think that if something can become a volume control while not changing any of its intrinsic properties and not coming to have any new causal impact, then a new feature can be created without any new causal impact being manifested. Thus, my objection to why natural selection cannot create a new feature is flawed.

Clearly, there is a sense in which someone can create a new feature - a volume control - by selecting a resistor with the intention of making it control volume, while not changing the actual causal impact of that thing, by installing the resistor incorrectly. But noting this point, we can say that for someone to create a new feature - a volume control - then they must either change the actual causal impact which the resistor has, *or intend to do so*. It seems reasonable to think that one does not create a volume control out of a resistor if one does not change the actual causal impact of the resistor (by installing it correctly so that it can alter volume) or if one does not intend to change its causal impact in this way. Now we can see that Dretske's analogy still fails to work. When natural selection selects for representational states to have the function of interacting with the cognitive system to yield appropriate behaviour, it cannot make the states it selects have a new causal impact, for they must already have this impact in order for natural selection to select them for this purpose. Nor can natural selection have the intention of changing the causal impact of these states. Natural selection does not have intentions unlike a person, who can artificially select something.

³⁴Dretske (1995) p. 165

Therefore I believe that Dretske's analogy that is intended to show how it possible for natural selection to create a new feature, by comparing it with artificial selection, breaks down. It remains mysterious how states that are representations and have the appropriate function of interacting with the cognitive system could come to be conscious states in virtue of being selected for by evolutionary processes.

4 - Summary of Results

I began this chapter by considering what relationship holds between phenomenal character and nonconceptual experiential content, as specified by the teleological and causal covariation theories. I argued that in light of the considerations of previous chapters, one should hold that content supervenes on phenomenal character, at least within some specified time period and within the experiences of one individual, rather than accept the representationalist claim that content is identical with phenomenal character. I then noted that that relationship suggested that phenomenal character was the vehicle of experiential content.

I raised some intuitive problems faced by an account which holds that we could be aware of what an experience represents, without being aware of the vehicle of that content, or without that content being conceptual content. I then presented the representationalist account of how a subject of representational states could be conscious of what their states represent, that is, be the subject of a conscious experience. This account held that representational states that are poised to interact with the cognitive system, or have the function of interacting with the cognitive system, are experiential states. I proceeded to investigate this claim firstly by looking at various dissociation phenomena. I argued that the representationalist account of what the cognitive system is, and what it is to be poised to interact with it, or have the function of interacting with it, needed to be further elucidated in order to exclude attributing experiences to blindsight subjects and subjects of other similar dissociation phenomena. I argued that it would be difficult to provide such an account that

separated experiential from nonexperiential states in light of some types of colour anomia.

Lastly, I argued that even if one accepted the representationalist account of how to distinguish between representational states with the appropriate content that are experiences from those that are not, providing a description of the kind of interaction experiences have with the cognitive system does not amount to explaining why such states should be conscious states.

5 - Concluding Reflections

Given these conclusions, what should one make of my suggestion that phenomenal character is the vehicle of content?

One thing to be clear about is exactly what we mean when we ascribe content to a state. It seems to me that there are different notions of content that one could adopt. I will call these the 'inflationary' and 'deflationary' views of content.

The deflationary view of content would be that there are different notions of content which are equally respectable and applicable to states. Each of these notions of content will be defined by the relationship between the state and the world which is required to obtain in order for the state to represent what it does. According to the deflationary view, for a state to have some content is just for it to bear the required relationship to a feature of the world that the particular theory of content prescribes. Ascription of content is a mere theoretical tool and there is no supposition that if a state has content and that state is a conscious state, that the content of the state should somehow be manifested in the conscious nature of the state. The content need not be content for the subject of that state.³⁵

³⁵We can see Hamlyn expressing this deflationary view of nonconceptual content in the quotations in section 3.1 above. McDowell allows that subpersonal states can have content of this kind, but not experiences. I believe that therefore he wants to hold that content ascribed to experiences should only be of an inflationary kind. Braddon-Mitchell and Jackson (1996) p. 228 outline a deflationary notion of wide propositional content similar to my more general conception here.

On the other hand, I believe that there is an inflationary view of content, where a state is viewed as having one unique content. Different theories of content are seen as competing in trying to capture and explain how states can have this unique content. In other words, on this view, states are uniquely about something and competing theories of content try to elucidate the relationship that a state has to bear to the world in order to be about that thing. On the inflationary view of content, it is supposed that if a state has content and that state is a conscious state, then the content of the state will be manifested in the conscious nature of that state. Indeed, the inflationary conception of content precisely tries to capture the sense in which conscious states seem to present aspects of the world to the subject of that state.³⁶

I don't think that there is anything wrong with holding a deflationary view of the content specified by the teleological theory and the content specified by the causal covariation theory. One can agree that experiences (sometimes) have content of this kind if all that is required for them to have such content is that they stand in the specified relations to features of the world. Further, I believe that contents ascribed to experiences in this manner would supervene on the phenomenal character of the experiences of an individual within a certain time period, as I explained in section two above.

I also believe, however, that there is an inflationary view of content that does apply to conscious experiences. When one undergoes an experience, one does seem to be presented with the way the world is. For the reasons given in chapter two, I think that this content is best conceived to be nonconceptual - experiences seem to present the world as being a certain way, not only in a different manner from belief (analogue as opposed to digital), but to a large extent, independently from belief (independently

³⁶Tim Crane (1995) pp. 194-197 articulates the idea that the propositional attitudes have unique contents. Part of the motive for this view, he explains is that contents are taken to be individuating of belief. When it comes to experiences, one may not think that contents are individuating of experiences if one holds that phenomenal character is something over and above content, but the idea that nonetheless every particular instantiation of an experience has a unique content may persist.

of a subject's conceptual capacities and whether or not they actually form beliefs, given they have the appropriate conceptual capacities).

One might try to provide an analysis of why Tye's and Dretske's theories face the problems I have been considering in these terms. Tye and Dretske both present theories of what makes a state a representational state and of what the content of that state is, which applies not only to experiences but to all kinds of other states, such as natural indicators. One might think that this kind of theory of content really specifies only a deflationary view of content, because it applies to nonconscious states. Yet both Tye and Dretske want to press their theories of content into accounting for the inflationary view of experiential content, which, on independent grounds, it seems reasonable to think experiences have. To do so, they try to show that phenomenal character strictly covaries with the content that their theories postulate. They then present a case for identifying phenomenal character with this content, on the grounds that all features of phenomenal character can be taken to be representational (their claims about the transparency of experience are also relevant here). If one accepts this identification, then the merging of deflationary and inflationary notions of content seems almost complete. The one thing left to do is to explain why nonconscious states with representational content are not conscious. *Prima facie* it may seem as if one simply has to find some property that differentiates experiences from nonexperiential states. But in fact this property has to account for the subject's awareness of what their experience represents, that is, account for the why this state is a conscious one. I have argued that this last move is unsuccessful. I have also argued that the phenomenal character of experiences does not strictly covary with the content of experience as it is conceived by Tye or Dretske, and that there are experiences that lack content of this kind. Therefore I do not believe that Tye and Dretske provide a successful naturalistic theory of phenomenal character. Nor do I think that the causal

covariation and teleological theories capture the inflationary notion of nonconceptual content that it is plausible to think experiences possess.³⁷

To explain this last point, consider experiences of novel colours again. I argued that experiences of novel colours cannot have content at least if one believes that experiences only have content by bearing the relation to the property they represent that the causal covariation or teleological theories require. However, there is a sense in which experiences of novel colours do seem to present the world as having a feature - best described as reddish-green - to a subject of those experiences, even if such experiences systematically and necessarily misrepresent the world as having this feature. The way in which these experiences represent conforms to the inflationary view of content, but it cannot be explained by Tye's or Dretske's theory.

It also seems possible that there may be aspects of experience that represent the world as being in some way to the subject of those experiences, but it is possible that these aspects have not been selected for by evolutionary forces. These aspects could be accidental correlates of features of experience which have been selected for, or they could be features of experience that have only newly arisen because of gene mutation, or they could be experiences of a swamp person. The teleological theory cannot account for this.

Regarding the causal covariation view, one might think that the experiences of a person present the world to be a certain way to that person, even if there are no features in the world that those experiences track, or even if what they track is irrelevant to the way the world is presented as being. Perhaps the person is travelling to and from Inverted Earth on a regular basis, and their experiences of 'yellow' no longer track yellow objects. Perhaps the experiences of a person in a virtual reality machine track the intentions of the person who controls that machine. But we would

³⁷It is a complex question whether explanation at the subpersonal level constitutes an autonomous level of description from that at the personal level. In suggesting that Tye's and Dretske's theories of content describe a subpersonal and not a personal level of explanation, I do not mean to suggest that I think that subpersonal and personal levels of explanation are autonomous in all other other areas where they are applicable.

not think their experiences present the world to them as containing the intentions of that person, even if they track those intentions.

In conclusion, I believe that one should conceive of the content postulated by the causal covariation theory and the teleological theory in a deflationary manner. Nonetheless, it is plausible to think that ascriptions of this content will supervene on the phenomenal character of the experiences of an individual within some time period. In addition, one can still hold that experiences have content in an inflationary sense. When one has an experience, often it seems as if one is presented with or one is aware of the objects and properties which surround one in the world. It also seems plausible to think that the way in which one is aware of these objects and properties is in a nondoxastic manner, and thus that experiences represent in a nonconceptual manner.

If one subscribes to this inflationary view of nonconceptual content, the question of its relationship to phenomenal character persists.

One might hope that a successful naturalistic theory of inflationary content will be forthcoming, and one might hope that such a theory will allow us to correlate and identify phenomenal character with the content of experiences and thereby provide a naturalistic theory of phenomenal character of the kind that Tye and Dretske aspire to. While this is an attractive strategy, I hope to have shown that such a theory of content will not be easy to come by.

On the other hand, one might be convinced that the phenomenal character of experience does not merely represent the way the world is. The thought is that while phenomenal character does represent to a subject the way the world is, the nature of that phenomenal character is determined by nonrepresentational factors pertaining to our own constitution. For example, Shoemaker says:

How could the phenomenal character we are confronted with be solely determined by what is in the environment, if what is in the environment is anything like what

science tells us is there? At the very least, the way things appear to us is determined in part by limitations on the powers of resolution of our sensory organs. And it seems obvious that it depends on the nature of our sensory constitution in other ways as well. There is good reason to think, for example, that the phenomenological distinction between 'unique' hues such as orange is grounded in a feature of our visual system, and has no basis in the intrinsic physical properties of the objects we see as coloured.³⁸

While I believe this view of phenomenal character to be attractive, questions remain about the relations of phenomenal character to an inflationary view of content. Does the phenomenal character of an experience necessarily represent what it does? Does it represent the world as it is, or does it misrepresent the world?

There are a wide variety of answers to these questions in the current literature by those who believe that phenomenal character is not identical with the content of experience. For example, Boghossian and Velleman hold a projectivist view of colour properties. Colour properties are conceived of as properties of experience, in particular, properties of the visual field that are projected or represented as inhering in the surface of the objects that we perceive. On this view, experiences of colour systematically misrepresent objects as having properties which they in fact do not. This view seems to commit Boghossian and Velleman to hold that phenomenal character pertaining to colour necessarily represents what it does, but it systematically misrepresents the world.

Many philosophers think that if one talks of the visual field, this commits one to a sense-datum account of perception, whereby one indirectly sees things by directly seeing objects that exist in the mental realm. One might balk at such an account if one wishes to give a naturalistic account of the mind. But Boghossian and Velleman claim that:

³⁸Shoemaker (1996) p. 250

Talk of a visual field and its intrinsic qualities may seem to involve a commitment to the existence of mental particulars. But we regard the projectivist view of colour experience as potentially neutral on the metaphysics of the mind. The visual field may or may not supervene on neural structures; it may or may not be describable by means of adverbs modifying mental verbs rather than by substantives denoting mental items.³⁹

Whether or not this metaphysical neutrality can be maintained is not a question I will address here.

An alternative view is given by Shoemaker, who holds that different phenomenal characters can represent the same property of the world - redness - but that they also represent a relation between redness and the different intrinsic properties of the experience that accounts for the different phenomenal characters of those experiences.⁴⁰

Another alternative is provided by Block, who holds that phenomenal character is the vehicle of content and that the same phenomenal characters pertaining to colour can represent different colours.⁴¹ (Although Block primarily has conceptual content in mind, one could perhaps develop a version of this view regarding nonconceptual content.)

I believe that in all likelihood different answers to these question will have to be given about different aspects of phenomenal character. For example, in the case of visual experiences of shape, it is tempting to think that they necessarily represent the shape that they do. It is simply hard to conceive of how the experience I have of a square could represent the shape of a circle. As Block points out, the phenomenal characters associated with seeing squares allow one to see that they could form a

³⁹Boghossian and Velleman (1997) p. 95. Interestingly, Armstrong (1968) pp. 236-237 thinks that talk of the visual field can be made sense of within a materialist theory of mind, although he disagrees with Boghossian and Velleman's view of colour properties.

⁴⁰See Shoemaker (1996) p. 253.

⁴¹See Block (1995a).

tiling with no gaps, whereas those associated with circles do not.⁴² Moreover, it is difficult to think that experiences with phenomenal characters associated with seeing shapes could be systematically misrepresenting the way the world is, in the way that such a view may seem plausible to someone with respect to colour.

In short, if one thinks that phenomenal character is not identical with the content of experience, then this is just the starting point for a whole new investigation of the relationship between phenomenal character and content - either conceptual or nonconceptual. Moreover, holding such a position, in itself, gives one no insight into how it is that we can be aware of phenomenal character or content. It gives no insight into how one can account for the nature of and existence of phenomenal character, content, or consciousness in general. Indeed, it does not guarantee that a naturalistic theory and explanation of these phenomena will be forthcoming at all. The position does suggest that some consideration should be given to our constitution, but the manner in which this should be done, for example, physical, functional, dispositional, etc., or a combination of these, must yet be determined.

⁴²Block (1995a) p. 278

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