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ILLUSIONISM: MAKING THE PROBLEM OF HALLUCINATIONS DISAPPEAR

By

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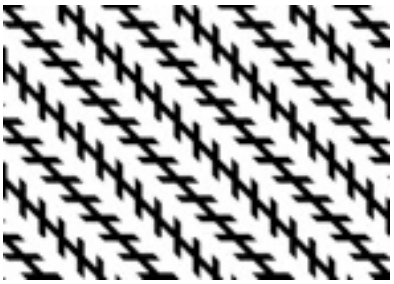
My dissertation contributes to a central and ongoing debate in the philosophy of perception concerning the fundamental nature of perceptual states. Such states include cases like seeing, hearing, or tasting, as well as cases of merely seeming to see, hear, or taste. A central question concerning these states arises in light of misperceptual phenomena. While a commonsensical picture of perceptual states construes them as simply relating us to the external and mind independent world's objects, some misperceptual cases suggest that these states fall short of such world contact. The result is that perceptual states are either thought to fundamentally consist in a highest common factor that falls short of perceptual contact with the world, or are thought to be disjunctive in nature, with some cases involving perceptual contact, and others receiving a different analysis. Contrary to these views, I argue that no misperceptual cases compromise perceptual contact with the world's objects, and so perceptual starts are to be thought in terms of relations to the external and mind-independent world. I call this view I defend *Pure Relationalism*, and the view of misperceptual cases that makes pure relationalism possible *Illusionism*.

To better understand the difficulty confronting the pure relationalist view one needs to understand the way in which cases of misperception compromise the commonsensical view of perceptual states. Traditionally such cases decompose into two basic types, the case of illusions, and the case of hallucinations. We can see an example of an illusion (the Zöllner lines) below:



Illusions are such that an object itself is perceived (in this case, seen), but the object appears in a way at odds with the way it is. For instance the Zöllner lines appear nonparallel but are in fact parallel. These cases present a first challenge to relational views, they require an explanation of how things can appear other than they are when perceptual states only involve a relation to the thing perceived.

A more difficult problem arises in the case of hallucinations. These cases are more radical, and range from the mundane to the extraordinary. A simple example is an afterimage that appears in one's visual field after looking directly at a bright source of light like the sun. A more elaborate hallucination (had by a blind Charles Bonnet Syndrome patient) is described below:

"People in Eastern dress!" she exclaimed. "In drapes, walking up and down stairs!...a man who turns towards me and smiles, but he has huge teeth on one side of his mouth … this horse (not a pretty horse, a drudgery horse) with a harness, dragging snow away! ... I see a lot of children; they're walking up and down stairs. They wear bright colors … like Eastern dress."

What distinguishes hallucinatory cases is that they are states with a sensory character but without an obvious relation to any object in the world. Unlike illusions, these cases on the face of it do not involve the object appearing in a misleading way, but instead involve a "mere appearance", an appearance without any object to do the appearing. As such hallucinations pose a difficult challenge for any view that maintains that perceptual states always involve relations to objects.

Current views of perceptual states accept the idea that hallucinations are unlike illusions in involving mere appearances, and the result is two views that currently dominate the literature. On the one hand there are intentionalist views which argue that perceptual states are fundamentally characterizable as states that mentally represent the world to be a certain way. These views solve the problem of hallucinations by denying that all perceptual states require a relation to a worldly object. On the other hand there are disjunctive relationalist views that seek to preserve the relationality of perceptual states, but do so in a more limited fashion. These views reject a common core to all perceptual states. Instead, such states are disjunctive in the sense that some (the veridical cases) are relational, while others (the misperceptual cases, in particular hallucinations) are to be characterized as fundamentally different.

Unlike these views, I argue that we should reject the idea that hallucinations do not involve a worldly object appearing, and as such I take hallucinations to be just as relational as veridical and illusory states. While this seems implausible on the face of it, I argue that careful attention to actual and hypothetical cases of hallucination reveals that they are relational. As such I maintain that hallucinations can be assimilated to the case of

illusions, and this is the view I call illusionism. I defend illusionism in two steps. First, I show that no arguments establish that hallucinations are not constituted by the properties of the objects surrounding the hallucinator, and second, I argue that these properties can be used to constitute nonexistent objects through the phenomena of perceiving-in. The result is that hallucinations involve perceptual relations to objects in the world, but the objects of hallucination can be nonexistent in the sense that they are merely objects that are depicted in existing objects. As such, my view is that hallucinations are in an important sense images much like paintings and movies.

The view I defend comes with various upshots. First, it suggests that a particular conception of the mind is mistaken, or at least not motivated by cases of perception. This is the representational view of the mind, on which the function of brain processing is to replicate or represent external information from the world internally. In contrast to this view, the view I defend suggests that brain processing merely makes transparent the world's features, it does not replicate them. This view makes my view congenial to other nonrepresentational views such as enactive views of the mind. A second upshot of the view is that it endorses the idea that there is a unity to perceptual states and to misperceptual states. Since illusions and hallucinations are not fundamentally different, there is a unity to cases of misperception. This is not to say that all cases are alike. Indeed I maintain that there are many interesting differences between different cases, but no differences that are systematic and establish the dualistic division between illusions and hallucinations. In addition, since illusions are themselves not fundamentally different from veridical perceptual states, then veridical, illusory, and hallucinatory cases fall on a

single spectrum. This means that there is a certain unity to perceptual cases, they are all cases involve perceptual relations to the external and mind-independent world. A final upshot is that my view forges a connection between images or depictions, such as those that we consider art objects, and hallucinations. This connection has been briefly suggested in the past (two examples are Wollheim 2003 and Sartre 2012) but not elaborated upon. My discussion fills this gap, and in so doing provides a means to test this idea in actual hallucinatory contexts, for instance, those that might occur in psychiatric cases.

In what follows the argument described here divides as follows. In the first chapter I start with an elaboration on the central notion of *perceptual contact*, which describes the optimal case in which perceptual states simply relate us to the world. In the second chapter, I complicate the perceptual contact relation by posing two challenges to the idea that perceptual contact sufficiently constrains the phenomenology of perception. In answering these two challenges I set the stage for the solution that will emerge for cases of misperception. In the third chapter, I turn to the case of hallucinations and articulate the problem more fully, as well as some possible ways of resolving it. In the fourth chapter I propose my illusionist solution, considering some attempts at providing such a view in the literature, and supplementing these with my own fleshed out view. In the fifth and final chapter, I turn to the objections that may be raised against the view, and I argue that none of them are persuasive. In doing so I describe further features of the view, in particular the phenomena of perceiving in.

Acknowledgements

I would foremost like to thank the chair of my committee, Elijah Chudnoff, whose guidance both before and during the dissertation was invaluable to my development as a philosopher. My dissertation would not have been nearly as good without his always helpful suggestions and criticisms. I also want to extend my thanks to the other three members of my committee, Otávio Bueno, Simon Evnine, and my external member, Susanna Schellenberg. Otávio's seminar on perception in 2011 was my detailed introduction to relationalism and disjunctivism, and it is because of the problems posed in that class that I decided to write this dissertation. Simon, on the other hand, helped me deal with many of the metaphysical issues that arose in my view through his always clear discussion. He read, attended talks, and discussed with me early drafts of my first four chapters. In addition the seminar on the metaphysics of mind that he and Elijah offered in 2013 helped me think through many of the harder issues arising in the dissertation. Finally, my view owes a lot to the thought I put into Susanna's insightful and nuanced view. Carefully reading her papers, listening to her 2012 lecture at the University of Miami, and discussing the view with her, all helped me articulate my own position.

Apart from my committee, I benefitted greatly from the help of Maliki Eyvonne Ghossainy, who spent countless hours listening to me as I worked through my ideas on perception. My view would not have been nearly as developed had she not been such an excellent interlocutor.

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Introduction

Relationalism is the view that perceptual states, which include states of seeing, hearing, touching, etc, and states of *seeming to* see, hear, touch, etc, are to be characterized as fundamentally involving perceptual contact with the particular, material, and mind-independent objects of the external world (henceforth, worldly objects).[1] It is because perceptual states put us in perceptual contact with objects that we are able to consciously experience objects, as well as refer, know, and interact with them. Relationalism puts a strong emphasis on the role of worldly objects and our relation to them in perceptual states. But this raises two worries about the phenomenological adequacy of the view since it is not clear that one can individuate perceptual states by appeal to their objects. On the one hand, objects seem to cut across phenomenal characters[2] making them insufficient for an adequate characterization of a state's phenomenology. On the other hand, some perceptual states seem to have a phenomenal character but no object, and this makes that objects are also unnecessary for characterizing perceptual states.

The aim of this project is to argue that contrary to appearances, relationalism has adequate responses to these problems. In this introduction I start with some background on the relational view. First I will discuss the view's historical and contemporary context, then elaborate on some of the view's recent motivations, and finally turn to the problems

1 I elaborate further on what relationalism amounts to in the first chapter.

2 I define phenomenal characters more fully in chapter 1, but roughly phenomenal character refers to the way things seem from the first-person perspective of the subject undergoing an experience.

that structure the chapters that follow. Without further ado, we turn to the first of these tasks.

1 Relationalism in Context

Philosophy has long been interested in the nature of perception, and as it so happens misperception has always had a central role to play in how we understood perception. This has been particularly so since Descartes' Meditations, though the concern with perception and misperception goes back to at least Plato's *Theaetetus*. Descartes' project, however, is of particular significance because Descartes began with skepticism, and the discussion that emerged out of his starting point largely structures contemporary philosophical thought on perception. In his attempt to find a firm foundation for knowledge, Descartes thought that the best method involved calling into question the possibility of certainty altogether. This he did by invoking three skeptical hypotheses that he took to undermine the foundations of all human knowledge. Descartes' observations did not aim at undermining perception alone, they were also meant to call into question mathematical and other *a priori* knowledge. Despite this, Cartesian skepticism did *begin* with doubting perception, which Descartes took to be the most intuitive first source of human knowledge. "Surely whatever I had admitted until now as most true I received from the senses or through the senses", Descartes writes.

Today when we think about the Cartesian approach in the context of understanding perception we see that the way Descartes addressed perception is, in an important sense, secondary. Descartes' first question concerned the role of perception

with respect to knowledge, but it is reasonable to think that a prior question concerns the nature of perception itself. It is the way perception is that tells us about its role with respect to knowledge, not vice versa. This is not to say that Descartes' investigation left out all commitments on this prior question. Indeed his skepticism got off the ground through such a commitment. Descartes' worry was about how our minds can put us in touch with external reality.[3] By posing this worry Descartes had already assumed that no feature of the mind essentially involves a connection to external or mind-independent reality, and this of course entails, on the plausible assumption that perception is a function of the mind, that perception does not essentially involve such a connection. The objects of perception are not essentially worldly objects, and so perceptual experience or perceptual states[4] come apart from the world they purport to be of. This made Cartesian skepticism coherent: on the one hand mental representations were sufficient for things to appear thus and so, and on the other the world and its structure were unnecessary for such representations. This meant the mind has no real purchase on the world or its structure, and this is what worried Descartes.

But an anti-Cartesian trend followed in the philosophy of perception, of which relationalism is the latest iteration. This trend has its first roots in George Berkeley and later Thomas Reid, and on the view endorsed by these philosophers and the many that

3 This is clear in the Meditations, but has also been widely argued. For instance, in McDowell 1998 (Essay 11: Singular Thought and the Extent of Inner Space).

4 In this introduction I use the terms perception, perceptual experience, and perceptual states interchangeably. In the first chapter I draw distinctions between these.

followed them,[5] perceptual experience simply cannot be severed from the world and the way it is. This is because to perceive is simply to be related to the world itself perceptually, it is neither to represent it in a way that may or may not reflect how it is, nor is it to represent it regardless of whether or not it is. This trend takes its motivations from various places. It is partly anti-skeptical (for instance, as it occurs in John McDowell's work e.g. 1998), partly motivated by issues concerning reference (as in the work of Hilary Putnam 1981 and John Campbell 2002), partly by phenomenology (as in Heidegger's *Being and Time*), and partly by an affinity and favoring of the verdict of commonsense (as it was with Reid 1983).

But as is usually the case, to take an opposite position often leads to incurring the opposite costs, and the anti-Cartesian trend has been haunted by the case of misperception which for the Cartesians was the safest ground. Descartes found a resting point at the beginning of the Meditations which involved nothing more than the representer and her representations, but for anti-Cartesians who take perceptual states to essentially relate us to the world, there is no question of being able to rest, as Descartes did, amidst mere appearances or representations. Instead anti-Cartesians find themselves confronted by the task of explaining how Descartes' first-person resting ground, which today we describe using the notion of phenomenal character, could essentially relate us to the world. On the one hand this requires explaining how relations to the world give an adequate characterization of phenomenal character. On the other, this requires

5 To name a few: there have been various proponents of anti-Cartesian views of perception within the phenomenological tradition, in particular Heidegger and Merleau-Ponty, and more recently Dan Zahavi. In the early analytic and the pragmatic traditions there are philosophers who are sympathetic to anti-Cartesian views in general even if not specifically with respect to perception, for instance Gilbert Ryle and Richard Rorty. And more recently there are the works of Hilary Putnam and John McDowell that take up the anti-Cartesian trend.

confronting the problematic possibility of misperception. Misperceptions are problematic because minimally they mislead us, and *minimally, they are capable of doing so radically*. We can be altogether deceived with respect to the world's nature. If perception is just a relation to the world, it is hard to see how this sort of misperception is possible. The most obvious explanation returns us to Cartesianism. On it, we follow Descartes in saying that experience need not involve perceptual contact with objects, at least in misperceptual cases. But even if this limits the scope of the mind/world separation to misperception, it still shows that perceptual states are not fundamentally world-involving.

At this point we might turn to an assessment of the other options available to the anti-Cartesian, but doing so would be premature. This is because we need to consider a final possibility, namely, that the dichotomy between Cartesian and anti-Cartesian views is mistaken. This is an increasingly reasonable hypothesis. For one thing, contemporary philosophy has largely abandoned Cartesian dualism which supplemented and made plausible the radical separation between mind and world. So even if today there are views that accept the possibility of appearances or representations severed from the world, they do not do so in the manner that Descartes did. For another, the views currently carrying the banners of Cartesianism and anti-Cartesianism in perception, the intentional and relational view respectively, have come a long way. They have developed various ways of accommodating the good-making features of the opposite view, and some have argued that hybrid views are possible.[6] The result is that it is no longer possible or plausible to

6 For instance, Schellenberg 2010, Tye 2011, McDowell 2013, and Dorsch 2013 all argue that we can have views that are both intentionalist and relationalist.

see the two families of views as diametrically opposed, nor to see one view as clearly preferable to the other.

One reason for thinking that the current iterations of the Cartesian and anti-Cartesian views are not different is that it is very hard to pin down the specific difference between the views. The literature on relationalism and intentionalism (sometimes representationalism) is extremely large and unwieldy, and it precludes any quick and easy categorization. This is radically unlike the straightforward opposition (described above) between Cartesian and anti-Cartesian views. One might think the question concerns the acceptability of representational content.[7] But some relational views have accepted such contents, e.g. Bill Brewer (2006), Matthew Kennedy (2013), and myself in the present work. And anyway, intentionalists disagree amongst themselves about the nature and role of contents. For instance Adam Pautz (2010) and Susanna Siegel (2012) disagree on whether perceptual experiences are relations to a content; and Michael Tye (2011) and Susanna Schellenberg (2010) disagree on whether contents are Russellian or Fregean.

Another thought is that the views differ on whether perceptual states are disjunctive or not. For instance Pautz (2011) structures his discussion around disjunctivism's opposition to intentionalism. But there are philosophers who are best described as disjunctive intentionalists, e.g. McDowell (1994) and Tye (2011), and philosophers who are best described as nondisjunctive relationalists, e.g. Johnston (2004). A final thought returns to the Cartesian roots by construing the differences as that between views on which perceptual states depend on worldly objects or not. But some

7 For Instance, Susanna Siegel's 2012 discussion focuses on whether relationalist views can or must accept perceptual contents.

intentionalists like Tye (2011) and Schellenberg (2010) follow relationalists in accepting object dependence, and some relationalists like Kennedy (2009), Genone (2013), and myself (in the present work) have argued that object dependence is insufficient for relationalism. So what differentiates the current descendants of Cartesian and anti-Cartesian views of perception?

One way to make sense of the debate between relationalism and representationalism, and the way I adopt, can be understood in light of the following question: *do we perceive the world because we represent it, or do we represent the world because we perceive it?* Intentionalists accept the first disjunct, relationalists the second. In this construal I am following an idea articulated by the relationalist John Campbell (2002) who takes the central disagreement to be about the explanatory role of perception. He writes

> We are not to take the intentional character of experience as a given; rather, experience of objects has to be what explains our ability to think about objects. That means that we cannot view experience of objects as a way of grasping thoughts about objects. Experience of objects has to be something more primitive than the ability to think about objects, in terms of which the ability to think about objects can be explained.[8]

The idea expressed by Campbell is that relationalism gives our perceptual experiences of objects a founding role with respect to intentional capacities like the capacity to think about the objects of the external world. As such, one can say that the heart of the disagreement concerns *Brentano's thesis,* which claims that what characterizes all mental phenomena is *intentionality* or the mind's capacity to "direct" itself upon or be about

8 Campbell 2002 p.122

objects that are external to the mental act itself, whether or not they exist.[9] For relationalists, intentionality, which is operative in those cases in which we represent the world, is taken to be derivative in the sense of depending on a more fundamental capacity to perceptually experience the world's objects. This is what explains why relationalists often downplay the role of perceptual contents, why they adopt disjunctivism, and why they often emphasize object dependence. Perceptual contents are unnecessary insofar as perceptual states are not primarily intentional, but rather ground intentionality. Disjunctivism is attractive because it allows relationalism to put aside those cases that seem to establish that perception is intentional. And object dependence is needed because perception is unlike intentional states which do not require the actual, real, or worldly presence of the object. So relationalists, but not intentionalists, take being perceptually related to the world to explain how we can come to have world-directed thought, talk, memory, and so on.

Intentionalists, by contrast, reverse this order of grounding. Committing to Brentano's thesis (which is not to say they are necessarily motivated by its preservation)[10], they argue that perceptual experience successfully conveys the idea of mind-independent world *because* such experience is intentional. Our perceptual access to the world is thus grounded in the *sui generis* intentionality of the mind. Indeed in many cases intentionalism is explicitly introduced by analogy to other intentional attitudes like belief. For instance this is the route Siegel (2012) takes in introducing her version of

9 This is to say that I take intentionality to allow for what Brentano called "intentional inexistence", namely that the object of a mental act may exist only within the act, even though it is not identical with it.

10 Intentionalism has many benefits to motivate it. For more, see the works on perception by Adam Pautz, Susanna Schellenberg, and Susanna Siegel (most of which are cited here).

intentionalism, "the content view". She writes "the content view can be refined into a proposal that finds the following similarity between visual experiences and beliefs: like beliefs, maps, and newspapers, visual experiences have contents….According to the proposal, experiences are the kinds of states that can be accurate, and their contents are conditions under which they have their status"[11]. My claim is that this is not a mere analogy. It is rather a metaphysical commitment to a common representational or intentional core between perceptual experiences, beliefs, and other intentional states.

Taking this to be the central contention of intentionalism helps us understand the appeal to perceptual contents, and why object dependence and disjunctivism are often not emphasized. Since perception is intentional, it depend on mental contents being conveyed to the subject having the experience. This content *represents* the world as mind-independent, giving us the capacity to experience, think, and talk about such worldly objects whether or not they are they are there. With the content being sufficient for experience, there is no need to appeal to disjunctivism by way of excluding problematic cases that do not depend on worldly objects. And this is because the worldly objects themselves are unnecessary, all that is needed are the contents (although as I noted above, the contents themselves might be object-dependent). So for intentionalists, it is intentionality or representations that are basic, not perception. Perception is just one way in which intentionality is manifest; it is one amongst many world-directed psychological attitudes rather than being their ground.

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11 Siegel 2012 p.30

2 The Commonsense Appeal of Relationalism

Provided that we can make sense of the distinction between the contemporary Cartesian and anti-Cartesian views of perception - intentionalism and relationalism - why should we prefer relationalism?[12] While there is no easy way of declaring one view definitively better than the other, many philosophers, including some intentionalists like Adam Pautz (2011), have thought that relationalism is the view most appealing from the perspective of commonsense.[13] But how should we understand the verdict of commonsense?

The world around us is littered with objects that exist, and which in most cases do not depend on us in any way. Intuitively, we think that these very objects are the objects of perception, they are what populate our "perceptual world". Intuitively, as a "faculty of the mind", perception simply reveals the world to us, it puts us in perceptual contact with the world's objects. The commonsense explanation is that in perceiving the objects, the objects seem (from a first-person point of view) a particular way to us. Because they do, we can refer to them and know things about them. As an example, consider the following question-answer pairs

"Is the phone ringing?" - "Yes, I heard it"

"Is that block really solid?" - "No, I just touched it"

"Are you sure there are three electrons?" - "Yes, I just looked at the computer reading"

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12 The literature on which view we should side with is extremely large and I do not try to deal with all of it here. But for some good discussions, see Campbell 2002, Fish 2008, and Brewer 2011 on behalf of relationalists, and Pautz 2010, Schellenberg 2011, and Siegel 2012 on behalf of intentionalists.

13 Perhaps most famously, Reid 1983 argued that the philosophy of his time seemed opposed to commonsense when it came to perception, and he himself chose to side with commonsense which gave relationalism the derogatory label of naïve realism.

Despite the difference in these pairs - that they appeal to different sense modalities, and that the last case is indirect - it is uncontroversial (at least if one is not a skeptic) that each answer satisfies its question. The questions ask about the way the world is, and the answers given satisfy the question by appeal to what was seen, heard, or touched.

Is intentionalism's position worse with respect to commonsense? Not clearly. To appeal to commonsense, intentionalism needs to give a central role to the world's objects. This can be done in several ways. Intentionalists can accept externalism about contents, and in so doing make the contents object involving. Intentionalists can also accept singular contents, and this would mean that particular worldly objects are essential to the content. But this alone is not enough. Intentionalists do not just need to involve specific worldly objects, they also need to relate those objects to the state in the right way. The state must involve the object because it is *that very worldly object* that appears to the perceiver and allows her to learn about it. Can intentionalism procure this intuitive feature?

On the face of it the answer is yes. To see this we need to first see that intentionalists can make the referential and epistemic significance of the state dependent on the state's phenomenology, and the state's phenomenology dependent on the object. The first step is possible if one adopts a *phenomenology-first* intentionalist view. On this type of view, when something is perceived, there is a conscious and first-person experience of the way that thing is. On the basis of this conscious access, the object can be referred to and known.

The second step seems possible initially. This is because the state's phenomenal character can depend on the object of the state. But here a central distinction is needed. There are two ways in which phenomenal characters can depend on objects, and one way is more in line with commonsense. I will call the first way *indirect* or *causal*, and the other way *direct* or *constitutive*. Indirect or causal dependence is exemplified by qualia centered intentionalist views, e.g. Charles Siewert (1998). On this type of view, the phenomenal character of the experience depends on the objects, but it does so causally. This means that if the causal conditions are replicated, *even in the absence of the object*, the phenomenal character of the state can be retained. A view of this sort makes phenomenal character dependent on the object, but does so indirectly. The phenomenal characters *results* from the object, but it is not constitutive of it. It is not *that object* that is appearing, but rather that object which is contingently *giving rise* to the appearance. By contrast, relational views like the ones endorsed by Mike Martin (2004), William Fish (2008), and Bill Brewer (2011), require direct or constitutive object dependence. When the object dependence is constitutive, the state itself is at least partly constituted by that very object, and this means that the object must exist and be present to the perceiver if she is to enter the state. If the object is there, and the perceiver is in perceptual contact with it, the state has that phenomenal character; if the object is not there or the perceiver fails to be in perceptual contact with it, the state simply lacks that phenomenal character. According to relationalists, *all* perceptual phenomenal character is directly or constitutively object dependent since perceptual states most basically relate us to objects.

Can intentionalists maintain that objects are constitutive of perceptual states in the same way? In principle yes. The problem is that if intentionalists maintain this sort of constitutive connection, the stipulated contents cease to play any important role. Contents are used by intentionalists as a way of accounting for the phenomenology and significance of perceptual states which they lack objects, but if perceptual states always have objects, then contents are needed for neither of these tasks. At least with respect to this use, contents are redundant. So effectively, this means that intentionalists deny that objects are constitutive in this way. This is clear when we look at cases of misperception. Specifically, the way we explain hallucinations reveals the strength of the connection we make between objects and phenomenal characters. Most intentionalist views admit that hallucinations are perceptual states with phenomenal characters, but deny that they need to be object involving, constitutively. For instance, Susanna Schellenberg (2011), Michael Tye (2011), and John McDowell (2013) (all of whom accept that contents are external and singular) do this in different ways. Schellenberg thinks hallucinations can have characters due to the deployment of perceptual capacities, even when they fail to pick out an object. Tye thinks they can have characters due to uninstantiated properties which have no objects. And McDowell thinks they can have characters due to their *de se* contents, and those do not depend on the presence of an object. On these views most intentionalist views are committed to indirect or merely causal object dependence, at least in hallucinatory cases. By contrast, relationalists tend to reject that hallucinations have a phenomenal character. When they do accept its character, they do so by bringing in some object. For instance Martin (2004) and Fish (2009) deny that hallucinations have a

phenomenal character, and Johnston (2004) accepts that they do by finding objects to which they are relations.

3 The Way Ahead

In the last section I argued that although intentionalism can uphold the commitments of commonsense, in doing so it undermines the appeal to contents. This should make relationalism the more appealing view if contents are only required to account for cases of misperception. The problem is that if we adopt the relational view and with it the constitutive view of objects, it becomes unclear what we should do with radical cases of hallucinations. To think that objects are constitutive of perceptual states is to deny that there are any perceptual states without objects, and hallucinations do not have obvious objects. This gives the relationalist two options with respect to hallucinations:

(1) Hallucinations are not genuinely perceptual, and do not involve perceptual contact with objects, or

(2) Hallucinations are perceptual, and involve perceptual contact with objects

By contrast, intentionalists can also accept a third view which reflects the causal or indirect view of object dependence:

(3) Hallucinations are perceptual and do not involve perceptual contact with objects.

The problem for relationalism is that (3) seems to be the most attractive view of hallucinations. (1) seems to fly in the face of hallucinatory experiences which often seem

to have a perceptual phenomenology. And while it is open to relationalists to maintain that hallucinations have a merely "perception-like" phenomenology, it is not easy to maintain this in a way that is plausible and not ad hoc. (2) also seems difficult to maintain since often we are at a loss to say what object we are related to when hallucinating. This leaves (3) as the most intuitive because it accepts at face value the phenomenal character of hallucinations, and the absence of the object hallucinated. If (3) is the most attractive view of misperception, but is a view that must be rejected for relationalism to be appealing from the perspective of commonsense, then relationalism is in a dilemma. Either it has an intuitive view of the connection between perceptual experiences and their objects but an unintuitive view of hallucinations, or else it accepts the intuitive view of hallucinations but in so doing loses the commonsense appeal. Of course intentionalism faces the exact same dilemma when it comes to commonsense.

My aim in this project is show that relationalism can overcome this dilemma. I want to argue that relationalism has a commonsensical story about how veridical perceptual states involve relations to objects, and that it can reject the problematic view of hallucinations. Thus the project can be construed as defending two claims

(A) that the objects we are in perceptual contact with are sufficient for perceptual phenomenal character, and

(B) that the objects we are in perceptual contact with are necessary for perceptual phenomenal character.

The first claim depends on showing that when we cite the objects of an experience, the objects we are in contact with, and the way we are in contact with them, this gives us an

adequate understanding of perceptual phenomenology. I defend this claim in the first two chapters. The second claims depends on showing that even in cases of hallucination, there are objects which we are in perceptual contact with. I defend this claim in third, fourth, and fifth chapter. By doing this, I uphold a view that maintains that the highest common factor *does not fall short* of perceptual contact with the objects of the world. In arguing this, I undermine the need for contents in cases of misperception, and also the need for controversial disjunctive views that allow us to reject the more commonsensical common factor approach to perception.

Chapter 1

Perceptual Contact

In this first chapter my aim will be get clear on the core commitment of relational views. I begin by arguing that the core relational commitment is that *all* perceptual states involve *perceptual contact with worldly objects*. This results in two strengths of relationalist views, those that think perceptual contact is necessary but not sufficient, and those that think perceptual contact is both necessary and sufficient. I call the first *impure* relationalism, and the latter *pure* relationalism, and in the remainder of the project defend the more stringent pure view while highlighting features that force us to retreat to the weaker impure view. I then turn to the thorny issue of mediation in the perceptual contact relation. I argue that relationalism is fairly but not entirely permissive when it comes to mediation. By highlighting the acceptable and unacceptable forms of mediation I develop a litmus test for what is to count as a minimally relationalist view. With this test I consider some current relationalist proposals to see whether they meet the minimal commitment.

1.1 Defining Perceptual States

I understand theories of perception as aiming at a fundamental characterization of *perceptual states*.[14] "Perceptual state" is a philosophical term of art which needs definition. Such states are states that a subject enters whenever they see, hear, taste, touch, or smell objects of the world. More generally, they are states in which subjects gains access to their world through one or more of their sense modalities. In addition, perceptual states also include cases of *seeming* to access objects through one of the sense modalities. Often, the blanket term for all these cases is *perceptual experience*. While I will use that term occasionally, my discussion will mainly make use of the notion of a perceptual state.

To further home in on perceptual states, I propose beginning with an ostensive definition followed by abstraction. Begin by considering your total occurrent and conscious state[15] at this time. This is made up of everything you are experiencing at this moment. That state has at least four constituents: there are certain thoughts you are having e.g. about this paper, the emptiness of the coffee cup, etc. There is some mood or otherwise affective state that you are in e.g. you feel calm, bored, etc. There is also some way your body feels to you interoceptively e.g. sitting, alert, hungry, suffering a back pain, etc. And finally there is some way the world around you seems exteroceptively. The part of your total state that is perceptual includes only the last two of these. My focus, however, will be the exteroceptive part.

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14 In what follows I will omit the word "perceptual". I also use "state" to mean "perceptual state".

15 Since the whole project's focus is conscious occurrent states, I will almost always ways omit the words "occurrent" and "conscious".

We now have a preliminary grip on perceptual states: they are occurrent, conscious, embedded within a "larger" occurrent and conscious state (at least for us humans), and characterized by the conscious and occurrent reception of information about the world and body through one's senses. This initial characterization falls short of what we need, however. This is because the definition only captures *veridical* perceptual states, which are cases of *successfully* perceiving the world. Cases of perceptual error may not involve the conscious reception of sensory information, as we might think is the case in Descartes' dream scenario. As it stands, we have defined only those states I will call *good*, *veridical* or *perceptual*. We are yet to define the *bad*, *falsidical*, or *misperceptual* cases.

To broaden the definition and include the bad cases, we need to appeal to the notion of *phenomenal character*. The phenomenal character of a perceptual state is that intrinsic property of a perceptual state which individuates it in terms of *what it is like* to be in that state. What it is like to be in a perceptual state is for the world (or one's body, in cases of interoception) to be *presented, appear,* or *look* some way to one. For instance, one's current state may be such that one's body appears full of energy or as having a pain in one's left foot. In addition, the room might appear brightly lit and quiet, and one's shirt might appear red and soft. Since we are constraining ourselves to perceptual states, the relevant notion of appearance, presentation, or look, is that of *sensory* or *qualitative* appearances, presentations, or looks.

Appealing to phenomenal character allows us to redefine perceptual states with the desired generality. Start by considering the phenomenal character of your current

good perceptual state. Now consider the following continuations of your experience: You blink, and Descartes' demon displaces you into an exact physical replica of your current location. Since this is an exact physical replica, the character of your state remains the same; everything continues to look the same because everything was designed to be the same. A second blink has the demon displace you again, this time into a world that is color-inverted relative to yours. The demon, however, also modifies your perceptual system such that your new wiring re-inverts the colors of the world. Again, the character of your state will remains the same, things look just as they did. Finally, on your last blink, the demon hurls you into a void while causing you to hallucinate an exact replica of your current location, right before you expire. Again, the character of your state remains the same. The world and the objects in it differ across these four scenarios, but intuitively these cases share something. All of them leave your perceptual state as is, or if the state changes, you are not privy to these changes. For you it seems as if you stayed in place before suddenly expiring, despite the changes that took place. This aspect that seems to cut across the different scenarios is the phenomenal character of your perceptual state. It is an intrinsic property of perceptual states, and it provides a situation-neutral way of individuating the state.

1.2 Relational Views

With the definition of perceptual states in place, we can now define the relational family of views formally. Recall that relationalism is motivated by the commonsensical idea that perception fundamentally places us in perceptual contact with the world. On the

assumption that what the world has in it are particular, material, and mind-independent objects which possess various properties (for short, *worldly objects)*, a first pass at the minimal relationalist commitment is

Identity: Perception is identical with perceptual contact with worldly objects.

For short, "perceptual contact with worldly objects" is *world-contact*, so perception is being identified with world-contact. More formally, we might say that the property of a perceiver being in a veridical perceptual state is identical with the property of that perceiver being in world-contact. Since perceptual states are individuated by their phenomenal characters, this means that a veridical state's character is wholly constituted by the worldly objects the perceiver is in contact with.

Relationalism is motivated by the attempt to capture our commonsensical intuitions, but as theory of perception, it is meant to be a theory of *all* perceptual states. The identity claim above is more limited than that, but can be straightforwardly expanded. The most obvious combination would be that of maintaining that all (and not just veridical) perceptual states are identical with being in world-contact. So the simplest construal of relationalism is as an identity thesis:

Pure Relationalism: The property of a perceiver being in a perceptual state *is identical with* the property of that perceiver being in world-contact.

There are also two ways of weakening the commitment of pure relationalism. One way is exemplified by the Identity claim above. On this way of weakening, relationalism is understood as a theory of *some* but not all perceptual states. We can call such views *Partial Pure Relationalist* views. *Disjunctive relational* views are a good example of this

weaker construal. Disjunctive views maintain that perceptual states must be given a disjunctive analysis, with good cases being explained one way and bad cases explained another. Accepting disjunctivism along with relationalism gives us disjunctive relationalism, which accepts that the explanation of good cases involves world-contact, but denies that explanation of bad cases does.

Another more substantive way to weaken pure relationalism involves limiting the commitment rather than scope of relationalism. On these views, perceptual states *essentially involve* world-contact without being identical to it. In this case world-contact is a necessary but insufficient constituent of perceptual states. As long as whatever else goes into the state does not violate world-contact (I discuss this in more detail in the following section), a minimal form of relationalism is preserved. We can call this weakened view *impure relationalism*:

> Impure Relationalism: The property of a perceiver being in a perceptual state *essentially involves* that perceiver being in world-contact, where that contact is not violated by whatever else goes into the constitution of S's state.[16]

One might wish to adopt this weaker form of relationalism if one thinks that a perceptual state's character cannot be entirely constituted by the perceiver's perceptual contact relation and the worldly object to which she is related. This would mean that some non-relational features play a constitutive role in perception. An example might be a view that takes perceptual phenomenology to partly depend on qualia, and partly on relations to objects (provided that the qualia posited to do not violate world-contact). In addition, we

16 Particular versions of impure relationalism will have to say more on what is meant by "essentially involving" world-contact.

can combine the two forms of weakening to get Partial Impure Relationalism, which accepts impure relationalism for a limited set of perceptual states. These variants can be conveniently placed into the following table:

	All perceptual states	Some perceptual states
World-Contact is necessary and sufficient	Pure Relationalism	Partial Pure Relationalism
World-Contact is necessary but not sufficient	Impure Relationalism	Partial Impure Relationalism

In what follows, my focus will be on pure and impure views, and I will put aside partial views. This is because partial views seem to me an admission that relationalism is the wrong view of perceptual states. To see this, consider disjunctive relational views. On these views, bad cases do not involve world-contact. If these views also admit that bad case have a perceptual phenomenal character, then their view amounts to denying that perceptual states essentially involve perceptual contact, and this is a denial of relationalism. By contrast, if bad cases do not have a perceptual phenomenal character, then it is not clear what the disjunction is for. Such views are more appropriately described by saying that sometimes, one undergoes a perceptual state (which always involves world-contact), and sometimes one is in a state that seems to be perceptual but isn't. These latter views are better thought of as eliminativists about falsidical perceptual states. In addition to excluding partial views, my aim will be to defend the more restrictive pure relational view. In chapter 2 I will discuss some possibilities that if true, will require a retreat to impure relationalism, but I will argue that these possibilities are

controversial. From the reader's perspective, however, either pure or impure relationalism should be acceptable since my arguments aim at defending the more stringent pure view.

1.3 Perceptual Contact

All of the above relational views make use of the notion of "perceptual contact", and this makes it the central notion for relationalists. Since it is not mean to be taken literally, being apt for a case of touch but not vision, we need a way of understanding contact in non-literal cases. In this section, I consider various features of the perceptual contact relation. In the next section, I turn to the role of mediation in the perceptual contact relation. Since any view of perceptual states must accept that perception minimally involves causal mediation (if it is to be scientifically plausible) regardless of how direct the view is supposed to be, looking at how contact stands in relation to mediation will shed needed light on what perceptual contact amounts to. This should be of benefit to both proponents and opponents of the view since the limits of relationalism are not always clearly recognized.

Before defining contact more explicitly, two preliminary comments are worth making: First, by contact I largely mean what others have used the term "acquaintance" to mean. I avoid using the latter term only to avoid unwanted assumptions or associations, but I think the terms basically aim at capturing the same relation. Second, contact is supposed to do justice to the idea that perception is a sort of openness to the world or direct revelation of it. When we are in perceptual contact with an object, the object itself is presented to us, it appears a certain way through its perceptible properties

and parts, and in so doing is revealed to us. The relation of perceptual contact therefore opens us up to the world and opens up the world to us.

We can now turn to some of the relation's central features. Perceptual contact is a two place relation, where the relation is a direct, conscious, and occurrent experiential relation obtaining between a perceiver S and a perceptible object o. World-contact is simply a restricted form of contact, it stipulates that one of the relata, the object that S is in contact with, be part of the real or external world. Continuing, we can that S is placed in contact with o just in case S is in a perceptual state in which o itself constitutes the phenomenal character of that state. The idea is that the presence of the object itself brings about a change in the character of the state, and thus "determines" (more on this in the next section) it phenomenologically. So the presence of *this* particular object is necessary for *that* particular phenomenology, and without an object the state would altogether lack a phenomenology. This means that perceptual contact has existential import: if S is in contact with o and its properties then o and its properties exist. In addition, the relation entails that the existent object is *present* to the perceiver, which means that it falls within the perceiver's "sensory scope" (a concept I elaborate on in chapter 2). Finally, since perceptual contact focuses on phenomenal determination, it does not depend on the perceiver's recognition of contact. If S is in contact with x, and x is y, then regardless of what the perceiver thinks (or indeed if she thinks at all), she is in contact with y when in contact with x.

In addition to the above features, we can also say that the perceptual contact relation is neither symmetrical or reflexive. It is not symmetrical because only one of the

relata needs to be a subject capable of having experiences.[17] As such, it follows that the object relatum need not be in contact with the perceiver who is in contact with it. Of course there are cases in which an experiencing being experiences a being that experiences it. Merleau-Ponty's (1962) case of one hand touching another is such a case. There, one hand touches the other, and the other touches the one. However following Merleau-Ponty, I take this case to be one of two perceptual contact relations, not one; the hand is either touching, or touched.[18] Perceptual contact is also not reflexive because one need not be in perceptual contact with oneself when one is in contact with the perceived object. Otherwise it would be the case that, for example, in seeing a cat, one must also see oneself seeing the cat. This blatantly gets the phenomenology wrong.[19]

Finally, we should note that while perceptual contact is a direct relation, an indirect form of perceptual contact is possible. This is due to the fact that contact is a matter of phenomenological determination. For instance, consider a blind man with a stick. The man is in tactile contact with the stick, but if the stick bumps against the wall, this alters the phenomenal state of the blind man since he now indirectly feels the pressure of the wall. This is indirect contact, which is is parasitic on (direct) contact since any time one is in indirect contact with an object, they are so by being in (direct) contact with some other object e.g. the wall determines the blind man's state through the blind man's perceptual contact with the stick.

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17 This might seem odd given that ordinary usage is such that if x is in contact with y then y is in contact with x, but recall that this is about perceptual contact specifically.

18 Merleau-Ponty 1962, p.92

19 This is so even if one accepts some sort of higher-order theory of consciousness because no theory claims that we both perceive our target object and perceive ourselves perceiving the target. To say that would be like saying we saw a third person image of ourselves in the perceptual act every time we perceived.

1.4 Forms of Mediation

One way to understand in what sense perceptual states involves contact with the world is to understand what sorts of mediation are allowed and disallowed by the relation. Perceptual contact is a relation that is often said to be "direct" or "immediate" in some sense or other. So far we have seen some ways in which it is. We have said it is supposed to simply open us up to the world. That it involves the actual presence of the object itself. And that this direct relation is supposed to be what underpins our capacity to represent the world. But as I said in the last section, no view of perceptual states can discount all forms of mediation since there is at least causal mediation. The relationalist must therefore steer a course on which contact allows some forms of mediation while disallowing others. Minimally, what the relationalist must deny is any form of mediation in which the object's presence or absence becomes insignificant to the character of the perceptual state. If this were to happen, then the presence of the object would become unnecessary for perceptual states, and this would seem contrary to the idea of opening us up the world, revealing the object, or underpinning our capacity to represent such objects. To steer this course, we can begin with an instructive puzzle raised by the language of phenomenal determination which we used to characterizing perceptual contact at the end of the last section.

Consider the least metaphorical case of contact, the case of touch. Specifically, consider the case of (successfully) touching a wall. In so doing you are in contact with the wall, not with anything else. This is so because when you touch the wall's surface, it is that surface which constitutes the way things are for you. So the surface's features

determine the phenomenal character of your state. This is one way of understanding phenomenal determination. But now notice that there is another way of using the term. We can rightly say that the sensory capacities of our hand (or alternatively its associated processing) *determines* the character of our state. This is clear if we contrast two examples: in the first, you touch the wall which is partly smooth and partly rough. When touched, the resultant phenomenal character is partly of a smooth surface, and partly of a rough surface. But now imagine your hand's physiology altered such that part of your hand is extremely sensitive to ridges while the other is not. With this hand, touching a wall with a uniform smoothness (or roughness) would result in a character identical to that of your normal hand touching a partly smooth and partly rough surface. Similarly, a uniformly colored wall will look uniform to a normal perceiver, but a color blind perceiver can see a multicolored wall as similarly uniform in color. Doesn't this mean that it is more right to say that the phenomenal character of a given state is partly determined by the object, and partly by the capacities? Both seem to phenomenally determine the character of one's state insofar as varying either changes the state's phenomenology. If so, then this raises a problem for describing perceptual contact using the language of phenomenal determination. If a perceiver is placed in contact with an object just in case the object's presence phenomenally determines his state by making a difference to it, then either we should also add that we are in perceptual contact with our capacities since they phenomenally determine our state, or else we should admit that the language of phenomenal determination does not capture what is distinctive about perceptual contact. Since saying we are in perceptual contact with our capacities seems

counterintuitive, we should opt for the alternative. The language of phenomenal determination needs further precisification to sufficiently capture what is significant about perceptual contact.

In response we can draw a distinction between two forms of determination, *enabling* and *constitutive* determinations. These notions are nicely clarified by using a metaphor: Consider a theatrical performance in which an actress has just been presented. There are two ways in which she could have been presented. One way is for an announcer to come on stage and present her. She might begin by talking about her, describing her, saying that she is about come on stage, point at her behind the curtains, and so on. Another way is to for the actress herself to show up on stage. Now she is presented by being herself there; being present. She walks onto the stage rather than simply being announced. When the relationalist talks about objects being presented to the perceiver, he has the second picture in mind. The object itself is not merely announced (as it might be by some mental contents conveyed to the subject), it itself shows up and we are in contact with it and its various properties.

But now turn to the role of the stage. The stage is the place where the presentation of the actress takes place. The difference in the roles of the actress and the stage in the theatrical metaphor illustrates the respectively different roles of constitutive and enabling determinations in perceptual states. While the stage is the *enabling condition* or *medium* of presentation for the actress, the actress herself is the *constitutive condition* that determines the presentation. Her being there, on stage, constitutes the presentation. But the medium, the stage, *enables* her presence more or less conducively. The stage may be

badly lit or well lit, have poor audio equipment or good equipment, be spacious or not, etc.. In each case the actress herself is presented, but what changes is the extent to which she and her properties are revealed to us. How well we see her, hear her, which features of her are visible at all depends on the stage. Still, it is her who is constitutive of the presentation.

The relationalist view can be explained with this metaphor. First, the object is itself present. It is not merely announced (e.g. through some mental content), but itself there. The object constitutively determines the state's character. But the state is also made possible by various enabling conditions which set the stage for the object. These range from the processing taking place in the subject, to the adequacy of the lighting for vision, the wave medium for sounds, and so on. If these conditions fail to obtain, it will be like the stage with no audio equipment, or lights, etc. One then fails to be in perceptual contact with worldly objects, and so fails to be in a perceptual state. If the conditions obtain, they can also obtain to varying degrees. They will all place us in contact with the object, but they will reveal more or less of it. For instance, the colorblind person sees less of the wall's features than a person with normal human vision, and the person with bad eyesight sees less of the wall's boundaries than does a person with good eyesight.

Despite the range of these conditions, not all cases of mediation are acceptable. Just as the actresses does not show up if the curtain between her and us fails to go up, or if she is occluded behind a cardboard cutout of herself, so some mediating conditions can simply cut off our perceptual contact. Since the relationalist is committed to saying that perceptual states always involve contact, she must deny these sorts of mediating

conditions. For the relationalist, when such mediating conditions obtain, we are simply not in a perceptual state. So, to consider the details of this more carefully, we can turn to John Foster's (2000) useful discussion of different mediating or enabling conditions.

Foster's aim is to defend idealism as a view of perception, and as such is also interested in direct contact (in his case, with mind-dependent objects). Foster tries to capture what I calling perceptual contact with what he calls the "φ-terminal" relation. To explain the directness of the φ-terminal relation, he consider two types of mediation, perceptual and psychological, that might occur when one has a perceptual experience. For perceptual mediation, he writes:

> It often happens that the perceiving of one thing is wholly channelled through the perceiving of another. This occurs when, for some subject S, time t, and items x and y, (1) S perceives x at t; (2) S perceives y at t; (3) S's perceiving of x at t breaks down into (is constituted by the combination of) his perceiving of y at t and certain additional facts; and (4) these additional facts do not involve anything further about S's perceptual condition at t (anything over and above what is already covered by S's perceiving of y). In other words, in combining with the fact of S's perceiving of y, they do not add further perceptual facts, about S at t, to the constitutive base.[20]

For psychological mediation, he adds:

> …philosophers who agree that φ-terminal perceiving is not subject to any further form of perceptual mediation, may still differ over whether it is subject to mediation in a broader sense, and this difference of view can also be represented as an issue between a kind of direct realism and a kind of representative theory[….L]et us say that S's perceiving of x at t is psychologically mediated by his being in Σ if and only if (1) Σ is a psychological state; (2) Σ is not, in itself, x-perceptive (i.e. being in Σ does not, on its own, logically suffice to put one in perceptual contact with x); (3) S's perceiving of x at t breaks down into his being in Σ at t and certain additional facts; and (4) these additional facts do not involve anything further about S's psychological condition at t (anything over and above what is already covered by S's being in Σ). In other words, in combining with the

20 Foster 2000 p.4

> fact of S's being in Σ, they do not add any further psychological facts, about S at t, to the constitutive base.[21]

We can assess these types of mediation to get clearer on how they stand with perceptual contact. First consider perceptual mediation. If x is perceptually mediated by y, then the subject perceives y. Under the conditions, the perception of y amounts to a perception of x without any additional perceptual facts about the subject coming into play. Whether this sort of mediation problematizes contact depends on the further facts. For instance, if the fact is that x is a part of y, then this will not affect contact. Consider touching a surface which is part of the wall. Here the state puts us in contact with the surface. But the surface is part of the wall, so the state also puts us in contact with the wall. By contrast, if x is not a part of y, then there will be no perceptual contact with y, only with x. These are cases which Dretske (1969) calls secondary (epistemic) seeing and which I above called cases of indirect contact. In such cases one perceives one thing, for instance smoke, and in doing so counts as having perceived the fire, but only indirectly.

Psychological mediation is more difficult to assess because it breaks down into a variety of cases which Foster does not differentiate (although his discussion throughout the book addresses many of these). This is because Foster defines the psychological state Σ negatively, as *not* procuring perceptual contact with x. So any state that meets that condition will count as a psychological state. In this case even a state with a perception-like phenomenal character will count as psychological if its character is not determined by the presence of the object. Of course it may also lack a phenomenology. This allows us to differentiate at least four types of mediating psychological states:

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21 Foster 2000 p.10

1- States with phenomenal characters that are indistinguishable from states which procure contact with the object, O.

2- States that are introspectively or epistemically indistinguishable even if not phenomenologically indistinguishable from states which procure contact with O.

3- States with phenomenal characters that are distinguishable from states which procure contact with O .

4- States with no phenomenal character and which are introspectively or epistemically distinguishable from experiences which procure contact with O.

The first two cases are indistinguishable from contact with O even though they do not constitute such contact. In the first, Σ's character is indistinguishable because there is an appearance of O when there is no O present to do the appearing. This is the sort of state that a qualia theorist might posit. Whether there is a red cube to be seen or not, one's state can have qualia arranged red cube-wise. Regardless of how discerning S is, she will not be able distinguish her red cube qualia state from a state involving contact with a red cube. In the second case, Σ's phenomenal character is different from a case of contact, but cognitive or otherwise non-perceptual features make S incapable of differentiating her state from one of contact. The failure here is merely epistemic and not phenomenal. Different conditions, as when the subject is more attentive, has more background knowledge, etc., would reveal a distinction in the phenomenal characters. The third and fourth cases can be distinguished from contact with O. The difference between them lies in their intrinsic characters. The first has a phenomenal character, the second does not.[22]

22 Notably, aside from the second case, all these states impose a certain amount of cognitive clarity. Without such clarity the states could come to seem phenomenological indistinguishable or distinguishable even when they are not.

How do these different sorts of mediation affect perceptual contact and thus relationalism? It should be clear that mediation through a state of the first type is incompatible with contact. The reason is that a perceptual state which was mediated in this way would, in effect, violate the essential role the worldly object plays in relational views. If the phenomenal character remains stable regardless of the object's presence or absence, then the mediating state *blocks* our contact with the object, and *replaces* it with something else. Returning to our theatre metaphor, this would be like the actress being hidden behind a cutout of herself. Whether she is behind the cutout or not makes no difference to anyone observing the stage. She will continue to look as if she is there because of the cutout. In that sense, her role is explanatorily screened off.[23]

What about the second sort of mediation? Here the issue is a little more complicated requiring that we clearly maintain the distinction between our access to a state's character, and the state's character itself. On the one hand, it is clear that there is no worry about the state blocking our contact with the object. The object continues to determine the character of the state. What the object does not do, however, is *register* for the perceiver. Whether the object is there or not, the perceiver continues *to think* it is there. Still, this type of mediation is compatible with contact. Contact is compatible with the perceiver's failure to register that contact, just as the actress's presence does not depend on the attentiveness of her audience.

The third case is the one apt for the case of touch above. In this case, contact is mediated by a state which, alone, is insufficient for contact or belief that one is in contact.

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23 This notion is widely discussed in the relationalist literature. For some extensive discussions, see Martin 2004, Fish 2009, Hellie 2013

Yet this state mediates contact and it does so by having its own phenomenal character. Consider touching the wall again. One's hand feels some way to the perceiver as he touches the wall. The wall too feels some way. But there is no temptation to say that one has an experience of *either* one's hand or the wall, *but not both.* Perceptual states regularly put us in contact with more than one perceptible object, and in this case, one has an interoceptive sense of the pressure on own's hand and an exteroceptive sense of the wall and its features. So one has a perceptual state of both one's hand and the wall. Moreover, if one lost one's interoceptive sense of the hand, one would also lose the exteroceptive sense of the wall. So although the sense of one's hand mediates the feel of the wall, it does not violate perceptual contact with the wall. Being a creature with a hand is associated with particular phenomenal states, but these states, even if they are necessary for contact with a given object, are not also sufficient for it, or even sufficient for the belief that one is making such contact. Returning to the metaphor, we might say that this case is like that of the stage. The lit stage shows, but we do not mistake the stage for the actress on the stage. Such cases do not involve a blocking of contact, but an *addition* of contact.[24]

The final case is also one that does not violate contact because it neither has a phenomenology, nor makes one think it does. An example of such a state might be a sub-personal brain state necessary for achieving perceptual contact while not itself providing a phenomenal contribution. Nevertheless states like this can also determine the phenomenal character of an state because they enable that state. Here are two more

24 Indeed in the case of the hand, we have an addition of contact, but also an enabling of contact with the help of the addition (we can feel the wall because we can feel our hand)

examples of such states: It may be argued that one cannot perceive a cat as a cat without possessing the concept cat. If so, then possession of that concept is an enabling condition for the perception of a cat, but possessing the concept is (at least arguably) not a state with phenomenal character. Now take the condition of color blindness. When this condition does not obtain, S can perceive a partly red and partly green wall as having two distinct colors. When it obtains, the wall has a homogenous color. Not being color blind therefore an enabling condition for seeing two distinct colors, but it is not a phenomenally conscious condition. With our above metaphor, we might say - for instance - that the ropes that hold back the stage's curtain are enabling conditions of this sort, since they need to hold back the curtain for the actress to show up, but are not visible to anyone watching the presentation.

We should now have a better sense of how perceptual contact stands in relationship to mediation. Contact with an object does not imply that the experience is not mediated, it merely excludes some types of mediation. Unacceptable forms are ones that block perceptual contact. They have a phenomenal character that is object *independent* in the sense of making the presence or absence of the object irrelevant to the character of the state. Relationalists have described this sort of mediating state that blocks contact as one that *explanatorily screens off* the role of the object, and I will follow them in this. Keeping the screening off worry in mind is a useful way to think about the inappropriate forms of mediation because it highlights that the object has a necessary explanatory role for the relationalist. So regardless of whether one accepts pure or impure relationalism, the constituents of a perceptual state cannot explanatorily screen off the role of the object.

By contrast to such unacceptable cases there are acceptable forms of mediation that don't jeopardize the object's role. These include unconscious states, but also states or other features that make their own phenomenological contribution where that contribution is different from that of the object being perceived.

1.5 Mediation, Intentionalism, and Impure Relationalism

Although relationalists have often admitted that perceptual states have enabling conditions that mediate world-contact in various ways, and moreover have highlighted the screening off worry, they have not always fully clarified the acceptable types of mediation. The above discussion has attempted to remedy this, and from this we can make three points relating mediation to intentionalism and impure relationalism.

First, outlining these types of mediation allows us to put aside one apparent dispute between relational and intentionalist views; that concerning perceptual contents. Much ink has been spilt on the question of whether relationalists can accept perceptual contents or not (e.g. See Siegel 2012 and Pautz 2011). With the proliferation of content types, and the different ways different intentionalists understand perceptual contents, it can be an unwieldy task to say which types of content if any are innocuous for relationalism. With a clarification of acceptable forms of mediation, relationalists can give an easier answer. Any perceptual contents that do not screen off the role of the object are acceptable in principle. This means that if possessing a particular content is not by itself sufficient for the perceptual phenomenal character of the state, then that form of

content is acceptable. This is why the debate between relationalists and intentionalists is not about mental contents.

Second, a clearer understanding of mediation helps us evaluate singular contents as a means of capturing the relationalist insight. Some intentionalists e.g. Schellenberg (2010) and Tye (2011) are moved by relationalist arguments, but at the same time do not wish to let go of the various benefits procured by intentionalism. By way of marrying the views, they have appealed to singular contents of various types as a way of capturing what is right about the relational view. While these views seem like the relational view, particularly in veridical cases, they in fact commit to an unacceptable form of mediation. This is clear when considering how the views respond to cases of misperception. To take an example, we can consider Schellenberg (2010)'s Fregean content view which accounts for the relationality of perceptual states without having to resort to what Schellenberg calls “austere relationalism”.

Schellenberg argues that her view successfully gives metaphysical and explanatory priority to veridical perceptual states, as well as giving an account of the relationality of such states, without sacrificing representationalism.[25] She argues that perceptual experiences should be understood in terms of representational states with a Fregean content. Fregean contents on her view play the two roles Frege assigned to senses. The first is to provide cognitive significance, the second to determine reference.[26] The first role, on her view, is played by the mode of presentation, the second by the

25 Where representationalism is a first-order intentionalist view.

26 Schellenberg 2010 p.42

object or property presented. She describes the content of perceptual experience as follows

> On the suggested view, the content of experience is constituted by concepts that refer to objects and property-instances. On the notion of concepts in play, concepts cannot be analyzed independently of analyzing what it means to possess a concept. For the present purposes, it will suffice to characterize what it means to possess a concept as having the ability to refer to the external, mind-independent objects or property-instances that the concept is of. This ability involves among other things being able to discriminate between the things that fall under the concept and those that do not.[27]

So, in being in a perceptual state, Schellenberg says that the perceiver deploys a representational content constituted by a Fregean concept to picks out the relevant objects. A token experience is then a matter of deploying that concept "in a sensory mode", where that deployment can be identified with the phenomenology of the state.[28] Since the concept is essentially related to an object that it picks out, Schellenberg argues that this allows her to account for the relational aspect of perceptual states. This is what makes her view object-dependent as a relational view would have it. At the same time, one can deploy a concept while failing to pick out a referent, so concepts are not *radically* object-dependent as relational views would have it. She writes "The phenomenology of experience can be identified with employing concepts…[and]… Concepts can be employed even if they fail to refer"[29].

The problem with the view, from a relationalist perspective, is that it does not give objects a constitutive role in determining the state's phenomenology. This is because that

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27 Schellenberg 2010 p.38

28 Schellenberg 2010 p.44

29 Schellenberg 2010 p.44

job is done by the deployment of concepts. Deploying concepts, *whether they are empty or not,* gives the state its full phenomenal character. And while this allows the view to avoid worries about the indiscriminability of hallucinations and perceptions, it does so only at the cost of having the deployment of the concepts do *the whole* phenomenal job. In the terminology adopted above, Schellenberg's account is one on which the mediating condition - the possession and deployment of the concept - entirely constitutively determines the phenomenal character. Moreover, this determination is of a type that is phenomenologically indistinguishable from procuring world-contact, and so explanatorily screens off the role of the object.

Of course this is not to say that Schellenberg is wrong in saying that her view achieves *object dependency*. Her view *is* object dependent insofar as her Fregean contents depend on possessing and deploying concepts that are essentially referential in character, and thus essentially tied to objects in the world. This makes for a tight relationship between the constitutive condition (the deployment of the concept in a sensory mode) and the objects, but this is not as the same as having the objects be what is constitutive of perceptual phenomenology. On Schellenberg's view the state is object dependent through the content's object dependence, where that object dependence only go as far as the employment of the concept, without phenomenally registering the deployment's failure or success. For the view to be genuinely relational, it would have to go further. The state's phenomenology should depend on both the deployment and its success, because the deployment alone cannot have the requisite phenomenal impact. Of course Schellenberg

can accept that the presence of the object is required, but this would undermine her idea that there is a phenomenal common factor.

Finally, the discussion of mediation explains how we should understand impure relationalism. As I described it, the view requires that the perceiver be in perceptual contact with the worldly object, but where that contact is not alone sufficient for being in a perceptual state. If other constituents are part of the state, then one worry is that they will introduce features into the state that make world-contact irrelevant to the state's phenomenology. To avoid this, whatever else enters the constitution of perceptual states must not undermine the object's role in the state. By explaining the forms of mediation that are acceptable, we give a principled way of assessing whether the object's role is compromised, and so a principled way of determining what other constituents are acceptable on impure views.

Chapter 2

Two Problems of Veridical Perception

In the last chapter I elaborated on the core commitment of relational views and discussed various relationalist proposals in the literature. As we saw, relationalism can take one of four forms, two of which amount to accepting relationalism as the correct theory of perception. Those were pure relational views on which perceptual states are identified with the state of being in world-contact, and impure views on which world-contact is a necessary but insufficient constituent of the state (despite being a constituent whose phenomenal contribution cannot be undermined by whatever else enters into the state's constitution). Relational views are therefore a cohesive family of views focusing on the idea of perceptual contact. Are these views also plausible? In this chapter I argue that they are. I do this by focusing on the sufficiency worry I presented in the introduction, which states that it is unclear whether the worldly objects we are in perceptual contact with sufficiently characterize a state's phenomenology.

2.1 Problems of Under- and Over-Determining Phenomenal Character

Does perceptual contact with objects tell us what the perceptual phenomenal character of a state is like? There are two reasons to think the answer is no. Both are challenges concerning the relationship between phenomenal character and object-dependence, and both have appeared under various guises in the literature. According to these challenges, in one way, the phenomenology of a perceptual state is underdetermined by the relational view, and in another way, it is overdetermined. Consider:

> **Perceptual State Underdetermination**: Specifying the object perceived underdetermines how things appear to the perceiver, and so underdetermines the phenomenal character of the state. Take looking at Tom the cat who is sitting still. Now consider looking at Tom from a different angle, under a different light, or while intoxicated. Tom will appear different, even though he is still there, and still completely still. Relationalism thus individuates perceptual states through too coarse grained a conception of phenomenal character; phenomenal differences we want to have show up don't show up.
>
> **Perceptual State Overdetermination**: On the face of it, one can be in phenomenally indistinguishable perceptual states even when related to a different object. For instance consider two states, one of being in perceptual contact with Tom, another of being in perceptual contact with Tom's robot duplicate Tim. The state of perceiving Tom and the state of perceiving Tim are not phenomenally different when Tim is in the exact same posture as Tom. Yet since relationalism individuates perceptual states by their objects, it is committed to claiming that

these two states are phenomenally different since they are of two different objects. So relationalism overdetermines the phenomenal character of the perceptual state; it seems that non-phenomenal differences are individuating the perceptual state.

The first worry has been dealt with in relationalist discussions of looks, appearances, or seemings;[30] the second in discussions of phenomenal indistinguishability.[31] Both of these are serious worries about relationalism. If the phenomenology of a state is really underdetermined by perceptual contact, then pure relationalism is false. This is because the view attempts to individuate states exclusively by appeal to perceptual contact, and perceptual contact simply does not give us a sufficiently fine-grained phenomenology. Impure relationalism does not fare much better. Since perceptual contact can't do the needed phenomenological work, impure relationalism has to appeal to the constituents other than the perceptual contact relation. But this raises a question about the phenomenological reasons, if any, for insisting on the world-contact commitment. If it is the other non-relational constituents that explain the way things appear, then why think contact with objects is a necessary constituent of the state at all?

This worry is aggravated by considering the second overdetermination problem. This latter worry seems to show that contact with an object is not just irrelevant for specifying the phenomenal character of the state, but that it in fact gets in the way of such

30 For instance, see Genone 2013 p.15 and Brewer 2011, Ch5. Genone writes "The difficulty is that the relational view seems to supply a merely extensional description of what a subject perceives, rather than explaining how things appear to her in the experience. The problem is that if all the relational view mentions is that a subject is perceptually aware of a certain objects and its properties, it is unclear how the view can account for the fact that perceptual experience always seems to involve objects appearing some way to the perceiver." And Brewer writes: "An immediate objection to the proposal that the mind-independent physical objects… themselves constitute its direct objects in this early modern sense is that there can be quite different perceptual experiences - had by the same subject or by different subjects - with identical such physical direct object" (chapter 5).

31 For instance, see Brewer 2011 and Genone 2013.

a specification. It does so by overdetermining phenomenal characters such that apparently indistinguishable characters turn out to be distinguishable. This is so because perceptual states are individuated by their phenomenal characters. But phenomenal characters on the relational view are individuated by their objects. So if two states are of different objects, they are necessarily states with different characters regardless of the fact that the characters are phenomenologically indistinguishable. Once again, the commitment to perceptual contact seems to work against the plausibility of relationalism.

These two problems compound to raise a final worry about relational views. If the relationalist understands perceptual states in a way where the notion of phenomenal character is both under- and overdetermined, then either the relationalist does not really grasp what a phenomenal character is, or else she means to be proposing a different criterion for the individuation of perceptual states. On the more charitable reading we might rightly say that relationalism is a change of topic rather than an alternative to current theories of perceptual states. Perhaps this is a significant new topic, but this still means that relationalism is not an alternative to views like intentionalism.[32] To correct this possible misimpression, the relationalist has to respond to the under and overdetermination worries.

In the following sections I offer a clear response to each worry before proceeding to cases of misperception that occupy the remainder of this project. My discussion will differ from previous discussions in the literature in a few ways. First, in responding to the underdetermination worry I will attempt to spell out clearly what other relationalists have

32 In fact, some views maintain this. Siegel (2012) thinks that relationalism is not an alternative to content views, and Kennedy (2013) thinks that relationalists have a different emphasis than phenomenal character.

only glossed. There are various constituents that modify perceptual contact, and together these give the view its phenomenologically robust response to the underdetermination worry. I describe

each proposed constituent that affects how objects appear to us, and show that the constituent is compatible with a purely relational construal of perceptual states. For the second worry, I argue that relationalists can indeed accept the phenomenal indistinguishability of states of perceiving different objects. The difference is that for relationalists, this phenomenological indistinguishability derives at least partly from the objects perceived, not the experience itself. In total, there are three ways in which experiences resemble one another, and each of these ways derives either wholly or partly from the objects we are related to. In the final section, I turn to a deployment of the proposed solution to explain cases of illusion and explain how their character can be misleading or deceptive.

2.2 Underdetermination and the Features of Perceptual Contact

Phenomenal character is a property of perceptual states, but relationalists think that this property is individuated, at least partly (i.e. in impure relationalism), by factors that are external to the state and perceiver. Specifically, they maintain that this character is one in which *the worldly objects appear some way* to the perceiver. So one way to think of this character is that it is solely (in pure relationalism) or primarily (in impure relationalism) constituted by *appearances*. Appearances, however, are a controversial category. Some views take appearances to be entirely mind-dependent, others treat them

as partly mind-dependent, and yet others treat them as mind-independent but distinct from the objects which they are appearances of.[33] Relationalists disagree or should disagree with all these construals. Instead, relationalists should argue that appearances are objective properties of worldly objects.[34]

One way of understanding how the relationalist sees the relation between appearances and objects is by analogy to one of two construals of Frege's sense/reference distinction. A first construal treats senses as independent from their referents in the sense that a sense can exist in the absence of its referent. On this construal, the sense/reference distinction helps explain how we can talk about nonexistent things. But another construal, endorsed by Evans (1982) and McDowell (1984, 1986), takes senses to depend on their referents such that there can be no sense without reference. On this view the sense/reference distinction cannot help with talking about nonexistents. The relationalist understands appearances in a way similar to this second construal of senses: there can be no appearances without objects that do the appearing (and correspondingly, as we will see, this construal cannot help the relationalist account for appearances when there is no object appearing).

Provided appearances depend on their objects as senses depend on their referents, how should we understand how the appearances of objects and the objects themselves differ? A good place to start is by looking at how different relationalists have handled the underdetermination worry. Two features that emerge repeatedly are the appeals to a third

33 An example of the first sort of view would be traditional sense-data views, an example of the second is Shoemaker's (2006) view on which appearances are dispositions of objects, but where they are dispositions to cause various experiences in perceivers, and an example of the last type is Johnston's (2004) sensory profile view, on which sensory profiles are - at least in the case of hallucinations - constituted by uninstantiated properties and are thus mind-independent, and independent of any objects. For more on this, see Genone 2013 section 4.

34 Indeed many relationalists maintain some variant of this view. Three examples are Martin 2010, Brewer 2011, and Genone 2013.

relatum that modifies the original perceptual contact relation by introducing an intensional element,[35] and the listing of features that belong under this relatum. For instance, Campbell writes "…to specify the phenomenal content of an experience, it is not enough merely to say what it is that is being experienced and by whom. Experience, on the Relational view, is not a two-place relation…it is a three-place relation between the perceiver, the scene perceived, and the point of view from which it is perceived. If we had only the two-place relation… that would not allow us to differentiate an object being touched from an object being seen, or an object being viewed from one angle from the same object being viewed from another angle."[36] In a similar vein, Genone writes "[o]n the relational view, then, the way things are in a subject's environment, along with attention and point of view, constitute her perception experience."[37] And Brewer "perceptual experience is a matter of a person's conscious acquaintance with various mind-independent physical objects from a given spatiotemporal point of view, in a particular sense modality and in certain specific circumstances of perception (such as lighting conditions in the case of vision). These factors effectively conjoin to constitute a third relatum of the relation of conscious acquaintance…"[38]. Here, Campbell interprets "point of view" as including features like sense modality, and spatiotemporal perspective. Genone cites attention and point of view but is not clear on whether point of view is meant to be taken spatiotemporally or metaphorically. And Brewer cites spatiotemporal

35 For instance, see Genone 2013.

36 Campbell 2011 p48

37 Genone 2013 p.16

38 Brewer Ch5, p.6

perspective, sense modality, and perceptual circumstances such as lighting conditions, as belonging in the third relatum.

There are important questions we can raise about the features cited by these authors. First, since these features emerge as lists made in passing, it is unclear whether the lists are meant to be exhaustive or a mere sample. Second, it is unclear whether the different views agree on the features but cite them selectively, or if there is some substantive disagreement on what the features are. Finally, it is unclear whether there are significant differences amongst these features provided we choose to accept them all. Do they all fit into the third relatum? Or could sense modality, for instance, be considered a relatum different from spatiotemporal perspective or attention, such that perceptual contact becomes more than a three place relation? The worry is that these features might affect perceptual contact in different ways, with some being acceptable on more restrictive views like pure relationalism, with others being acceptable only to impure relationalists. More troublesome is the possibility that some of these features may altogether be unacceptable because they introduce a problematic form of mediation. If they do, but are necessary for understanding appearances and thus solving the underdetermination worry, then relationalism will turn out false, even in veridical cases.

Answering these questions should be of central interest to both relationalists and their opponents. To provide an answer we should begin by noting that little is gained from simply citing listing feature, or by saying that they belong under a third relatum. What we want to know is how each feature helps with the underdetermination worry, and how each feature is compatible with the relationalist's view. Fish (2009), in particular,

does a good job of doing this. He attempts an exhaustive list which includes "the distribution of objects and properties in the environment, the subject's position in/ perspective on that environment, the nature of vision in general and the idiosyncrasies of the subject's visual system, the current distribution of the subject's attentional resources, and the subject's conceptual resources".[39] This is a good list to begin with, and what I would like to do is bolster Fish's discussion by providing more fine grained distinctions applicable to all perceptual states (rather than just visual states) while elaborating on the phenomenological role played by each feature before finally demonstrating the compatibility of the feature with relationalism. As I read Fish's list, perceptual contact must be understood in light of four basic types of features:

(1) Sensory features of the perceptual contact relation,

(2) Spatial features determining the perceptual contact relation,

(3) Situational features affecting objects and perceivers,

(4) Cognitive features affecting a perceptual state's phenomenology.

The first two of these features are responsible for one type of phenomenological contribution, and the latter two are responsible for two sorts of contribution each. Of these, I will argue that the first three features are clearly compatible with pure relationalism. By contrast, the last feature introduce some complications that might require a retreat to impure relationalism depending on one's further philosophical commitments. Despite this, it is far from clear that pure relationalism is to be rejected.

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39 Fish 2008 p.75

The theses incompatible with the view are at least as controversial as pure relationalism, and need to be thoroughly defended before pure relationalism is declared false.

2.3 Sensorial Modifications of Perceptual Contact

Relationalists maintain that perceptual contact is a relation obtaining between us and the objects of the world, where standing in that relation reveals the objects as being some way. But perceptual contact is plausibly taken to be a determinable relation rather than a determinate one. Although one can be in direct perceptual contact with a wall, they can only be so in a modality or sense-specific way. One is either *seeing* the wall, *smelling* it, *touching* it, or perhaps some combination of these; one is never simply in "perceptual contact" with the wall. This also means that one can maintain different sorts of contact. If I put my hand on the wall while looking at it, I am in perceptual contact with the wall in *two ways*. I can switch between these ways by closing my eyes while continuing to touch the wall, or by moving my hand away while continuing to look at the wall. So it is plausibly thought that perceptual contact becomes determinate only when sensorially specified. In this section I will elaborate on the different sensory *ways* we can be in perceptual contact and how this affects perceptual phenomenology. I will also ask whether appealing to this sort of determination undermines the relationalist's core commitments. Each sense modality is associated with its own distinctive phenomenology. One might see the right angle corner of the wall or feel it, in each case learning of the wall's properties, but in each case the phenomenology of the state differs because the tactile and visual appearances of the wall differ. The reasons for these differences

depends on how one understands the differences between the different senses.[40] Since it is possible that some characterizations of the senses are incompatible with relationalism, I will start by evaluating whether relationalism is compatible with each of the candidate views.

A first option is to individuate a sense by its own distinctive phenomenal character. In this case one will think that there is a distinctively visual phenomenology, or a phenomenology distinctive to visual creatures, and correspondingly different phenomenologies for the different senses. Alternatively, one might adopt a representational criterion, arguing that the senses differ phenomenologically because they represent different pieces of information about the objects in the environment. On this view seeing the wall and touching it feel different because sight's phenomenology is determined by the fact that vision tracks the lit surfaces of objects, while touch's phenomenology is determined by the fact that it tracks (amongst other things) the physical resistance that objects offer. A third option is to explain sensory differences by appeal to some physical rather than experiential criterion. Two examples are views that individuate the senses by the proximal stimulus received, and those that individuate by appeal to sense-organs. Finally, one can accept a hybrid view on which one or more of these criteria individuate a given sense.[41]

Regardless of the view one accepts, sensorially modifying perceptual contact does not lead to an inappropriate form of mediation. On the phenomenological view, a particular sense is associated with a particular phenomenology. This means that the

40 For a detailed discussion, see the introduction in Macpherson 2011.

41 Macpherson 2011 discusses all of these in detail. She herself adopts a hybrid conception.

perceptual contact is mediated by a sensory state with its own distinctive phenomenology (the state of seeing, hearing, etc). However since the phenomenology of seeing, or the phenomenology of being a sighted creature, is a phenomenology that is distinguishable from the phenomenology of seeing a particular object, the form of mediation introduced is harmless. Being a visual creature simply does not explanatorily screen off the worldly object's role in the perceptual state. If the relationalist adopts this view, she will do so by arguing that the perceptual contact relation is adverbially modified such that the a perceiver is in perceptual contact with the object *visually/auditorily/etc.* This allows the different senses to track the very same object while doing so in a variety of ways.

Similar comments apply to the sensory organ view. If the sensory organ is one we are consciously aware of in perceiving (this is plausible in at least some cases, for instance with the sense of touch where feeling the object is accompanied by feeling one's hand), we again need to consider the screening off worry. But the worry is again misplaced because possessing a particular sensory organ is distinguishable from the object perceived by that organ even when the mediating organ is associated with its own (e.g. “hand having” or “nose having”) phenomenology.

The proximal stimulus and representational views are harmless for two different reasons. On the proximal stimulus view, the differences between the senses depends on features that are not conscious. Since we are not conscious of the proximal stimulus the mediation introduced lacks a phenomenology and is therefore harmless. By contrast to all these views, the representational view introduces no mediation at all because all the different senses do is to convey different features of the external world. This amounts to

saying saying we are placed in contact with different properties of objects when we perceive with our different senses, much as we are placed in contact with different properties of an object when we perceiver different parts using the same sense. As such, there is no mediation introduced. Since the representational view is the last view we need to consider, we should now be able to see that appealing to the senses to solve the underdetermination worry, regardless of the view of the sense one adopts, is compatible with relationalism. Moreover, since no appeal is made to anything external to the perceptual contact relation, appealing to the senses is also compatible with the more stringent pure relationalism.

We can now turn to the way in which the the senses allow for a more fine-grained phenomenology. To describe their phenomenal contribution I suggest using three related concepts to help us systematize the sensory contribution. First, their is the *spatial scope* of a sense. Second, its *spatial resolution*. And finally, there is its *object scope.*

The spatial scope of a sense describes the spatial distances which a sense reveals to the perceiver from the center point where the perceiver is located. We can envision a sense's scope by appealing to a three dimensional coordinate system such as the spherical coordinate system. The center point is the perceiver's body (or perhaps head). From that center, the spatial scope is the extent to which the sense reveals the surrounding space on the x, y, and z axes. The space revealed will be in front of and behind the perceiver, to her left and right, and above and below her. Some parts of this space will be closer to the subject, as one's glasses or a drop of liquid in one's eyes, and some parts will be more distant, as the skies are for us. Despite this differences, everything within the scope is

seen. The result is a "bubble" around the center point which demarcates the spatial scope of the sense and thus how much the sense reveals. A few examples help make this clearer: Vision has the largest scope of the human senses. We are able to see much further into space then we are able to hear, smell, taste or touch. However the distance seen is limited to the space in front of the perceiver. So although vision has the longest scope, it is not as panoramic as, for instance, auditory perception. When we hear we get a maximally panoramic spatial scope in the sense that we hear everything that surrounds us: we hear what is below and above us, what is to our left and right, and ahead of and behind us. The same is true of smell and touch, although both are capable of revealing less distance than hearing. Finally taste is the sense with the least scope, like touch it requires literal contact, and unlike touch, taste only covers the surface of one's tongue.

The spatial scope of a sense tells us how much of the environment a sense is capable of putting us in contact with, but it does not tell us how much it does reveal or put us in contact with *on a given occasion*. This is because the senses capacity to reveal the features of the surrounding environment can be obstructed by the very objects of the surroundings; some things cannot be perceived through. If I am in a box, I cannot see outside the box, even if vision is in principle capable of revealing the space outside the box. This is, of course, because cardboard surfaces cannot be seen through. Similarly if I am in a sound proof box I will not hear what is outside the box even if in principle it is within hearing's scope. Still, keeping in mind the scope of a sense allows us to determine what a perceiver's experience will be like in a given worldly situation, provided we are also aware of those environmental features that could obstruct the sense. Furthermore,

spatial scope allows us to keep in mind that perceptual contact is not a relation obtaining between a perceiver and a single object. Although we usually think of perception as relating us to a single object, this is because we usually attend to one object, not because we perceive one object. Rather, a perceiver is in perceptual contact with a spatial scene littered with objects.[42] Everything within the scope of the sense can feature in the state, provided that it is not occluded by the surrounding items co-perceived.

If spatial scope tells us how much space a sense can reveal, spatial resolution tells us how much detail of that space is revealed. A good way to see what spatial resolution is is to compare two senses with different resolutions. Take the resolutions of our olfactory system and our visual system. If while standing still, one starts to smell something, one can usually determine the direction that the smell is coming from though one only has a rough estimate of that direction and the location of the smell. It arrives from somewhere ahead, but it remains unclear whether the smell is coming from slightly to the right or slightly to the left. In that sense, the resolution of our sense of smell is low, it does not give us precise information about the perceived space. By contrast a visual object, a speck on the horizon, is not similarly indeterminately located. It is more clearly to the center, to the right, or to the left. Compared to the smell which comes from ahead indeterminately, there are several visual locations perceivable within the indeterminate place of the smell, each having a color, a shape, etc. So compared to our sense of smell, our visual sense has a much higher resolution. It is more informative about the details of a given space.

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42 That multiple objects can be simultaneously perceived is of course a contingent fact about the way we perceiver. We can imagine creatures with sensory scopes that only reveal a single point in space.

This gives us a comparative way of tracking resolutions. We can tell that smell gives a less fine-grained impression of the space than does vision because we can point to the location of a visual object in space in a way that is more determinate than an olfactory object. The olfactory object comes "roughly from there" whereas the visual object is "exactly here". An alternative way of thinking about resolution is to make use of the coordinate system we used to describe sensory scope. Within a given scope, we can imagine a specific number of points in the covered space. A high resolution gives us information about each of these points, a lower one gives us information about clusters of points without going into the perceptual details of any given point in a cluster.

Four additional points are worth making about scope and resolution. First, we have to keep in mind that a sense's scope and resolution are species relative. For a species, a sense has a typical maximal scope and resolution, and that will determine how much space and what detail can be perceived. These are contingencies of an organism's sense, and so can differ from species to species, and within a species (depending on how normal the functioning of the sense is in a given member). Moreover these contingencies can be artificially altered. We use telescopes to expand our visual spatial scope, and microscopes to reveal a space at a higher resolution.

Second, the scope and resolution of a sense need not be uniform at a time or across time. This could be due to features of the sense, other mental features, or the environment being sensed. For a change across time, we can consider that as we age our hearing can get worse thus lowering its scope. Our vision might also get worse, and this lowers its resolution. For differences at a single time, we can consider the fact that objects

falling within the center of our visual field are revealed at a higher resolution than objects in the periphery because of attention, and that what we touch with our fingers is perceived at a higher resolution than what we touch with our arm. These examples are due to the sense or other mental features (like attention), but there are other differences that are due to the environment. For instance, consider the effects on scope and resolution when an object is seen while it is moving really fast, or when it is displayed under bad lighting conditions. Each of these affects the sense. The object appears blurry when moving quickly, so the resolution at which it is seen is lower. In bad lighting the details are less visible and the distances perceived shorter, so both resolution and scope are lowered.

Third, the scope and resolution of a sense determine not only the quantity of objects we perceive, but also the types of objects we perceive. This is clear in the case of scope where expanding the scope might reveal new spaces filled with new objects e.g. looking through a telescope might reveal a new celestial body. With resolution, some object types or property types may be too small to see or taste, so higher resolutions can reveal the relevant objects and properties e.g. looking through a microscope will reveal viruses that are not normally perceivable. These gradations are therefore capable of introducing us to new objects in new spaces, or new objects which have existed in a given expanse of space.

Finally, it could be that some features of the world are in principle outside the purview of a sense regardless of its scope or resolution. This is what the *object scope* of a sense tracks. For instance, it may be that regardless of the visual resolution or scope we

have, we can never *see* smells. We might see the chemicals generating the smells, but the smell itself might be specific to the sense of smell. A view that might take this to be true is a view that individuates the senses phenomenologically. In this sense, the senses do not just have spatial scope and resolution, but also an object scope. While the object scope can vary with spatial scope and resolution, it may be that some objects are simply outside the object scope of a given sense and so are in principle inaccessible by it.

To summarize this discussion: the perceptual contact relation is plausibly thought to be a determinable relation that becomes determinate by being constrained to a sensory modality. Regardless of the view of the senses one accepts, the senses do not compromise perceptual contact. So both pure and impure relationalism can appeal to the phenomenological impact of the senses. The senses contribute to the phenomenology of the state by revealing space in different ways, revealing more or less of the space, at higher or lower resolutions, and thus revealing different parts of or objects in space.

2.4 Spatiality and Perceptual Contact

Having discussed the phenomenological contribution of the senses, in this section I turn to the contribution of the object's spatial characteristics. Since objects have spatial properties these properties affect the way objects appear. Moreover they do so in a multitude of ways. By taking into account these factors we are able to describe, and also predict, the appearance of a given object. I will highlight three different ways in which spatiality affects appearances. None of these appeal to any form of mediation. They are rather broadly divided into two types: first, those that involve the object itself. And

second, those that involve spatial relations obtaining between the object and the perceiver. What follows is an explication of the perceptible effects of spatiality, followed by a brief discussion of why they are innocuous to the relational view.

To begin with, since objects are spatial, they can be perceived by perceiving *some* of their spatially separated parts. To be perceived, a given part must fall within the purview of the perceiver's perceptual apparatus (i.e. within the scopes and resolution of a sense) without being occluded. In many cases, the perceiver will see some but not all parts. For instance, visually, we usually (with solid opaque objects) see the parts facing us but not the parts facing away from us. Thus a single object can appear in multiple ways because different parts of it can be perceived. To illustrate this first spatially determined factor, consider the variety of phenomenal characters that might result from the perception of a Rubik's cube. These characters will depend on the appearance of the cube. How the cube appears on any token perceiving (partly, since other factors are involved) depends on which side of the cube is being perceived at the time. Perceiving the red side will result in an appearance determined by that side, while perceiving the blue side will lead to a different appearance determined by the blue side. A single cube can therefore be associated with multiple appearances, and therefore with multiple phenomenal characters. This is of course wholly due to the fact that the cube is a spatially extended object, and so each of its spatial parts can be perceived at the exclusion of other parts. The way we vary these parts is either by altering the positioning of the cube or the position of the perceiver. For instance the red side could be moved to face the perceiver, or the perceiver could

move to face the red side. In either case, the phenomenal impact depends wholly on which parts of the cube the perceiver ends up in perceptual contact with.

A second way in which spatiality alters the the appearance of a perceived object depends on where the object is located within the spatial scope of a sense. What determines this is the distance between the object and the perceiver, since it is the perceiver that sets the center point for the spherical coordinates. To see this contribution more clearly, consider the different ways in which one might perceive the cube's unoccluded front side. Since the cube's front side is perceivable as long as it falls within the spatial scope of a given sense, there are multiple locations at which the cube may be within that scope. The side will be closer if the distance between the object and the perceiver is smaller, and the side will be further if the distance between the object and the perceiver is bigger. The closer the cube is the bigger the appearance of the unoccluded front side, and the further the cube the smaller the appearance. Similarly a sound can be closer and thus louder, or further and so quieter. This change in location does not merely change the appearance in superficial ways. The cube's side does not merely come to occupy more or less of the visual field, and the sound is not merely louder or quieter. The changes are also often changes in how much of the object we can see. This is because altering the distance between an object and the perceiver often affects the resolution at which an object is perceived. Our distal senses (vision, audition, and olfaction) are able to pick up more information at closer distances than further ones. So when the cube's front side is closer we can see more of its details than we can when it is further. These of course are further changes in the appearances. Like the previous spatial factor, it is

significant that these principles are not in any sense subjective. Rather, they are principles that are due to the spatial character of the world. We learn about these principles by attending to the way we perceive the world, and we may also learn about them in classes, as when we are taught perspective in a painting classes.

A final spatial contribution does not change the parts of the cube that we perceive, but rather the location and orientation of the appearance. This once again depends on the way the object is spatially related to the perceiver. For instance, consider a *fixed appearance* of the cube, say its red side that is visible to you. You can be related to the very same parts in a multitude of ways. For example, assume that the cube is currently to your right. Now consider a mirrored experience. The cube will be to your left. However in both cases the very same parts of the cube will show up to you. Similar comments can be made about the cube being seen as above versus being seen as below. These are not cases of perceiving a different part of the cube. The difference is not one of seeing parts of the cube's left-hand side or right-hand side or its parts that are above or below. You are rather perceiving the same parts, but these parts can be differently located in relation to you.

Related to these mirroring cases are cases involving orientation. Consider once again the red side of the cube appearing in a fixed way. Now consider lying down while continuing to look at that side. The same side will be oriented differently. The top-most edge will now be the left-most edge. Changing your orientation further, for instance looking at the cube upside down, will now result in the top-most edge become the bottom-most edge. The same effect is achieved if we turn the object on its side or upside

down while remaining in a fixed orientation. Such changes in orientation, like the mirroring changes above, do not alter the parts you perceive, but they do alter the location of those parts in the wider experience. These changes therefore constitute a third way in which spatiality affects appearances and thus perceptual phenomenology.

It should be clear that none of these contributions introduce any form of mediation into the perceptual contact relation, nor do they introduce any further constituents into the perceptual state. Rather, these features derive from the fact that perceptual contact is a real relation occurring in space and between spatially located and extended objects. With these spatial phenomenal contributions we are again closer to solving the underdetermination worry.

2.5 Two Different Contributions of the Surroundings[43]

The picture we should now have is that of perceptual states placing us in sensory contact with objects distributed in space, where that space also contains the perceiver. This picture goes some way towards alleviating the underdetermination worry we initially raised, but it also leaves some important phenomenological differences unaddressed. Specifically, when we perceive a still object, it is often the case that the object can appear in a variety of guises despite the continued perception by a single sense, and despite the fixed spatial locations of the perceiver and object. Consider the following example: Tom the cat, on this occasion, is perceived lying still in an alleyway that connects to a busy road. Tom and the perceiver are both perfectly still, yet Tom's

43 In this section and the following two I use the terms “surroundings”, “environment”, and “situation” interchangeably. Though these terms are different in meaning I will not be concerned with any of the differences.

appearance can vary in at least two significant different ways. First, the surrounding lighting might alter Tom's appearance. His features may be well lit or not, lit by colored lights or not, and so on. Second, Tom's appearance might also change due to the juxtaposition of his features against the co-perceived surroundings. For example, a large gray truck passing by in Tom's background might make Tom's specific shade of gray more salient because of the contrast with the grayness of the truck. Tom might also look larger or smaller depending on the cats accompanying him in the alleyway; his size will be emphasized one way or another relative to the remaining cats. Both these changes in Tom's appearance are due to the surroundings of the perceiver and her target object. But both case are different. How so?

There are at least two ways in which the surrounding environment and its objects affects the appearance of a perceived object. The first of these ways is through a *direct* effect on the object. This is because the surroundings of an object have a role to play in determining an object's *current state.* Objects have a variety of properties that endure regardless of the surrounding environment, but some properties of objects are not like that. Instead, they are situation-dependent properties. As we vary the surroundings of an object, different situation-dependent properties are manifested by the object depending on the nature of the surroundings. This means that when an object is perceived in different surroundings, the perceiver will be related to the object as it manifest different situation-dependent properties. Since these properties differ, and since some of these properties are perceptible, the object's appearance will differ in accordance with the perceptible manifest properties.

By contrast to this first direct way in which the surroundings affect the appearance of an object, their is a second indirect way in which the appearance may be affected. The appearance is *indirectly* affected in the sense that the surroundings alter the perceiver's wider experiential state, and not the the perceived object itself. This, however, can affect the phenomenology of the state if perceptual states are phenomenally holistic, or if there are gestalt experiences. The role of the surroundings in such cases has to do with the fact that the surroundings are perceived along with the target object (or to put it differently, the surroundings fall within the scope of the sense along with the target object). In so doing, the surroundings co-determine the phenomenology of the state. Rather than a change in the perceived object's appearance, there is a change in the experience of that appearance. In this sense, holism affects the appearance of objects indirectly.

Although the surroundings have these two distinct phenomenological roles, relationalists need only be committed to the first direct role of the surroundings. Here the object's environment determines its state, and it is the object in this state that we perceive. The second indirect role of the surroundings requires accepting phenomenal holism and gestalt experiences as further commitments, and these are not commitments required by the relational view. Despite this, it is worth discussing both this latter contribution along with the first, as doing so will help demonstrate that even if there are phenomenally holistic or gestalt experience, neither stand in the way of a relational view of perception.

2.6 The Surroundings I: Perceiving the Object in its Current State

The first phenomenal contribution due to the surroundings occurs through the direct influence of the surroundings on the object being perceived. The way an object is in its current surroundings affects the state's phenomenology because the perceiver is in contact with the object when it is in its environmentally determined state. Since (at least) some of an object's environmentally determined properties are perceivable, when we encounter the object, its appearance is the appearance of an object in its current state. Of course not every feature of an object depends on the surroundings (e.g. the mass of an object), but some features do. Such features involve the manifesting of a dispositional property that an object has, and they are manifest only when the object stands in the relevant relations to its surroundings. To take an example, a piece of wood has the disposition to float in water as one of its intrinsic or environment independent features, but the property of floating in water is a property manifested by the wood only when it is in water. The water, in this case, is part of the wood's surroundings. Conversely, the wood is part of the water's surroundings. So when an object is in a given environment, it is in a state of manifesting both its environment independent properties as well as manifesting various environmentally-triggered dispositions. This state is the current state of the object. In being in contact with the object, we perceive it as it is in its current state. This is what makes the object appear a particular way and therefore determines the phenomenology in a particular way.

Keeping this in mind helps us account for a variety of phenomenal differences. Consider perceiving Tom's color. Tom's fur has a certain pigment and this pigment is an

intrinsic feature of Tom's fur. When we see Tom, we see the pigment of his fur, but we see it only under certain conditions. Visual perception is such that only the *lit* surfaces of objects appear (and only when they are within the scope of a sense). Thus the fur's pigment in complete darkness does not appear to us, or alternatively, appears to us as darkly as its surroundings. Once lit, however, the fur and its pigment become visible. The color we see the fur as being is the color of the pigment under that light. In that condition, the fur's current state is the state of manifesting its property of having a certain color under that light (and this color is a result of the pigment that the fur always has). So while we might see Tom's fur looking red or white, this difference will be one that depends on the way Tom's fur *is* in its current environment. This is what explains why Tom appears the color he does.[44]

Two additional comments further clarify the above environmental contribution to phenomenology. First, note that in cases like the above, the phenomenal difference due to the environment *does not* depend on perceiving the contributing factor in the environment. The perceived object manifests its disposition because it is causally affected by the environment, and not because the perceiver also experiences the environment or the causal interaction. Perceiving the target object is sufficient because the phenomenal character of one's state is determined only by the object in its current condition. So when Tom is under a red light, we need not see the light to see Tom's fur appearing as it does under the light. Perceiving Tom alone is sufficient because what we are seeing is a property of Tom's fur; namely, the property of manifesting a given disposition.

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44 For more on this sort of account of perceptible colors, see Matthen 2010 who makes similar points by appeal to pigment and illumination.

By noting the above we should be able to see that this sort of phenomenal contribution does not require that we posit any sort of mediation into our perceptual contact with Tom. The difference in phenomenology is due to the object itself. We are simply in contact with it when it is in that state. There is, however, a perceptual mediation going on with respect to the lights. If I perceive Tom's fur looking red when his fur is gray, there is an important sense in which I do perceive the lighting conditions even if the responsible lamp is itself out of my view. The way I perceive the light is indirectly. By perceiving Tom lit in a particular way, I perceive the light as it affect's Tom's fur, and so I am in a perceptual state in which I perceive the lights by perceiving Tom's fur. This is what I earlier called indirect perceptual contact (see chapter 1, section 4).

Second, it is worth tying the sort of contribution I am describing with some related claims in the literature as this will help clarify the position. I said that both Martin (2010) and Genone (2013) give accounts similar to the one I am proposing. Martin argues that an object has intrinsic properties that are perceivable, and Genone argues that we perceive an object's relational properties in a given environment. Both views are right. We perceive an object's intrinsic properties, and in some cases we do so by perceiving the dispositions that an object manifests in certain environments, and these are relational properties. Another close connection is that between my view and Schellenberg's (2008) situation-dependent view of perception. Schellenberg argues that in perceiving objects, the way objects are presented to us is partly determined by certain features of the environment which she calls *situational features*. Situational features play a role in the phenomenology of experience because they determine the *situation-dependent properties*

of objects. Such properties "are (nonconstant) functions of the intrinsic properties of the object and the situational features."[45] Schellenberg's view is therefore similar to both Genone's view and my own. For her view as well as ours, the situation-dependent properties of objects are, like the intrinsic properties of such objects, external and mind-independent. As Schellenberg notes, this feature of her view is significant because in many cases, how objects appear in a given situation has often been treated as mind-dependent or subjective. Against this Schellenberg says "I am arguing only that what is often understood solely in terms of mind-dependent properties or objects should be understood at least in part in terms of situation-dependent properties."[46][47]

2.7 The Surroundings II: Holism and Gestalt Effects

The first contribution due to the surroundings allowed us to account for the target object's appearance on a given occasion by noting that the object manifests a particular set of properties in a given environment due to its dispositions. The second contribution, by contrast, is due to the nature of perceptual states, with the surrounding objects playing only an indirect role. That role is the role of being perceived along with the target object (which, recall, is not a requirement on the first environmental contribution). In being co-

45 Schellenberg 2008 p.60

46 There is however one minor difference between my view and Schellenberg's: she assimilates some spatial effects on the phenomenology to situation-dependent properties. As I understand her argument, she takes an object's spatial appearance to depend on where the perceiver experiences the object from. Thus the object's appearance is location relative (i.e. relative to the place where the perceiver is standing), and she takes that location to be a feature of the situation. I do not think this is a significant difference. I have no problem with assimilating certain spatially determined properties to situation-dependent ones as long as we keep the differences in the phenomenal contributions clear. Since I think Schellenberg's view does that, I see no problem with parsing things as she does.

47 Schellenberg 2008 p.63

perceived, surroundings objects can affect the way a given object appears if a thesis like phenomenal holism is true.

As I will understand it, phenomenal holism is the view that some phenomenal characters of a given perceived object will be instantiated when that object is experienced as being part of a greater (experiential) whole, where that whole is constituted (at least in part)[48] by the co-perceived surroundings. This is a weak construal of the view, and it leaves open various possible variations. It is a weak construal because on more demanding versions of phenomenal holism, the resultant characters may be thought to be exclusively instantiated by being parts of such wholes, or by being part of a specific whole. My articulation leaves room for variations in the sense that once could take the parts to depend on the character of the whole, or else to depend on the character of some other part or parts occurring in the whole. For our purposes, it does not matter whether the stronger theses are true, or how we go on to specify the interexperiential relations. This is because what matters for us is the core idea common to all holistic views. Namely, that in some instances, the surroundings of an object have an indirect role to play in determining the phenomenal character resulting from the perception of that object. The idea is that minimally, phenomenal characters partly depend on features of the way experience is rather than the way objects are, and this means that there can be phenomenal differences that emerge despite the sameness of object and appearance.

Something similar will be true of gestalt experiences. Like the parts embedded in a phenomenal whole, the parts in a gestalt experience undergo phenomenal changes due

48 Since phenomenal holism might occur due to nonperceptual parts of the state.

to the surroundings co-perceived. Regardless of how we understand gestalt experiences or whether we accept their existence, if their are such experiences, they too will provide a phenomenological contribution that is due, in an indirect way, to the surroundings. So how do such contributions occur, and are they in conflict with relationalism?

An example helps shed light on the contribution of phenomenally holistic perceptual states. In some classes on color,[49] students are required to paint equally spaced gradations of colors onto a grid. Which gradations are to be painted depends on what the two end points are. For instance, students may be asked to paint a eight gradations between the colors red and green, or black and white, or yellow and blue, etc. In some cases, these gradations become very fine. For instance, a student might be required to paint six gradations occurring between yellowish gray to blueish gray, where every gradation will be yet another (slightly yellower, or slightly bluer) shade of gray. In such cases, students often determine what the next correct gradation is by contrasting their painted gray squares against neutral gray backgrounds, or neutral blue backgrounds, and so on. In doing so, the students are able to learn more about the square's color than they do by looking at the colored square alone. So although the gray square is not directly affected by the background (we can imagine the gray or blue background to be the sky which the student holds up the color square against), the phenomenology of the square seems to be affected by the phenomenology the wider state in which the square is seen. Specifically, the experience is such that some of the gray or blue seen in the background of the square has an effect on the phenomenology resulting from the target color square.

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49 Here I am describing two courses taught at the American University of Beirut's Graphic Design Department, Color I and Color II.

If we assume that this is what is happening in this case (and we might not since we could think that the difference in the two experiences is not a difference in phenomenology, but in what we have access to), then we will have a new sort of contribution that depends indirectly on the surroundings. Similar comments will apply in the case of gestalt experiences.[50]

Does this phenomenal contribution of the environment compromise relationalism? The answer depends on how one understands the relationship between phenomenal holism (and/or gestalt experiences) and perceptual states. On the one hand, phenomenal holism entails that the phenomenology of a perceptual state is partly determined by the relations between phenomenal parts of the experience, rather than perceptual contact with the object. As such, if phenomenal holism is a constitutive and not merely causal condition on perceptual states, than pure relationalism will be false. Pure relationalism maintains that the phenomenal character of a perceptual state is *solely* constituted by the character of the objects perceived, and this is clearly not the case if phenomenal holism is constitutive of perceptual states. Part of the character depends on relations that are independent of the objects being perceived. In this case the relationalist will have to retreat and adopt impure relationalism. This retreat will be possible because even if phenomenal holism is constitutive of perceptual states, it does not introduce a type of mediation that compromises the relationality of perception. To compromise relationality phenomenal holism will have to explanatorily screen off the role of the object, but this is just not so. The phenomenology resulting from holistic states is not phenomenally

50 Like the commitment to phenomenal holism, the commitment to gestalt experiences requires maintaining that the experience of a target object will partly depend on the surroundings perceived, as the surroundings will provide an organization that can be subsumed under gestalt principles, and thus result in a specific gestalt experience.

indistinguishable from the phenomenology of perceptual contact with worldly objects or any specific object. So in principle, holism is compatible with relationalism. Moreover, it is worth pointing out that taking phenomenal holism to be constitutive of perceptual state is controversial. It seems possible that there are perceiver's whose experiences are not composed of experiential parts because their experiences are maximally simple. So unless we are given a reason for thinking that holism is constitutive, the retreat to impure relationalism will be unnecessary. And in any case, such a retreat still maintains the core relationalist commitment.

2.8 Cognitive Factors I: Attention

The features I have cited so far have have been either features of the perceptual contact relation, features of objects, or features of perceptual states themselves. In this section and the next, I will introduce two features that differ from the previous ones because they are features of our wider mental life. The two features are attention, and cognitive penetration. As in the case of holism and gestalt experience, if perceptual states are structured by attention and cognitive penetration, they will be so in one of two ways. They will either be so constitutively or causally. The causal claim will not affect our commitment to either pure or impure relationalism since both views are only concerned with the constitution of perceptual states. If the components are constitutive, then pure relationalism will again turn out false. But as with holism, the further constitution claim is controversial.[51] At least prima facie, there is a good case to be made against it since it

51 e.g. see Brogaard 2013.

certainly seems possible and indeed plausible to think that perception can occur in some beings with neither attentional mechanisms nor conceptual abilities. Ultimately this is an issue that requires further exploration. What is important however is that neither attention nor cognitive penetration are in principle incompatible with perceptual contact. Neither contribution screens off the role of the object, so neither involves mediating the perceptual state in an inappropriate way. So, in the next two sections I will discuss the phenomenal contributions of these factors by way of extracting the relationalist from the underdetermination worry, but will put aside concerns about the compatibility of these constituents with relationalism.

The first of these features, attention, is relevant to our discussion only if attention is understood is understood as a conscious level process.[52] More specifically, the relevant views are those that maintain that attention (minimally) structures the phenomenal character of perceptual states.[53] A good example of this sort of view is the one endorsed by Watzl (2010, 2011), and earlier, by various philosophers from the phenomenological tradition (some examples are Husserl 2004, Sartre 1943, and Gurwitsch 1964). If attention structures our experience as these philosophers maintain, then some phenomenal variations will depend solely on attentional differences and not differences in the object.

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52 For more on this, see Watzl 2011.

53 This is one of several competing views of attention. On the one hand there are philosophers and psychologists who treat attention in a reductive way, and so would reject this sort of phenomenal contribution. On the other hand, there are various anti-reductionist views, not all of which agree that attention should be characterized in terms of the capacity to phenomenally structure experiences. So if it turns out that this structuring view of attention is wrong, then attention will not contribute to perceptual phenomenology, and thus will not be relevant to evaluating the relational view. I am, however, inclined to think that attention does structure our experience, and so I take it to be relevant to evaluating relationalism.

To take an example, consider the nonreductive structuring view most recently endorsed by Watzl (2010, 2011). Watzl describes his view as a structuralist view, writing "consciously attending to something consists of the conscious mental process of structuring one's stream of consciousness so that some parts of it are more central than others"[54] In Watzl (2011b), he writes "attention is contrastive: it structures our mental life so that some things are in the foreground of others."[55] So the central idea is that in perceiving and other conscious processes, the phenomenal character of our perceptual states is partly determined by a contrast which attention is responsible for. An easy way to understand this contrast is by example: Imagine being in a room with several people where four different conversations are taking place. Now consider the case in which your eyes are closed and you are entirely motionless, with your senses operating uniformly, and the environment fixed. Initially, your perceptual state will be similar to that of being in a crowded room. You can hear that there is speech, but you cannot hear any one of the conversations. Rather, there is only the rustle of the spoken words. Now consider being asked to attend to the dialogue in the leftmost corner of the room. Motionlessly, you can attend to the sounds coming from that part of your perceptual field. In so doing, that dialogue comes into what we might label the attentional foreground. This is to say you can now hear the words being spoken, you know what the dialogue is about, and so on. The remaining dialogues, by contrast, will now be in your attentional background. You may still hear them, and we might even assume that they continue to influence your perceptual state in the exact same way as they did prior to your attentional act (although it

54 Watzl 2011a p.145

55 Watzl 2011b p.849

is plausible to think that in fact they become peripherally experienced, being less clear, less audible, etc.)[56]. But they are now, by contrast to the target conversation, in your attentional background. Just as you can attend to this conversation, you can also shift your attention to another of the dialogues. This will lead to a similar change. The new conversation will come to occupy your attentional foreground while the rest of the dialogues remain (or become more) perceptually obscure as they occupy the attentional background.

When we consider these types of changes, it becomes clear that one's perceptual state can be phenomenologically altered by shifts in attention. Moreover, it is clear that these shifts are attentional shifts, rather than shifts in one's perceptual apparatus. Although in most cases, one pays attention partly by moving one's body - for instance tilting one's head to hear better, or moving one's head closer to see better - attention also seems to operate without such shifts.[57] One benefit of using an auditory example is that it allows us to bracket this worry about attention's role being played by subtle bodily movements such as the movements of one's eyes.

How should we understand the phenomenological shift that attention produces? In fact attention is responsible for different sorts of shifts. On the one hand, attention may be responsible for changes in the sensory apparatus itself, for instance, changes in how much light the eyes take in, their movement, etc.[58] On the other hand, attention may affect

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56 For instance Watzl 2011a defends this claim, arguing that "attending to something in part consists in consciously experiencing what is unattended in characteristic peripheral ways" (p.155).

57 Watzl 2011a calls this feature of attention purity, he defines it as follows "Consciously attending to something does not necessarily involve (a characteristic) bodily movement or posture, or an awareness of such a bodily movement or posture" (p.147)

58 For instance, see Carrasco, Ling, and Read (2004) on how attention affects perceived contrast.

changes independently of changes to the sensory apparatus. These changes can be broken down into (at least) three different sorts: First, there is *attentional focus*, in which one holds one's attention on a given object. Second, there are *attentional shifts*, in which one proceeds from focusing on one thing (or aspect) to focusing on another. And third, there is *attentional draw*, in which one also shifts one's attention, but the shift seems initiated by the object "grabbing" one's attention.[59] For our purposes, I put aside the changes in our perceptual apparatus since these are more appropriately described as sensory modifications that affect what features of the object one perceives. I will simply focus on the second set of changes.

One useful way of thinking about attentional focus is by appeal to a sense's resolution. Earlier I argued that each sense has its own (typical) resolution and this is the extent to which it can reveal details about a given space. I maintained that this resolution is non-uniform both at a time and across time. One way in which shifts in resolution occur is through attention. In the auditory example above, the phenomenal changes that occur are ones in which a given object in the perceiver's environment becomes perceivable in one's attentional foreground. Once in the foreground, the perceived object shifts from being perceived at a lower resolution where the sounds are indistinct to being perceived at a higher resolution in which the sound is (more) distinct. So shifts in resolution can, at least partly, explain what it means to say that an object is in one's attentional foreground. Of course being perceived in the foreground may also be responsible for other, non-phenomenal contributions. For instance, Wu (2011) argues that

59 Of these three, Watzl 2011a discusses the first two. See p.147

attention helps select for actions, and Smithies (2011) argues that it enables rational access.

This shift in resolution may also affect what one sees in the background. Returning to the example above, when one is focused on none of the conversations, the sounds of the whole room are heard simultaneously and with uniform resolution. One hears the conversations, some of the activity in other rooms, the hum of the air conditioner, and so on. But once one focuses on a single conversation, that background changes. The conversations in the vicinity continue to be part of the perceived background, but the hum of the air conditioning, and the sounds of the other room, may altogether drop out of one's experience. A visual example will help illustrate this more clearly. Consider looking at a painting displayed on a door. If one is not focused on the painting and its details, one will see the painting, the door it is on, and some parts of the wall. But if one begins to (motionlessly) focus on a detail in the painting, the painting's resolution increases, but this increase is also accompanied by a shift in what the perceived background is. Since one is focused on that detail, it is the detail's immediate surroundings that are part of the perceived background. The door may continue to feature in the experience, but the wall might altogether fall out of view. So shifts in resolution may be accompanied by shifts in what the perceived surroundings are.

Finally, we can turn to the contribution of attentional shift and attentional draw. In both these cases, the contribution to phenomenology is somewhat difficult to describe. This is for at least two reason. When shifting one's attention (which happens in both cases), part of what one is doing is ceasing to attend to a given object while not yet

attending to the next object. The result is a loss of resolution of the object one was paying attention to, and a yet unfulfilled increase in the resolution of the next object. Moreover, since shifts in attention often involve motion on the part of the perceiver, there is a further unclarity in what one perceives due to the motion. Much as we see the details of a car driving by quickly less clearly than we do the same car when it is still, how the experience seems to us as we shift our attention also involves the unclarity due to fast motion. The phenomenal effect might therefore be described as one in which we perceive the objects around us distractedly, unclearly, or at particularly low resolution.

2.9 Cognitive Factors II: Cognitive Penetration

The second feature, cognitive penetration, is the view that the phenomenal character of perceptual states can be altered by states of one's cognitive system, specifically, by one's conceptual repertoire.[60] If cognitive penetration is true, an alteration of one's perceptual phenomenology can occur if the perceiver possesses concepts relevant to the objects perceived, and she applies these concepts in her experience. The change is not a mere change in one's perceptual beliefs, but rather a change in how one perceives what they perceive. So holding all perceptual conditions constant, perceiving a single object can still result in a variety of phenomenal characters depending on the concepts one applies to the object.

Cognitive penetration is a controversial thesis, there are controversies about how we should understand the view, what should count as examples, and whether the view is

60 Macpherson 2012.

true at all.[61] As a result, finding a noncontroversial example is somewhat difficult. But to give a general idea of the claim being made, we will need some example, so here is one: a perceiver might see a cat, and in so doing undergo a particular phenomenology. But this phenomenology will differ if the perceiver is a cat expert who both possesses and knows how to apply various concepts referring to different cat breeds. Such an expert will not undergo a "generic cat" phenomenology (as I might), but something more specific. Her phenomenology will reflect a particular breed of cat, for instance, a Persian or Siamese cat. For our purposes we need not worry about the details of how this is so. Our concern is only with the compatibility between relationalism and the cognitive penetration thesis.

To illustrate the contribution of cognitive penetration, we can modify the attention example slightly. In this version, we can assume that each of the conversations being held is held in a different language. With that difference, we can consider a few cases of cognitive penetration. First, we begin by imagining a listener who does not know the language she is attending to, and moreover does not know what a language is (we can assume she is a noncommunicative alien species). Since she lacks the concept of a language, she will not be able to apply the concept to what she is hearing. In this case, it will be reasonable to assume that her experience will be something like the experience we have when hearing the rustling of leaves. The sounds made by the trees is a complex one, but it is not one that is linguistically structured in any way, and so it does not sound like any language to us (poetic interpretations aside). It is simply a complex sound, much like the sound of a waterfall or a vacuum cleaner. We can now imagine varying the case such

61 For an example, see Pylyshyn (1999).

that the listener possesses the concept of a language, and applies this concept to what she is hearing, but does not understand the language. Her phenomenology will be subtly different. Previously the sounds were perceived as complex but entirely unstructured, whereas now the sounds will appear structured, despite the difficult of discerning the structure. For instance, the listener's phenomenology might now allow her to recognize that the foreign words are intoned in a certain way such that some seem to be produced by way of posing questions and others by way of exclaiming. This would not have been possible previously. A third alteration we can make is to now stipulate that listener both possess the concept of a language and knows the specific language. In this case, her phenomenology will differ further. She will now hear specific words, these words will have a semantic content (assuming she understands them, which she may not), she will be able to evaluate on the basis of the experience whether the sentences are well formed or not, and what they are about. Finally, we can now imagine how these sorts of conceptual changes would affect the scenario of hearing multiple conversations. If the listener only understands the language in which one of the conversations is spoken, her experience will naturally be one of comprehending and hearing those words amidst the buzz of foreign languages. If we shift which dialogues she understands, this will shift her experience correspondingly. So it seems that the phenomenology of perceptual states changes with changes in our conceptual repertoire. If these cases are cases of cognitive penetration,[62]

62 Recall that the cognitive penetration thesis is a controversial one, and this is partly because of the controversies surrounding the interpretation of the examples. For instance, one might hold that the phenomenology remains the same across the cases, but that there are differences in what one can access. Or, one might think that these changes do not affect what one perceives, but are rather changes in one's resulting perceptual beliefs.

then the phenomenology of perceptual states can vary because of our concepts. But as we saw (in section 9), this will not undermine the core relational commitment.[63]

2.10 Solving the Underdetermination Worry

With the preceding features in place, the relationalist's difficulty with phenomenal underdetermination is largely overcome. The worry focused on the fact that perceptual contact with a worldly object cannot account for the variations in phenomenal states that occur in relating to a single object. As we have seen, by detailing the features of the perceptual contact relation, we can account for these variations.

The picture required to explain the underdetermination worry varies on two dimensions. On the one hand, some features affect the appearance of the object i.e. the way the object is on a token viewing. Others affect the phenomenology of the state directly rather than affecting the appearances. These are therefore properties of the state rather than the object. While the features affecting appearances and therefore phenomenology will be acceptable to all relationalists, the features affecting the phenomenology of the state directly will only be acceptable to impure relationalists *if* those features are constitutive of perception. As we saw, however, maintaining that these latter features (i.e. holism, gestalts, attention, and cognitive penetration) are constitutive is controversial.

The total picture we have is therefore as follows: A perceiver is in contact, sensorially, with various spatial, worldly objects. These are objects that fall within the

63 For further discussion of this issue, see Alston (1999) and Brewer (2002).

object scope, spatial scope, and spatial resolution of her sense. The perceiver is herself somewhere as she perceives the objects, and in accordance the objects appear will either close or far, to her left or right, turned upright or not, mirrored or not, and so on. The surroundings add to this by play two further phenomenology-determining roles. First, through the surrounding objects of the environment being in causal interaction with the perceived objects, these interactions determine the objects' present states. The objects are thus perceived as they presently are. Second, the surroundings, when perceived along with a target object, can affect the resultant experience if phenomenal holism is true, or if there are gestalt experiences. Finally, both attention and cognitive penetration also contribute to the phenomenology of perception. Attention structures the phenomenal character in a way that generates a contrast between a foreground and a background, and cognitive penetration allows a perceiver's conceptual repertoire to play a role in how thing's appear.

To solve the underdetermination worry what I have done is cited various features that explain typically cited phenomenal changes (such as changes due to lighting conditions, sense, etc.) that are meant to press the underdetermination worry. These features may not account for *every* change in phenomenal character. It is hard to see how one can come up with a principled way of uncovering a complete list of factors with which to individuate phenomenal characters, but fortunately we need not occupy ourselves with this sort of worry. This is so for two reasons: First, the main task facing relationalism is that of showing that the underdetermination worry is not a worry that seriously undermines the plausibility of the view. If the relationalist had no explanations

of any or most phenomenal changes, then this worry would be a serious one. But with the features cited so far, this worry is shown to depend on underestimating the resources available to the relationalist in detailing the perceptual contact relation. Whether every possible phenomenal change can be accounted for by relationalism is a further question. It is one that relationalists should take seriously. But outside of specific proposals for unexplainable changes, it seems to me that the relationalist can assume her view to be capable of dealing with phenomenal underdetermination. Second, even if we accept the burden to explain all possible phenomenal changes, this burden is not one that stands in the way of adopting relationalism. This is because the burden is shared with alternative views. For instance, Block (2010) has argued that phenomenal changes due to attention cannot be explained by representationalists, and Watzl (in progress)[64] argues that intentionalism as a whole has difficulties in accounting for the phenomenal contribution of attention. If so, then relationalism is not uniquely troubled with not giving a fully worked out account of all possible phenomenal changes. As long as it fares no worse than other views, the underdetermination worry is not a real threat.

2.11 The Overdetermination Worry and its Solution

While the underdetermination worry focused on the fact that relationalism distinguished phenomenal characters in too coarse-grained a manner, the overdetermination worry is a worry that relationalism distinguishes phenomenal characters too finely. Specifically, the issue arises because perceptual states are

64 On his website "Can Intentionalism Explain How Attention Structures Consciousness?"

individuated by their phenomenal characters, and on relational views those characters are individuated at least partly by the worldly objects. So it follows that two token states that relate us to different objects will always have different phenomenal characters. The problem is that this seems wrong. Many experiences suggest that perceivers undergo phenomenally indistinguishable characters even when related to different objects. For instance, recall the example of perceiving Tom the cat and Tim his robot duplicate. If all the conditions are held constant, than even a perceiver who is infallible at discriminating phenomenal characters would not be able to tell apart the state of seeing Tim from that of seeing Tom. So surely it must be wrong to think that these two characters are nevertheless different.

The first thing to say in response to this worry is that it is not a worry that relationalists face alone. Intentionalists who think that perceptual states represent singular and not just general contents share this worry. Like relationalists, such intentionalists think that perceptual states convey information of the form "*that* x is f" and not just "there is an x, and that x is f". So rather than merely representing properties ascribed to some object, singular content intentionalists also think that perceptual states represent properties as belonging to particular objects. In light of this, the insistence on the generality of phenomenal character is controversial and cannot be taken for granted. Of course one can define phenomenal character as being general, but the question is whether such a definition ought to be adopted. Simple insisting on the generality of phenomenal character amounts to tipping the scales against the relationalist by stipulation and nothing more.

Alternatively, if there really are reasons to accept such a construal of phenomenal character, then the relationalist will have to reject the centrality of the concept of phenomenal character to perceptual states. Indeed some relationalists have thought that this is the route relationalists should take. Matthew Kennedy, for instance, argues that relationalists are precisely focusing on an aspect other than phenomenal character. He writes "Our concept of phenomenal character makes a kind of off-kilter reference to the structure of Good experience. But the concept fails to capture the relational, world-involving orientation of this structure. Nor does the concept land on a natural part or component of this structure."[65] I do not follow Kennedy in this. I think that the concept of phenomenal character can be used in a way that picks out particular objects as the relationalist and singular content intentionalist need. Kennedy thinks that such a view would involve a radical change in our concept of phenomenal character and so chooses to do away with the concept's centrality altogether. If Kennedy is right that this change is too radical, then, I agree with him, so much the worse for the concept of phenomenal character. It is just not apt for the relational view of perception.

But there are more substantial responses on behalf of the relationalist. The relationalist can account for the genuine phenomenal indistinguishability of two characters that are of different objects in at least three ways. To begin with, we should first put aside those cases of epistemic indistinguishability. In those cases, two numerically distinct objects, a and b, qualitatively differ and their difference is actually reflected in the phenomenology of the state. But due to features of the perceiver's

65 Kennedy 2013 p.38 (draft)

epistemic limitations, the perceiver fails to tell the two states apart. These cases should be put aside because they are not genuine cases of indistinguishable phenomenal characters. By contrast to such cases, there are three possibilities of genuine indiscriminability despite the numerical difference of the objects that the relationalist can and should accept. Those cases are:

> Case 1: a and b are quantitatively distinct objects, but the objects themselves are qualitatively identical. They are also viewed under the exact same conditions. As a result, they are phenomenologically indistinguishable.
>
> Case 2: a and b are quantitatively and qualitatively distinct objects. But this appearance of a, and that appearance of b are qualitatively identical. As a result, they are phenomenologically indistinguishable.[66]
>
> Case 3: a and b are quantitatively and qualitatively distinct objects. Moreover their appearances on these viewing are qualitatively different. But due to features of the perceptual state itself, or the wider mental state, the resultant states are phenomenally indistinguishable.

In the first case, the idea is that the indistinguishability of the phenomenologies is inherited from the qualitative similarity of the objects themselves because the objects really are qualitatively identical. Consider Tom and Tim, for instance. Tim is designed to be exactly like Tom, so it is no wonder that Tom and Tim can appear identical, and as a result lead us to mistake Tim for Tom (or Tom for Tim). Or consider objects mass produced in a factory. Cars or televisions of the same model and brand are designed to

66 Genone 2013 also endorses this sort of case.

not just look alike, but to *be* alike. They have parts arranged in the same way, they are designed to instantiate the same properties, and so on. Any differences are mistakes in the manufacturing, an ideal manufacturing process would make every token object qualitatively identical to every other token. In these cases, given that a perceiver sees any one of these objects under the same conditions, she should not be able to discriminate them. There is simply nothing to differentiate them qualitatively. Although they are numerically distinct, and the experiences of them are the experiences of different objects, the phenomenologies that result are indistinguishable. This is so derivatively. The objects are intrinsically indistinguishable, and they are perceived in identical conditions.

The second case is more interesting. In it the objects are not qualitatively identical, it is only there appearances that are. As an example, consider looking at a red oval shape against a white background from the top. Now consider looking at a red circle shape against a white background from the side. The appearances of both objects will be identical. This is because the appearance of an object is defined with respect to the various variables specified in this chapter, and one of these variables is the viewing location. The two objects have qualitatively identical appearances because despite their intrinsic differences, when seen in these conditions they appear identical. The amount of variation between the objects compared in these types of cases is extremely large. White objects lit with red lights will be indistinguishable from red objects under normal light. Distant planes against a blue sky will be mistakable for a nearby dot on a blue page. Moreover most things appear identically under certain conditions. For instance in darkness all objects look the same: they are absolutely dark. Similarly, with large

distances, all things look alike: they look like dots. Moreover, the appearances might be identical even when comparing one object with many (I discuss such cases in detail in section 3 of chapter 5).

The third way in which phenomenologies can be indistinguishable neither depends on the qualitative identical of numerically distinct objects, nor on the qualitative identity of the appearances appearances. This is because two objects might be different and have different appearances, but features such as holism, gestalts, attention, or cognitive penetration can lead to indistinguishable phenomenologies. For instance, two different colors might, despite the fixed lighting conditions, produce similar phenomenologies because in one case, the background coupled with the phenomenal holism of the state makes the phenomenal character resulting from one color genuinely indistinguishable from that of perceiving the other color.

So nothing in what the relationalist says forces her to deny the phenomenal indistinguishability of states in which one perceives different objects. What the relationalist denies is that this qualitative indistinguishability is due to the generality of phenomenal character or the fact that there is a common core to these states. Instead, the phenomenal indistinguishability depends on the qualitative indistinguishability of the objects, the qualitative identity of the appearances, or the fact that properties intrinsic to perceptual states interact in certain ways with given object pairs.

Where does this leave the concept of phenomenal character? In chapter 1 I started by defining perceptual states through their phenomenal character, and I said that phenomenal character cuts across different sorts of cases (veridical, illusory, and

hallucinatory). But now that the relational view has been more thoroughly articulated, we can see that the relationalist defines phenomenal character in terms of object's appearing in various ways (with other features potentially factoring in either causally or constitutively). Since the relationalists treats appearances as objective features of worldly objects, then even indistinguishable phenomenal characters do not cut across different cases. In each case the phenomenal character is the character of a different object. It is just that those objects have qualitatively identical features, or else identical appearances, or else identical appearances given features of the state itself. So in other words, the overdetermination worry is a misplaced worry. The genuine indistinguishability of phenomenal characters does not show that phenomenal character does not pick out specific objects.

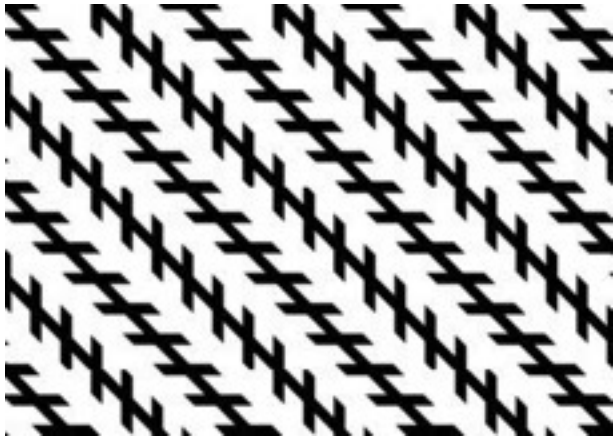
2.12 The Case of Illusions

The discussion of this chapter places us in a position to understand how perceptual illusions are possible. While the relationalist literature does not converge on a single account for hallucinatory perceptual states, the situation is different when it comes to illusions. A consensus on a relationalist understanding of illusions seems forthcoming. Various relationalists have provided elaborated accounts of the case of illusions,[67] and while there is some divergence in the accounts, there are at least three basic constituents that repeatedly emerge. In this section I discuss these three features, relating them to the

67 Some notably detailed accounts are presented in Fish 2009, Brewer 2011, and Genone 2013.

account given in this chapter, and to Brewer (2011) and Genone (2013)'s discussions of illusions.

We can begin with an example of an illusion followed by a definition of illusory cases. Consider the Zöllner lines below:



These lines count as illusory because while they appear nonparallel they are in fact parallel. We can define cases like that of the Zöllner lines as follows:

S undergoes an illusion as of o being F only if:

1- S in a perceptual state with a phenomenal character that presents o as being F,

2- S is in perceptual contact with o, and

3- o is not F

Illusory states are a type of perceptual state, and they are illusory because of the objects they relate us to. Such objects have an illusory character, and for short can be called *illusory objects*. What make these objects illusory is the fact that their appearance is misleading with respect to the object's intrinsic characteristics. This misleading character depends on various features of perceptual states in general, and illusory objects in

particular. I will begin by discussing the features of perceptual states that allow illusions to arise.

First, illusions can arise because an object can appear in a way that differs from the way it is. In solving the underdetermination worry we saw how this is possible. Plausibly, illusions like the Zöllner have an appearance that depends on the viewing conditions. For instance, because the lines are seen along with the lines intersecting them, they appear nonparallel; this is the result of features like phenomenal holism or the possession of a gestalt property. But alone, such features do not explain why we should mistake the object perceived for another object with different properties. What explains this latter feature is that appearances can be opaque with respect to the object's enduring character. This opacity is explained by our response to the overdetermination worry. Since distinct worldly objects can result in states with qualitatively identical characters, a given experience need not be transparent as to the specific object of the experience. As we saw different objects can result in identical characters in three ways: either the objects themselves are qualitatively identical, or their appearances are, or their appearances, coupled with features of perceptual states themselves, lead to identical phenomenal characters. Since quantitatively and qualitatively distinct objects can seem the same from the perceiver's perspective, distinct objects can be mistakable for one another. For instance the Zöllner lines, which are parallel, have an appearance that is qualitatively identical or at least similar to the appearance of nonparallel lines.[68] In this sense, a given perceptual state's character epistemically underdetermines the object we are related to.

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68 It is plausible to think that illusory objects need not be qualitatively identical to objects with differing features for them to be illusory. A close similarity or resemblance is sufficient, since perceivers need not be maximally attentive to the objects they experience.

This gives us the general feature of perceptual states that make illusions possible:

(1) Objects of illusion a- have an appearance, and b- that appearance is similar to the appearance of a different object with incompatible properties

Since this first feature is shared by non-illusory objects and thus veridical states, it does not explain what is distinctive about illusions. This is because typically, when an object has an appearance that is similar to the appearance of some different object, we do not necessarily mistake the one for the other. For instance, consider a case in which you see a white-furred cat under an orange light bulb. The cat looks orange (we can assume its appearance is indistinguishable from a cat with genuinely orange fur that is lit under a white bulb). Of course the property of having orange fur is incompatible with the property of having white fur and vice versa. Still, the perceiver is not inclined to misidentify the white cat as an orange one. Under the circumstances, the perceiver expects the white cat to look orange (based on background knowledge), and so the orange-looking cat is perceived as being white. Indeed, if it looked white, the perceiver would think the cat had luminous white fur, not white fur. This is importantly different from the way we experience the Zöllner lines. There the parallel lines look nonparallel and the perceiver takes this to indicate the lines *are* nonparallel. The perceiver mistakes the parallel lines for nonparallel ones in a way that she does not mistake the white cat for an orange one. One might focus on the difference in the type of illusion in each case, but this would be to miss the point.[69] In each case the object has an appearance that differs

69 This is because there are different types of illusions and one might think that the cat case is a environmental illusion while the Zöllner case is due to our perceptual apparatus. For more on different types of illusion, see Fish (2011) and Genone (2013).

from how the object is intrinsically, but the epistemic outcome differs. So what explains this latter difference?

The answer is that in one case but not the other, the viewing conditions are *taken to be comparable by the perceiver despite not being so*. This is the second feature of illusory states:

> (2) When looking at the illusory object, the perceiver takes her viewing conditions to be comparable to the viewing conditions she is in when perceiving an object with incompatible properties but a similar or identical appearance.

The case for this claim is as follows. Consider again the orange-lit cat. In some experiences of the cat, the perceiver can see that there are orange lights above it. In such cases the orange light bulb is co-perceived with the cat. The same thing can happen with the orange cat lit by normal lights; a perceiver might see the cat and the lights. In such cases, the perceiver is epistemically aware that the conditions are not comparable because she co-perceives the lighting conditions, and the result is that she does not mistake the orange cat for a white cat, despite the identical appearances. In the Zöllner case, by contrast, the perceiver is not similarly aware of the difference in viewing conditions. Although she co-perceives the lines intersecting the parallel lines, she is not epistemically aware of the effect that the intersecting marks have on the visual system. She assumes that the condition of looking at the Zöllner lines is like that of looking at ordinary nonparallel lines which would have a similar appearance. This is made clearer by considering a variation on the cat case that does count as illusory. Consider seeing the orange-lit cat without co-perceiving the lights or anything else that indicates their

presence (apart from the cat, of course). We can imagine that the lights are occluded from view, and that one has no background knowledge or anything else that allows one to determine the lighting conditions. In this sort of case, it is plausible to think that a perceiver will mistake the orange-lit cat for an orange cat, and thus be the victim of an illusion. This is plausible because naturally we assume that the lighting is normal unless given a particular reason to assume otherwise, and normal lights are roughly white. This sort of experience is what philosophers have in mind when discussing environmental cases of illusion.[70] Not every appearance due to environmental conditions is illusory, but some are. Those are the cases in which the conditions are not comparable but the perceiver thinks they are.

It is important to note that the issue is not about how knowledge or co-perception of the viewing conditions *alters* the way the object perceptually appears to the perceiver. Whether or not a perceiver has the relevant knowledge or co-perception, the object's appearance is unchanged. The cat continues to look orange, and the lines continue to appear nonparallel. What changes is the *inference* that the perceiver makes on the basis of the experience: in the one case, but not the other, she makes the wrong inference. This point is clearly highlighted in Genone's (2013) account of illusion. He writes:

> So according to the view I'm advocating, when a subject perceives an object, she perceives a determinate set of appearance properties.[71]
> and

70 For instance Siegel's (2012) primary example of an illusion is the Fishtank case which is plausibly interpreted as an environmental illusion that depends on the refraction of light by water.

71 Genone 2013 p.33 (draft)

> What I am proposing is that whether or not a perceived appearance is misleading depends on the subject's understanding of the relationship between appearances and intrinsic properties in different contexts.[72]
> and finally
> If any conflict does arise, it is between the ways objects are, including how they appear, and the judgments we make about them…[73]

Like the account I am endorsing, Genone takes the appearance of an object to be due to the object's intrinsic and relational properties.[74] He takes us to be perceiving those properties when we perceive an object. By contrast, whether the appearance is misleading or not depends on the *subject's understanding.* It is her understanding about the relationship between how things appear in different contexts. Thus the mistake is not a perceptual one; it is about the judgments we make on the basis of experience. What Genone does not explicitly highlight is the fact that an understanding of how things appear in different contexts requires that the perceiver herself be aware of the context. This awareness could be perceptual, as in the case of the cat, or else a matter of background knowledge (one would need to know that our visual system is so affected), as in the case of the Zöllner lines.

Although the two features I have described tell us a lot about illusions, they are still do not sufficiently characterize such states. To fully characterize them, a third feature is needed:

> (3) The appearance of the illusory object is more typical of the other object under these viewing conditions.

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72 Genone 2013 p.31 (draft)

73 Genone 2013 p.39 (draft)

74 Genone 2013 p.23 (draft)

This typicality condition is required to solve a puzzle that could arise if one appeals to only the first two features. This puzzle which involves an unwanted symmetry is discussed by Brewer (2011)

> It may be objected at this point that similarity is symmetrical. So [the object view] has the unacceptable consequence, in connection with the [Müller-lyer lines], for example, that the relevant paradigm pair of lines of unequal lengths at different depths look equal in length, for the very same reason. Similarly [the object view] may seem to be committed to the claim that a bent unsubmerged stick looks straight and that a red piece of chalk in normal lighting conditions looks white.[75]

The worry is that if lines like the Müller-Lyer or Zöllner lines look like ordinary unequal or nonparallel lines, than why not think that unequal or nonparallel lines look like equal or parallel ones? Similarly, if a white cat under orange lights looks like an orange cat, then an orange cat under white lights looks like a white one under orange lights. The objection is that if two object look similar, what makes it the case that one of them counts as illusory but the other not? The answer is provided by the third typicality condition. Brewer's appeals to a similar notion, that of paradigm exemplars. He writes

> First, o looks F, according to [the object view], in virtue of its visually relevant similarities relative to the spatiotemporal point of view and other circumstances of perception with paradigm exemplars of F. The [Müller-Lyer] diagram does not constitute a paradigm case of lines that are equal in length. Given the misleading hashes, it would certainly be an inappropriate exemplar to use in manifesting or acquiring the concept of equality in length. So, although plain similarity is symmetrical, the relevant condition of similarity to a paradigm is not.[76]

This is to say that while it is true that the objects with incompatible properties have qualitatively identical appearances, given the situation the perceiver takes herself to be in, the appearance constituting her phenomenal character favors *one* of the two objects. This

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75 Brewer 2011 p.22 (draft)

76 Brewer 2011 p.23 (draft)

is the object that more typically has the appearance in the situation envisioned by the perceiver. This typicality (or in Brewer's case, paradigm exemplar) is what explains the asymmetry.

With this last feature, we can now see how illusions are possible on the relational view. Although the element of deception arises because of the way the perceiver grasps his situation, illusions truly have the perceptual character that is misleading. This is what explains why illusions resist changes in belief, and why they are genuinely perceptual phenomena. Their character is due to a feature of all perceptual states, namely, that upon perceiving, things appear to us a particular way, and the way they appear can resemble or be identical to the way other things appear.

Chapter 3

Relationalism and Hallucinations

In the previous chapter I argued that the objects we are related to in a perceptual state sufficiently constrain the phenomenal character of perceptual states, so the sufficiency worry raised in the introduction is misplaced. In this chapter I turn to the worry that objects are not necessary for perceptual states because hallucinations are possible. I begin by elaborating on the way hallucinations have been construed in the literature and the impact they have had on theories of perception. I then consider relatianalist's two prevalent options in dealing with hallucinations, and argue that both are underpinned by a particular conception of hallucinations. I argue that it is this conception that needs to be rejected, and the way of rejecting it I pursue appeals to (what I call) an illusionist view of hallucinations.

3.1 Hallucinations and Commonsense

In the introduction I said that one central reason for adopting relationalism is that it fits well with common sense. While this is true, the existence of misperception or perceptual error (I use both terms interchangeably) is also a claim we are committed to by common sense. It is a commonplace observation that perception is sometimes misleading,

and that it sometimes misconstrues the way the world and the items in it are. We need not look far to see this. To begin with, consider Socrates' statement on behalf of Protagoras in *Theaetetus*:

> I would remind you of what we were saying before, namely, that to the sick man the thing she eats both appear and are bitter, while to the healthy man they both appear and are the opposite[77]

And Descartes' expression of insecurity about his waking life:

> Yet at the moment my eyes are certainly wide awake when I look at this piece of paper; I shake my head and it is not asleep; as I stretch out and feel my hand I do so deliberately, and I know what I am doing. All this would not happen with such distinctness to someone asleep. Indeed! As if I did not remember other occasions when I have been tricked by exactly similar thoughts while asleep![78]

The observations made by these philosophers are not esoteric. They are rather meant as platitudes of commonsense. The same thing can perceptually seem different ways, and one's state may deceive one about the way the world is. What is important about these observation is that they are *not* thought to be mere confusions in thought. Rather, there seems to be something distinctively perceptual about the errors. A perceiver might be confused, inattentive, or deluded and so reach a false conclusion about the perceived, but in some cases what is perceived itself seems wrong: The sick man experiences the sweet food as bitter; the paper is experienced as perceptually present by the dreamer.

The commonsense observation is a negative observation, it notes that sometimes, perception fails to be an optimal case of perceptual contact. By contrast, the philosophical interpretation of perceptual error is more loaded. Philosophers have traditionally traced the commonsense observation to two positive perceptual encounters, those that are

77 Complete Works, Theaetetus 166e

78 Meditations, original page 19

illusory, and those that are hallucinatory. Since I focused on the case of illusions in the last section, here I turn to the apparently different case of hallucinations. To begin with, consider the radical case of Charles Bonnet Syndrome (CBS). Oliver Sacks describes his encounter with a CBS patient in his book *Hallucinations* (2012) as follows

> "One day late in November 2006… one of the residents… had suddenly started seeing things, having odd hallucinations which seemed overwhelmingly real.… When I arrived and greeted her, I was surprised to realize that Rosalie was completely blind…. Though she had not seen anything at all for several years, she was now "seeing" things, right in front of her. "What sort of things?" I asked. "People in Eastern dress!" she exclaimed. "In drapes, walking up and down stairs … a man who turns towards me and smiles, but he has huge teeth on one side of his mouth. Animals, too. I see this scene with a white building, and it is snowing —a soft snow, it is swirling. I see this horse (not a pretty horse, a drudgery horse) with a harness, dragging snow away … but it keeps switching.… I see a lot of children; they're walking up and down stairs. They wear bright colors rose, blue - like Eastern dress." She had been seeing such scenes for several days."[79]

CBS starkly illustrates the case of hallucinations, but it is a hallucinatory case we do not have first person access to. So although nowhere as elaborate, we can consider the case of afterimages which are often considered a type of hallucination. Focusing on the black dot in the image below for a minute, then turning to a plain white surface (preferably one at a distance equal to the distance between you and the actual image) should induce an afterimage.

79 Sacks 2013 p.18

If successful, one's perceptual state will present a red heart shape in the clear absence of one.

Philosophers contrast these cases of hallucination with cases of illusions. Siegel (2012), for instance, glosses the distinction between the cases by saying "In a hallucination, perceptual contact is missing; illusions are misleading guides to what is in the environment".[80] Foster (2000) elaborates on the distinction further, he writes

> In this respect, the [illusory] case stands in sharp contrast with what would happen if someone were viewing a circular object, but […] a device which was attached to his optic nerves eliminated a certain portion of the sensory input, in a way which severed visual contact with the object's boundary and its immediate surroundings, and replaced what was eliminated with neural signals that created the false impression of an elliptical boundary. Here, the element of non-veridicality within the total visual experience would be purely hallucinatory. It would not be a case of the subject's seeing the circular boundary as elliptical, but of his not seeing the boundary at all. But, in the case of the lenses, there is no such element of hallucination.[81]

These claims can be understood by considering the CBS and afterimage cases above. Beginning with the red heart afterimage, we can note the following: on the one hand, the state we enter seems to have a perceptual phenomenal character; it presents a red heart. On the other hand, the state lacks an obvious worldly object for us to be in perceptual contact with. There is no red heart shaped object before before the perceiver, at most there is a white surface and that seems to have little to do with the state's phenomenology. While the green heart we originally looked at shares a few features (namely, the shape) with the hallucination, we are no longer looking at it when we see the red heart. So hallucinations seem to involve a presentation that has nothing to do with the perceptually

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80 Siegel 2012 p.34

81 Foster 2000 p.69

accessible environment. Similarly so in the case of Rosalie. Since she is blind, she has no visual access to her environment, yet she sees what she does. Perceptual contact seems to be missing in both cases, as Siegel and Foster describe.

Hallucinations introduce their own distinctive features. If we look at Foster's description, we notice that he finds two features definitive of hallucinations but not illusions: first, hallucinations *sever* perceptual contact. This is unlike illusions which merely distort our contact. To say that hallucinations sever perceptual contact is not to say that they present an object that simply occludes what we are in contact with (although a hallucination may do that too), as when one sound drowns out another, or something stands in between you and what you are looking at. It is to say that *the state either involves no perceptual contact with any worldly objects at all, or else that it involves contact with some object that is inappropriate to the hallucinatory image*. In either case the state involves a violation of world-contact (which, recall, is short for perceptual contact with particular, material, and mind-independent objects as well as their properties). The second feature of hallucinations is that they *replace* the eliminated perceptual contact with an apparently ersatz object. So in addition to the loss of contact, the perceiver *continues to experience things as being some way*. The way they are does not depend on perceptual contact. So unlike illusions, hallucinations seem more aptly defined as follows:

S undergoes a hallucination as of o being F only if:

1- S in a perceptual state with a phenomenal character that presents o being F, and

2- S is not in perceptual contact with o or any other object that has F (either because S is not in any perceptual contact, or because they are in contact with an inappropriate object).

If hallucinations are like this, then hallucination involve what I will call a *mere appearance.* Mere appearances are entities that are negatively defined. They are whatever explains the phenomenal character of the hallucination *without* appeal to world-contact. If hallucinations involve mere appearances, then the nonnecessity worry raised in the introduction is a legitimate worry for relationalist views.

3.2 Three Reactions to the Argument from Hallucination

As I see it, philosophers of perception are confronted with a balancing act when it comes to the metaphysics of perceptual states. They need to give weight to each of the two commonsense observations, the one which suggests world-contact, and the one that suggests its violation in perceptual error. Every theory tries to construe these two observations in a way that won't lead to an outright contradiction, and it is in striking this balance that hallucinations become important. If veridical cases were alone at stake, there would be no reason to compromise the commitment to world-contact. Moreover the addition of the commonsense observation of perceptual error does not by itself require the compromise of world-contact. It is only in fleshing out the experiences that undergird that observation that the possibility of violating world-contact arises. Traditionally, both illusions and hallucinations were understood to require a rejection of world-contact. Both phenomena were deployed in arguments against relational views and its commitment to

world-contact. The arguments, which I construe as reductios of relationalism, go as follows:

The Argument from Illusion:

P1- If a perceiver S is in a perceptual state P, then P's phenomenal character is determined by the worldly object o that S in in contact with. (the relational commitment)

P2- In illusions, P's character presents o as F when o is not F

P3- In illusions, P's character is not determined by o (since o is not F)

C- The relational commitment is mistaken.

The Argument from Hallucination

P1- If a perceiver S is in a perceptual state P, then P's phenomenal character is determined by the worldly object o that S in in contact with. (the relational commitment)

P5- In hallucinations, P's character presents o being F when S is not in perceptual contact with o or any other suitable object.

P6- In hallucinations, P's character is not determined by o

C2- The relational commitment is mistaken

Though both arguments reach the same conclusion, they do so in different ways. Illusions merely distort our contact with an object, they do not involve mere appearances. As we saw in chapter 2, this sort of distortion is acceptable on a sufficiently elaborated relational view. P2 can be made consistent with world-contact by distinguishing objects and their appearances, and this blocks P3 which in conjunction with P1 leads to the

rejection of relationalism. So illusions do not pose the problem they were once thought to pose to the idea of world-contact. By contrast hallucinations cannot be dealt with in the same way. They do not merely involve a misleading appearance, but also a mere appearance. Mere appearances raise the possibility that perceptual contact with an object is unnecessary for being in a perceptual state, and thus reject the core relationalist commitment. Hence the argument from hallucinations has played a central role in rejecting relationalism.

We can either accept the argument from hallucination or reject it. If we reject it then we think that hallucinations do not compromise the relational view and with it the core commitment to world-contact. If we accept the argument, we can do so on one of two grounds. We can accept that hallucinations are not relational at all, or hold on to their relationality but argue that they require a revisionary ontology. This is because world-contact decomposes into two claims:

(1) Contact: Perceptual states involve the perceptual contact relation.

(2) Worldliness: The object we are in perceptual contact with is a worldly object, that is, a particular, material, and mind-independent object.

(1) commits us to the relational character of perceptual states, and (2) to the type of objects we are perceptually related to. This means that we can reject (2) without (1) but not (1) without (2) (since the absence of perceptual contact from (1) makes the commitment to (2) unnecessary.[82]). We can claim that both (1) and (2) are compromised and so hallucinations do not involve perceptual contact at all, or we claim that (2) but not

82 Which is not to say that one cannot accept a thesis similar to (2) without (1). As I wrote (2), (2) commits us to perceptual contact as well as the worldliness of the object. But one might think that all perceptual objects are worldly objects and deny that we a bear a perceptual contact relation to these objects. We might, for instance, represent worldly objects and only worldly objects. In this case, we accept a statement like (2) without (1).

(1) is compromised because hallucinations do not involve relations to ordinary worldly objects, but are relations to what we may call *extraworldly objects*. Alternatively if we reject the argument from hallucination, we will maintain that hallucinations compromise neither (1) nor (2).

If we reject (1) and (2), then we have given up on views like Pure and Impure relationalism. Instead of appealing to perceptual contact or a similar relation, we characterize perceptual states as consisting most fundamentally in intrinsic, nonrelational properties. In some cases, this means characterizing the state in terms of *qualia*, which are mental and qualitative aspects of consciousness. In other cases, this means characterizing states in terms of representational contents, where those contents are general and not object-dependent.[83] On these views, the difference between veridical and nonveridical states is external to the phenomenology of the state. For instance, veridical cases might involve appropriate causal connections between the state and its objects, while nonveridical cases do not do so.

Rejecting (2) but not (1) preserves something like pure and impure relationalism. The difference in these cases is that hallucinations involve a modification of our idea of worldly objects. Hallucinatory states involves relations to *something*, but they are no ordinary worldly object for us to be related to. So we need to introduce a new type or types of object to be related to in hallucinatory cases. This means a *revisionary* ontology is required. I call an ontology revisionary just in case it goes beyond our ordinary ontology, the ontology endorsed by the commonsensical view of the world coupled with

83 Since singular contents reintroduce relationality into the state.

the scientific findings about it.[84] Different views endorse different revisions. For instance, A.D. Smith (2002) proposes that hallucinations involve relations to nonexistent or Meinongian objects, and it is those extraworldly objects that account for hallucinatory phenomenology. Mark Johnston (2004), by contrast, maintains that hallucinations involves relations to sensible profiles, where such profiles, unlike their veridical counterparts, involve properties without bearers; uninstantiated properties. Like Johnston, Michael Tye (2011) also accepts uninstantiated properties in hallucinatory cases. Common to these stipulates is the function they serve: they are the objects of hallucination.

The views resulting from the rejection of (2) but not (1) can accept the stipulated entities for hallucinatory cases only, or for all perceptual cases. Smith, Johnston, and Tye's views all limit their stipulates to hallucinatory cases, but older views, like indirect realist and idealist views do not do so. Indirect views (for example, those endorsed by many early modern philosophers)[85], depart from relational views in maintaining that the stipulated extraworldly objects are *intermediaries* between the perceiver and her world in good cases, but as the final object in bad cases. The most well-known recent form of this view is the sense-data view on which sense-data are stipulated as the direct objects of perception, with these objects being connected to worldly objects in good but not bad cases. On these views, relationalism is limited to our relation to the mediating entity. On idealist views (two examples are George Berkeley's (1998) and Foster's (2000) views), the extra-worldly object do not act as intermediaries in good but not bad cases. Instead,

84 Throughout I have assumed that our ordinary ontology involves particular, material, and mind-independent objects, for short, worldly objects.

85 For more discussion on this, see Brewer (2011).

they replace our ordinary ontology. Berkeley, for instance, argued that all worldly objects were mind-dependent. What differentiates veridical from hallucinatory cases is the way in which these objects feature in our perceptual states. Veridical cases are of consistently present mind-dependent objects, while hallucinations are inconsistent, violating the laws usually obeyed. Thus a hallucination presents an object that is visible but untouchable when normally it would be touchable, or that is visible only from one angle but not another when usually it would be visible from every angle. Like indirect realism, idealism offers a common core of extraworldly objects, but unlike indirect realism, it does not make its objects mere intermediaries. In this way it maintains relationalism but with a modified ontology.[86]

Rejecting (1) and (2) and with them the argument from hallucinations best preserves pure and impure relationalism. These views are fully relational in the sense that they reject the idea that hallucinations compromise or require a modification of world-contact in any way. The dominant strategy of procuring world-contact involves denying that hallucinations are perceptual (by either maintaining they are cases of imagination or belief, for example)[87]. Since they are not, they cannot compromise perceptual contact. Two examples are Martin (2004, 2006) and Fish's (2009) views. On Martin's view, hallucinations are most basically states with a particular epistemic property, the property of being indistinguishable from a corresponding veridical case from the perspective of the perceiver. This property is not grounded in a more fundamental phenomenal character of

86 Perhaps some varieties of skepticism also warrant a place in this category. On such views, the ontological structure of reality is unknowable or, on a metaphysical skepticism, nonexistent. The result is that one is left only with perceptual seemings. These, the skeptic could maintain, are objects of contact, although they are not worldly objects. A possible proponent of this view is Descartes by the end of the second meditation.

87 For more, see Macpherson (2013).

such states, but is rather a stand-alone property of some mental states. Fish's (2009) view elaborates on this sort of property by identifying hallucinations with states that match veridical states in their cognitive and behavioral profile, yet are nothing more than undergoing these effects. On both views, hallucinations are not distinctively perceptual phenomena since they do not involve a perceptual phenomenology. As such, hallucinations compromise world-contact; they are not perceptual at all.

3.3 A Different View of Hallucinations

If one is committed to relationalism, then it seems that one can must either posit objects to be related to when hallucinating, or else deny the perceptual character of hallucinations. Both options are problematic.[88] Here I will briefly discuss some worries for each option, and then argue that we can avoid both options by rejecting the conception of hallucinations that drives each response.

Consider the option of positing entities to which we are related to in cases of hallucination. There are at least four reasons for why this is problematic. One is that the entities posited are peculiar (Schellenberg 2010, 2011). For instance properties we perceive usually have bearers. The property is an abstract entity that is instanced at a particular space and time by its bearer. But since an uninstantiated property has no bearer, it is not clear how we can perceive the abstract property. A second worry is that the posited entity may screen off the worldly objects even in veridical cases (Martin 2004). If the posited entity depends on replicating the internal state of the perceiver, then this entity

88 For instance Siegel (2011) has discussed problems with the eliminative strategy, Martin (2004) has raised the screening off worry for views that substantiate hallucinations, and Schellenberg (2011) has argued against the introduction of "peculiar" entities for hallucinatory cases.

will be sufficient for the experience's character even in veridical cases. A third worry is that the entities posited seem to be introduced ad hoc, they are custom-made to respond to the problem of hallucinations. A fourth worry is that the stipulated entities make hallucinations too real. Assuming one could argue that these entities are particular to hallucinations, then a surprising conclusion follows: when we hallucinate, we make an empirical discovery. Just as we can discover there is a new type of frog by looking somewhere, so when we hallucinate we discover a new type of thing, for instance, a perceptible uninstantiated property, or a perceptible Meinongian object. Hallucinations seems to introduce us to new objects in the world. A final worry is that the stipulation of these entities, and the fact that they are distinctive to hallucinations, bloats our reality. So unless they are necessary, we should avoid them.

The alternative of denying hallucinatory phenomenology seems equally unsatisfactory. If positing extraworldly objects makes hallucinations too real, denying hallucinations perceptual character makes them too unreal. First, there are phenomenological reasons against the view. If hallucinations are not genuinely perceptual, then we must explain away there apparently perceptual phenomenology. Phenomenologically, hallucinations can be fairly mundane, like experiencing an afterimage. It seems farfetched to think one is not undergoing any phenomenology in those cases (e.g. the redness of the heart from the first section). One might argue that afterimages are either not hallucinations, or else partial hallucinations to be explained in a different way (more on this later), but there are many instance of hallucination that have a strikingly perceptual phenomenology. Rejecting the sincere reports of hallucinators seem

to attribute delusion to them, and this is a high price to pay. A second related worry is that the idea that hallucinators are delusional is unappealing from the perspective of commonsense. If relationalism is partly motivated by commonsense, then it seems to go against the grain of this motivation to argue that hallucinations are nonperceptual. Anyone who has undergone a hallucination *commonsensically* believes that they perceived something. To deny this seems to undermine the commonsense appeal of relationalism. A third worry is that the assimilation of hallucinations to delusions seems mistaken for various reasons. I will understand a delusion to be the attitude of adopting a mistaken belief which the deluded subject finds it hard or impossible to dismiss on the basis of their experience even when they know (e.g. from testimony) it is mistaken. Even the most sympathetic eliminative view of hallucinations treats hallucinations as delusions. Hallucinations are at best delusions involving *perceptual* beliefs.[89] Even if this is compatible with hallucinators reporting phenomenal character, it is not empirically plausible. Scientifically, there is a large body of empirical evidence that suggests hallucinations are perceptual because they are implicated in specifically perceptual regions of the brain.[90] Moreover the mistake of taking hallucinations to be delusions seems a sociological artifact in two ways. First, consider these quotes in Sacks' recent (2012) book *Hallucinations:*

89 This is, for instance, Fish's 2009 view.

90 For instance, see Ffytche 2013 and Naish 2013 for interesting data to that effect, but also Sacks 2013 which recounts many different types of hallucinations and discusses their physiological underpinnings.

> But in modern Western culture, hallucinations are more often considered to portend madness or something dire happening to the brain—even though the vast majority of hallucinations have no such dark implications.[91]

and

> Psychiatry, and society in general, had been subverted by the almost axiomatic belief that "hearing voices" spelled madness and never occurred except in the context of severe mental disturbance.[92]

and

> Smith's father and grandfather rarely spoke of their voices. They listened to them in secrecy and silence, perhaps feeling that admitting to hearing voices would be seen as an
> indication of madness or at least serious psychiatric turmoil.[93]

These excerpts suggest that Western society, at the very least, has long thought that hallucinations involve delusions. Second, if we consider the fact that discussions of perception have historically occurred in primarily epistemic contexts, we can see how delusions and hallucinations can seem to collapse: both result in a bad epistemic situation.

But relationalism is not forced to choose between these two distasteful routes. This is because both views begin by assuming that hallucinations are cases that do not involve perceptual contact but which have the requisite perceptual phenomenology. If hallucinations are indeed like that, then the only two routes of maintaining a relational view is either rejecting such hallucinations, or finding a special object to be related to

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91 Excerpt From: Oliver Sacks. "Hallucinations." iBooks. https://itunes.apple.com/WebObjects/MZStore.woa/wa/viewBook?id=616A22ECB53B33BE125F87DBEFD3959E

92 Excerpt From: Oliver Sacks. "Hallucinations." iBooks. https://itunes.apple.com/WebObjects/MZStore.woa/wa/viewBook?id=616A22ECB53B33BE125F87DBEFD3959E

93 Excerpt From: Oliver Sacks. "Hallucinations." iBooks. https://itunes.apple.com/WebObjects/MZStore.woa/wa/viewBook?id=616A22ECB53B33BE125F87DBEFD3959E

when hallucinating. However we can reject the assumption that hallucinations involve a mere appearance; a perceptual phenomenology without world-contact. We can think that hallucinations, like veridical and illusory states, involve perceptual contact with worldly objects.

3.4 Dualism, Hallucinism, and Illusionism

To think that hallucinations do not involve mere appearances is to reject the idea that hallucinations are fundamentally different from the misperceptual case of illusions. This is not a denial of hallucinations, it is the claim that we have exaggerated the difference between illusions and hallucinations. Hallucinations, along with illusions, lie on a single spectrum along with many perceptually curious cases. And like illusions, hallucinations involve misleading appearances but not mere appearances. In general, there are three ways of thinking about the relationship between illusions and hallucinations. Recall the definitions

S undergoes an illusion as of o being F only if:

1- S in a perceptual state with a phenomenal character that presents o as being F,

2- S is in perceptual contact with o, and

3- o is not F

S undergoes a hallucination as of o being F only if:

1- S in a perceptual state with a phenomenal character that presents o being F, and

2- S is not in perceptual contact with o or any other object that has F (either because S is not in any perceptual contact, or because they are in contact with an inappropriate object).

Discussions of illusions and hallucinations in the literature suggest at least three different ways of construing the metaphysics of these two states, provided both are perceptual: (1) One may take illusions and hallucinations to be fundamentally different perceptual phenomena. (2) Alternatively, one might think they are fundamentally the same, and thus assimilate illusions to hallucinations, or (3) hallucinations to illusions. Although these three ways of dividing misperceptual cases remain largely implicit in the literature, all three construals have emerged in it.

On the first construal, which we can call *misperceptual dualism* (dualism for short), illusions and hallucinations are fundamentally different states. Illusions are cases of perceptual contact like veridical cases, but hallucinations are cases of lost contact. Many philosophers endorse or assume this view. We saw Siegel and Foster endorse it in section 1, and we can see some others assuming it here

A.D. Smith: "In illusion, although a physical object appears other than it actually is, that very object is really perceived; in hallucination, “that” physical object does not exist."[94]

James Genone: "Philosophers usually divide misleading perceptual experiences into two categories: hallucinations—understood as experiences which lack a

94 Smith 2002 p.191

mind-independent object of awareness, and illusions—understood as experiences in which perceived objects appear to have properties they in fact lack."[95]

Benj Hellie: "…in a case of hallucination, intuitively, one's experience is "cut off" from one's environment"[96]

Notice that each of these philosophers accepts the relational view but thinks that hallucinations violate the core relational commitment. In each case the hallucinatory state has a phenomenology, a way things are for the perceiver, but without the need for perceptual contact. By distinguishing hallucinations through their lack of perceptual contact, these views commit us to a mere appearance. Since dualism must appeal to mere appearances, it must give a particular construal of them, for instance as special objects we can be related to (e.g. sense data), or else as intrinsic characters of hallucinatory states (e.g. qualia).

Aside from its endorsement by philosophers, dualism seems to have an intuitive appeal. It helps us explain the distinction between certain types of misperceptual cases. For instance, consider these two cases

(1) Woman on LSD: In a perceptual state that presents a green lizard seen on the white wall before her.

(2) Man seeing the Zöllner illusion: In a perceptual state that presents nonparallel lines while looking at the Zöllner lines before him.

Intuitively (1) and (2) seem different. (2) puts the perceiver in perceptual contact with a worldly object, the lines, which appear a particular way, (1) seems not to involve any

95 Genone 2013 p.25 (draft)

96 Hellie 2013 p.161

lizards or lizard appearances. The perceiver experiences a lizard when the wall looks nothing like a lizard. Second, the lizard is something that only the woman can see, the distorted lines, by contrast, are visible to everyone; they are public property. Dualism seems to explain this intuitive difference well: the first case, but not the second, involves a mere appearance. The intersubjective accessibility of the Zöllner illusion but not the LSD-induced lizard is explained by the fact that the LSD case involves a mere appearance, and since mere appearances are environment-independent but mind-dependent, we have an explanation of why others don't see the lizard. Or consider how the lizard seems to look nothing like the wall. If mere appearances are involved, and these appearances are internally generated, then that fact is easily explained. By contrast, since illusions do not involve mere appearances, we can see how they would have to be related to the lines on the page, and why the illusion would be publicly visible. Dualism seems to capture the sense in which a hallucinator experiences something that "is not there", while victims of illusion are merely fooled by what lies before them.

The wide endorsement and intuitive appeal of dualism makes it a strong candidate for understanding the difference between illusions and hallucinations, but it is not the only candidate. On the second and third construals, illusions and hallucinations do not differ in kind, so either both involve mere appearances or neither do. The collapse can occur in either direction. We can call the view that makes endorses mere appearances for all misperceptual cases the *hallucinist* views*,* and the ones that denies mere appearances for both cases the *illusionist* views. The first view thinks that *both* the arguments from illusion and hallucination establish mere appearances. As an example, the hallucinist will

treat the Zöllner illusion as follows: (i) some part of the world - the parallel lines - fail to be presented. As such, perceptual contact with that property is severed. And, (ii) nonparallel lines (or the property of being nonparallel) are *merely* presented. On this view, the Zöllner lines involve a property perceived that does not depend on perceptual contact, and as such the lines involve a mere appearance. Hallucinism was once a popular view. The larger part of philosophical history might be interpreted as accepting hallucinism insofar as both the arguments from illusion and hallucination were thought to undermine relationalism. As we saw there was a time when both the arguments from illusion and hallucination were thought to establish the need for intermediaries, and so many indirect realist views (e.g. from the early modern period, or sense-data views) assumed the need for mere appearances in all perceptual cases, and thus in illusory and hallucinatory cases.

Unlike hallucinism and dualism, illusionism has not enjoyed any period of dominance, but the view seems to be gaining more currency. One reason for this is that many relationalists are actively seeking an understanding of hallucinations that does not violate the relational view. The problem with dualism (and hallucinism) is that it forces us to accept mere appearances for hallucinatory cases, and this means that hallucinations cannot involve world-contact. This is why we saw the eliminative strategy and the extraworldly object strategies emerge. More recently, the idea of hallucinations involving mere appearances at all has been questioned. For instance, Hellie casts doubt on the idea of such hallucinations which he spells out in terms of hallucinations belonging to a narrowly supervenient fundamental kind. He says: "I am not certain why we should

accept the [narrow supervenience] assumption: the alternative would be that the fundamental kind of a hallucination takes in its external conditions, such as its failure to be caused in a normal way by external conditions."[97] Although he suggests that the narrow supervenience assumption is made more plausible if we formulate the idea using experiential properties, and moreover registers the intuitiveness of the world-severing construal, he parenthetically states that these ideas are still contestable.[98] Furthermore, Hellie himself endorses a view on which hallucinations themselves are a disjunctive category. This leaves open the possibility that at least some, and maybe all, cases of hallucination involve perceptual contact. Genone (2013) too registers a similar hesitation in discussing the illusion/hallucination distinction. He acknowledges the dualist interpretation, but then writes "If one surveys examples of perceptual illusions discussed by psychologists, along with familiar examples of hallucinations, mirages, and other related phenomena, it turns out that they preclude such straightforward [dualist] categorization."[99]

William Alston (1999), David Chalmers (2005), Shaun Gallagher (2008), and Dan Zahavi (2008), and Sebastian Watzl (manuscript) have all also endorsed illusionism to different extents. For instance Alston (1999) suggests three illusionist proposals, in passing, as possible responses to the problem of hallucinations raised for his theory of appearing. He writes:

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97 MacPherson (2013) p.161

98 MacPherson (2013) p.161

99 Genone 2013 p. 25 (draft)

> If Macbeth's hallucination of a dagger is to be handled by [the theory of appearing], we must find something actually existing that looked dagger- like to Macbeth. And what might that be? There are various candidates. One is the air occupying the region where the dagger appears to be. Another is the portion of space apparently occupied by the dagger. A less plausible candidate would be the part of the brain playing a causal role in the production of that experience. Of these alternatives I prefer the first.[100]

Each of these three proposals is an illusionist proposal. The first takes hallucinations to be relations to the air or whatever else occupies the region in which the hallucinatory dagger appears, the second takes hallucinations to be relations to the space where the dagger appears, and the third takes hallucinations to be relations to one's own brain, specifically that part that is causally responsible for the hallucinatory appearance. As Alston points out, these views are not all on par. Some are less plausible than others, and this is why one might prefer one view over the others. Alston, however, does not think that all hallucinations can be explained this way. Here writes "But this account will not handle more total hallucinations or dreams, if dreams are to be put under the rubric of 'perceptual experience'."[101] Instead he suggests relations to mental images, which given our framework would violate the core commitment to the commonsensical nature of relationalism.

Both Chalmers (2005) and Gallagher and Zahavi (2008) also consider illusionist proposals which they constrain to the case of envatted brains. In the context of discussing the movie the Matrix, Chalmers argues that the movie's scenario, which is one variant of the envatted brain, is not a skeptical scenario. Indeed no brain-in-a-vat case is. Instead, such scenarios are metaphysical scenarios. Chalmers writes

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100 Alston 1999 p.191

101 Alston 1999 p.191

> I argue that the hypothesis that I am envatted is not a skeptical hypothesis, but a metaphysical hypothesis. That is, it is a hypothesis about the underlying nature of reality.[102]

and then

> The Metaphysical Hypothesis here tells us about the processes underlying our ordinary reality, but it does not entail that this reality does not exist. We still have bodies, and there are still chairs and tables: it's just that their fundamental nature is a bit different from what we may have thought. In this manner, the Metaphysical Hypothesis is analogous to a physical hypotheses, such as one involving quantum mechanics. Both the physical hypothesis and the Metaphysical Hypothesis tells us about the processes underlying chairs. They do not entail that there are no chairs. Rather, they tell us what chairs are really like.[103]

Similarly, Gallagher and Zahavi (2008) ask "whether the notion of a disembodied brain (a brain in a vat) is at all intelligible"[104] and then respond saying:

> The brain-in-the-vat thought experiment actually shows that perception and action do require some kind of embodiment. Even the pure brain-in- the-vat requires absolutely everything that the body normally provides – for example, sensory input and life support. Indeed, the importance of the body can be measured in considering precisely what it would take to sustain a disembodied brain and the supposed experience that goes along with it. What is possible for a brain-in-the-vat is only possible if it is provided with a properly balanced nutrition, a properly balanced mix of hormones and neurotransmitters, and a complex stream of sensory information, properly adjusted for the temporal differentiations that are in fact involved in intermodal binding. If we consider only the visual input, we would have to assume that any poking around in the visual cortex that would replicate our human visual experience would have to be so specified in its details, that an analogue or digital input mechanism would have to be as complicated, as chemically complex, and as enactive as the human eye. That is, the full and extraordinary support system that would be required to allow a brain-in-a-vat to experience things as we experience them, or in other words, to allow a brain-in-a-vat to be phenomenologically in-the-world and not just physically in-a-vat, would have to replicate the bodily system that already supports our ordinary existence.[105]

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102 Grau 2005 p. 135

103 Grau 2005 p.136-137

104 Gallagher and Zahavi 2008 p. 131

105 Gallagher and Zahavi 2008 p. 131

Both these views accept illusionism for the case of envatted brains. Chalmers thinks that in the envatted brain the perceiver is in perceptual contact with actual objects, albeit objects with a nature that is fundamentally different from the nature it takes them to have. It think they are atoms, but instead they are data. Gallagher and Zahavi also take envatted brains to involve relations to digital inputs from the envatting apparatus. The envatted brain may use a different route to receive its inputs from the external world, but it nevertheless does receive such inputs, and it is these inputs that are perceived.

Finally, Watzl (manuscript) has argued for an illusionist view on which all hallucinations involve perceptual contact. We will consider his view and argument in the next chapter by way of arguing for illusionism.

Chapter 4

Illusionism

In this chapter I argue that we should accept an illusionist view of hallucinations. This is because illusionism is the most conservative position on hallucinations, and insofar as it can explain how all cases of hallucination are possible, we should continue to uphold it. I give four arguments for these claims. First, I begin by arguing that there are no good arguments for the idea that hallucinations involve mere appearances. I then argue that in general, the only reason we have for thinking that there is no perceptual contact in hallucinations is that we adopt a mistaken restrictive conception of what we can be in perceptual contact with when hallucinating. Third, I use Watzl's smooth transition argument to show that the arguments hold for all hallucinatory cases, and not just some. Finally, I supplement Watzl's argument with a discussion of different ways in which once can deal with the hardest hallucinatory cases.

4.1 Against Dualism and Hallucinism

In the last chapter we saw that there are three ways of understanding the illusion-hallucination distinction:

(1) *Dualism:* On which illusions and hallucinations are fundamentally different types of misperception, where hallucinations but not illusions involve mere appearances

(2) *Hallucinism:* On which all misperceptual cases involve mere appearances.

(3) *Illusionism:* On which all cases involve world-contact, just as with cases of illusion.

Why should we accept the illusionist view? One reason is that illusionism seems to be the most conservative and least revisionary view of misperception. It is just as compatible with the commonsense observation of perceptual error as the other views. But it is more compatible with the commonsense observation of perceptual contact because since only illusionism requires no modification of our commonsense understanding of perception which motivates relationalism. We should abandon illusionism only if we have reason to. But do we? Are there reasons to accept that hallucinations involve mere appearances? I think that at least four arguments have been forward in defense of hallucinations requiring mere appearances. Those are the definition argument, the introspective argument, the conceivability argument, and the scientific argument. None of these arguments are convincing. If not, then we should accept illusionism. Consider:

Argument 1: The Definition Argument

A first "argument" for interpreting hallucinations as world-severing is that this is just what the definition of a hallucination is, and so such cases are not up for debate. Consider A.D. Smith saying something to this effect

> In illusion, although a physical object appears other than it actually is, that very object is really perceived; in hallucination, "that" physical object does not exist….If you are misperceiving a part of the carpet as a pink rat, we have a case of illusion, not hallucination.[106]

Smith is making two different points in this selection. One is that the object of hallucination, in a sense, does not exist. Another is that the hallucinatory state is *by definition* not a case of misperceiving a part of the perceiver's surroundings.[107] This second claim amounts to saying that hallucinations are by definition world-severing. Perhaps Smith can be more charitably interpreted as appealing to tradition rather than definition. It is also possible that he does not mean his words to imply the definitional existence of world-severing cases. But it remains instructive to consider his claim in a more loaded sense. This is because one can easily see how this is a possible reaction when confronted with the illusionist position: Aren't hallucinations *by definition* cases in which we fail to perceptually relate to the world?

But this is easily objected to. If my three construals of the illusion-hallucination distinction are not incoherent, it cannot be that hallucinations are by definition world-severing. The world-severing way of thinking about hallucinations is just one of two ways of thinking about them. To stipulate it amounts to accepting a substantive construal of hallucination. Moreover, even if it is incoherent to construe hallucinations in an illusionist way, there still remains the denial of perceptual hallucinations altogether. As I pointed out, Martin (2006) and Fish (2009) at the very least deny that hallucinations are

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106 Smith 2002 p.191

107 These two claims are independent because one is about the ontological status of the hallucinatory object and the other is about how one comes to experience it. Whether the object exists or not one could think that one experiences it by being related to some part of the surroundings, or not. What I am against in Smith's claim is his second idea, that we come to experience the object without being related to the surroundings. As we will see, I think Smith is right to say that the hallucinatory object is in a sense, nonexistent.

strictly speaking perceptual. They are rather cognitive and behavior effects which are usually associated with perception but not themselves perceptual. Finally, even if we construe this argument as one that harks back to the philosophical tradition, as philosophers we do not just accept the tradition. It could be that this was the default definition of hallucinations for much of philosophical history, but the definition is no more sacred than the definition of knowledge as true justified belief turned out sacred.

Argument 2: The Introspection Argument

A much better argument, although still a mistaken argument, is the argument from introspection. It states that one's introspective access to one's own hallucinatory experiences establishes that they are world-severing. I can think of three distinct problems with this claim: First, introspection's verdict is unclear. Second, introspection's verdict is fallible, particularly so when it comes to lived hallucinations. Third, lived hallucinatory experiences often occur when one against a veridically perceived background, and such hallucinations cannot establish that they are world-severing even if introspection is trustworthy. Let's consider these.

If introspection revealed the essence of perceptual states, the philosophy of perception would have more answers than it does. The essence of veridical cases - whether they are best understood in terms of a perceptual relation, representational contents, qualia, adverbially modified relations, or sense-data - is just not obvious from our introspective access into our own perceptual states. If this is the case with veridical situations, why would one expect introspection to reveal the essence of hallucinations?

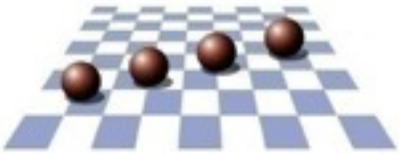
Hallucinations have been variously understood as relations to extraordinary objects (e.g. as relations to sense-data), extraordinary relations to ordinary objects (e.g. as adverbialists might think), as nonrelational (e.g. as consisting in qualia), as nonperceptual (e.g. as "cognitive effects"), etc. None of these are clearly refuted by introspection. So introspection's verdict is simply unclear.

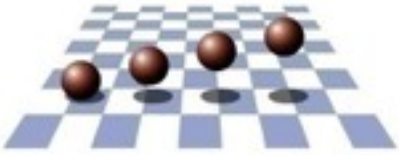
A second problem is that introspection's verdict is, generally speaking, fallible. Moreover it is particularly fallible in cases of lived hallucinations. Real hallucinations are for the most part accompanied by cognitive deficiency. Hallucinogenic substances, sleep deprivation, fever, hypnagogic (the state immediately before falling asleep) and hypnopompic (the state as one is about to wake up) states, as well as various medical conditions are all accompanied by cognitive decline, or at least cognitive unclarity. In light of this, there's a a specific reason to worry about using introspection to discover the essence of hallucinations.

But perhaps it can be said that neither of the above arguments are conclusive. Introspection may not reveal the essence of hallucinatory states, but it might still reveal significant facts that have bearing on the hallucinatory essence. And, even if one cannot introspect *during* the hallucinatory experience, one might introspect on one's memory of having been in the hallucinatory state. In response to these we can raise the third and most difficult problem for the use of introspection to establish world-severing cases: actual cases of hallucination occur against a veridical background, and such cases are poor evidence for world-severing hallucinations.

This is so for several reasons. First, as long as one is related to some real parts of the world, a variety of phenomena can generate the appearance of a hallucination out of worldly objects. To see this, consider again Alston's claim that hallucinations are relations to air or space. This sounds implausible on the face of it. But consider three facts along with his suggestion (for now I constrain myself to a visual case, but in chapter 5 I discuss other modalities): (1) the fact that space and air are visually transparent, and as transparent they inherit the qualities of the background. For instance a chunk of space or some air right in front of you will take on the color of whatever is behind it. If you focus on it, you find yourself seeing whatever color is in the background. So if the wall behind the empty space is yellow, the space itself will seem to inherit that yellow. Imagine painting this part of space. You would not do so by leaving the canvas empty, you would do so by putting yellow there. We can call this phenomena "qualitative inheritance". And we should note that it is not just true of color, but also of (visual) textures and shapes, as well as sounds. All those can be qualitatively inherited by empty space. (2) Along with this inheritance, consider the fact that the perceptual world easily allows us to mislocate objects and their qualities. Something distant and large might appear close and small, or vice versa. A good example is Ames Room in which the distorted perspective makes some people or objects in the room appear much larger than others despite being the same size. Another example is the surface of water which often displays a panoply of colors none of which are actually colors of the water. Rather the colors are located elsewhere in other objects that are reflected in the water. Mirrors, of

course, do the same. Finally consider the role shadows play in perceived location. Here are two images that make the point forcefully:





(3) Finally, along with inheritance and mislocation, consider the phenomena of "seeing-in" which I will return to later. For now, we can think of it ostensively: one can see shapes and objects in clouds, in fires, and in chaotic distributions of color. For illustration, consider the image below which makes use of this phenomena (the man is seen in the collection of vegetables, flowers, and fruits):

In light of these, we can now consider a case of hallucinating while related to a background of perceived objects. Take Macbeth hallucinating the bloodied dagger against

a veridical background. Is it so implausible to suppose that Macbeth saw the whiteness of a marble table, the black and red of a nearby curtain, mislocated their colors, and saw in the distribution a bloodied dagger given his state of mind? It seems to me the answer is no (more elaboration on cases like this will follow in the third and fourth chapters). It's also worth adding that though the phenomena I described and the example have been visual, similar phenomena and examples can be constructed with hearing. A silent room inherits the sounds from the neighboring room, sounds can be mislocated, and one can hear one sound in another, as when one hears a song or words in a cacophony of sounds.

The example above makes tenable the idea that hallucinations against a worldly background need not be world-severing, but the example is generalizable. For as long as their are objects, it will be difficult to establish that a hallucination is world-severing since hallucinations can be construed as involving anomalous relations to worldly objects, or anomalous relations between worldly objects. If a perceiver suffers fluctuations in her perceptual apparatus, or her attention, or her wider state of mind while perceiving a fixed environment, the character of her state will vary unsystematically with the objects in her world but systematically with her state. So the phenomenal changes will not be easily traced back to the constitutively determining object. For all that, the perceiver will not have lost perceptual contact with her world. Moreover the object and the perceiver's state may both remain stable while changes in the surrounding environment occur. The strobing lights of a club or a rave can do much to the way an object appears even though the perceiver and the object remain as they are.

So one diagnosis of the appearance of a strong distinction between illusions and hallucinations is that illusion, but not hallucinations, vary systematically with environmental changes. The pen may look bent when partly submerged, but drain the water and it no long appears that way. Similarly erasing the arrows of the Müller-Lyer lines makes the lines appear equal again. Hallucinations seem are not to be like that. One hallucinates something out of the blue, without systematic relations to the surrounding environment, and this is why hallucinations appear world severing. So the idea is that we can infer from:

(a) hallucinations do not systematically vary with the worldly objects perceived

that

(b) hallucinations are not relations to the worldly objects perceived

But one way to understand the examples I gave, and the anomalous relations I cited, is as demonstrating that one cannot move from (a) to (b). It may not always be easy to notice the changes that ground the hallucinatory appearance, but this does not establish that the hallucination is a mere appearance. Sometimes the states of the subject are responsible, other times the surrounding objects are responsible, and yet other times it is just the object itself that is somehow deceptive.

At this point one might admit that it is hard to establish world-severing hallucinations by appeal to hallucinations against veridically perceived backgrounds, but what about total hallucinations without such a background? I will discuss these cases more fully in the next chapter, but for now we can begin by noting that lived hallucinations of this sort will almost certainly be accompanied by such radical cognitive

decline that it is likely to be one of the worst cases to introspect on. Moreover, the most cited cases do not genuinely involve no perceived background. Dreams, and hallucinations like those had by Charles Bonnet Syndrome patients do in fact involve perceiving a background, except that it is with a different modality. A hallucination that does not involve perceiving a background must avoid do so in every sensory modality, as otherwise the hallucinated features may always be worldly-features received from another modality. This is just another example of an anomalous relation. Cases of multimodal illusions attest to this possibility,[108] but so do conditions such as synaesthesia. In synaesthesia, for instance, a feature detected in one modality (e.g. a shape) makes a conscious impact elsewhere (e.g. by generating a sound). The shape is therefore heard. This same mechanism might be exploited in unimodally world-severing hallucinations; one might see what one hears or hear the pain one feels.

Perhaps there is one case that might be thought to fit the idea of a world-severing hallucinations, this is the case of dreams. Dreams are highly or exclusively visual and they involve no other sensory input being received by the subject. This is true to an extent. There are interoceptive sensory inputs, as when one feel one's real thirst in the dream, and there are exteroceptive inputs, as when sounds make their way into the dreamscape. But assuming that some dreams are such that no part is veridical and are as such total, they nevertheless lack features which would make them ideal to introspect on. First, unlike other perceptual states, they occur while asleep. This makes it highly questionable that they are even aptly described as perceptual states and not, for instance,

108 For instance, see O'callaghan (2008)

imaginative states. Whether imaginative states are perceptual states or not is a controversial matter, so the appeal to dreams will require a considerable amount of background argumentation. Second, adding to the worry about their being perceptual states, dreams are not clearly phenomenologically indistinguishable from perceptual states. Although often immersive during the dream, they are almost always recalled as fragmented, hazy, and in general perceptually incomplete. This seems a feature reminiscent of imaginings (think of a daydream which is similarly incomplete and immersive) rather than perceptions or hallucinations. Finally, the experienced immersiveness during the dream contrasted with how hazy it seems in retrospect raises the strong suspicion that dreams are cases of radically hazy cognition. Such cases are hard to introspect on.

Argument 3: The Conceivability Argument

We are now in a position to consider another important argument for world-severing hallucinations. An important reason cited by many philosophers is that we have to admit world-severing hallucinations because they are conceivable, not because there are actual cases.[109] The contemporary philosophy of perception has its roots in Descartes who famously appealed to the conceivability of the evil demon scenario. A similar scenario is stipulated today in brain in vat (BIV) cases, and maybe this is what justifies the possibility of world-severing cases. But appealing to the conceivability argument is problematic for at least three reasons. First, there are the general worries about using

109 e.g. Fish 2008 and Smith 2002, amongst many others.

conceivability arguments to establish metaphysical possibilities. Second, one has to be sure that the content of one's conception is such that it envisions the requisite metaphysical possibility. With the above scenarios, it is simply unclear that the content is of world-severing cases of hallucinations. To establish that metaphysical possibility we need to conceive a hallucinatory state in which the perceiver is perceptually severed from the world. But the conceived scenarios are always ones that involve an external entity feeding the subject some input. In the envatted brain scenario, one does not conceive a subject in a perceptual state and no external world, rather, one conceives the subject with a special external world; the envatting apparatus. This is what leads Gallagher and Zahavi (2008) to say "The brain-in-the-vat thought experiment actually shows that perception and action do require some kind of embodiment. Even the pure brain-in-the-vat requires absolutely everything that the body normally provides – for example, sensory input and life support."[110] Similarly, in the evil demon scenario the demon plays the role of external world, it feeds the perceiver false images. As long as this is so, it is arguably the case that what one is conceiving is the envatted/demonized brain standing in a perceptual contact relation to the envatting apparatus/demon's acts. It is true that the brain being fed input while disembodied means that it is perceptually related with an abnormal sense modality (some sort of direct stimulation), but this does not establish that it is not perceptually related at all to its world. Of course to say this is not to explain how this is so. The point is only that the brain *may* be perceiving the demon or the apparatus, and it is not clear

110 Gallagher and Zahavi 2008 p.131

that what we conceive rules out that possibility. The content of the conceivability argument does not clearly support world-severing hallucinations.

What about trying to construct a scenario that is unambiguously world-severing? It is not clear how that would go. What one would have to do is conceive a subject who, despite the complete destruction of the external world, or despite being in no perceptual relation to anything outside of itself at all, nevertheless continues (to be, and) to be in a perceptual state by sheer will or constitution. But if this is what we're conceiving, why think this is at all applicable to creatures like ourselves? In other words, why think this is a metaphysical possibility *for us*? Here it seems to me that the being we conceive is so far departed from what we are that although we conceive the world-severing case clearly, we do so at the cost of not conceiving a perceiver clearly. Relationalism may not be true of the creature we conceive, but neither is it clearly the case that this is a perceiver at all. Rather, this being seems to *create* its objects, generating a reality rather than perceiving or hallucinating it.

Still, we might insist that in conceiving that being, we conceive a world-severing hallucination. If so, this brings us to the third problem with the conception: it seems to be an empirical matter whether our brains are indeed capable of entering a full-blown perceptual state *without* any input from the world, not a matter for conceivability. It would not be unfair to say that this sort of dependence on the conceivability argument is actually indicative of a general problem in philosophers' attitude towards hallucinations. Philosophers seem to (at least until recently)[111] have a *magical theory of hallucinations*,

111 See MacPherson and Platchias 2013

where hallucinations are treated as if they lie outside the empirical sphere. With the conceivability argument's roots in Descartes' demon scenario (which he constructed out of thin air in his study), philosophers seem to maintain the Cartesian conviction that hallucinations are best considered and understood from the armchair without the need for empirical input. The result is that empirical work and distinctions are largely ignored, current empirical hypotheses are never mentioned, and the varieties of hallucinatory types never considered. Moreover, as they are conceived, hallucinations are treated as if they occurred in a mental vacuum, where multimodal interactions, conceptual differences, attention, memory, and the emergence of gestalt properties have no phenomenal impact on what one experiences at all. In this way, it is left to one's prior commitments to decide how one will characterize the essence of the hallucination, e.g. whether they will be cognitive effects or phenomenologically indistinguishable representations.

Argument 4: The Scientific Argument

This brings us to the final argument in favor of world-severing hallucinations. This argument maintains that it is not merely conceivable that hallucinations are world-severing, but rather scientifically demonstrable. One way to understand this argument is as beginning with a conceivability argument and then supplementing the conceived scenario with scientific evidence suggesting that the scenario is scientifically plausible. The conceived scenario is as follows: we imagine a subject actually perceiving some worldly object, and then we imagine replicating the exact brain state of that subject in a subject who is not actually perceiving (for instance a blind/deaf/anosmic/etc. subject).

This, according to the scenario, should lead to a phenomenologically indistinguishable state, but this state would be a hallucination since by stipulation the subject is not in perceptual contact.[112] Next, it is claimed that this is not merely a conceivable scenario, but that it has also been - to an extent - scientifically demonstrated. There are well-documented cases in which various ways of directly stimulating the visual cortex has generated phosphenes and other basic perceptual phenomena,[113] and this is proof that with a fuller replication we can induce a full-blown perceptual state.

Despite the supplementation by scientific evidence, I think this argument also fails to establish world-severing cases. First note that the argument inherits one of the failures of the conceivability argument, namely, that it does not show that the perceiver is not in fact standing in perceptual contact to the stimulation that is generating the identical phenomenal state. Again, how electrical stimulations can look like e.g. a cup, needs to be explained, but for now the point is that this is a possibility (later on I try to explain how this is now only possible but plausible) In any case, one might also respond to the causal replication argument in a different way: to claim that causally replicating the brain state would replicate the phenomenology begs the question against the relationalist. Relationalists think that the function of perceptual processing is to reveal the world, not replicate it. Campbell (2002) has provided a helpful metaphor to understand the way relationalists and intentionalists understand the role of causal processing. Intentionalism, he says, models perception as a television set which constructs images from the

112 For an example of this scenario, see Horgan and Tienson 2002.

113 For instance, see Bart and Kohitij 2012

information input provided, which relationalism models it as a pane of glass which just reveals the world. He writes

> Suppose we have a medium which, like glass, can be transparent. But suppose that, unlike glass, it is highly volatile, and needs constant adjustment and recalibration if it is to remain transparent in different contexts. Suppose, in fact, that the adjustment required is always sensitive to the finest details of the scene being viewed. The upshot of the adjustment, in each case, is still not the construction of a representation on the medium of the scene being viewed; the upshot of the adjustment is simply that the medium becomes transparent.[114]

So replicating the causal factors replicates the phenomenology only if an appropriate object is revealed by entering the state i.e. the perceiver stands in perceptual contact to a given object. To claim otherwise begs the question against the relationalist; it is to assume that the causal factors are alone sufficient to replicate the phenomenology.

But one might respond, “Doesn't the generation of phosphenes *prove* that something like the television model is more correct?” I think this would be too hasty. For one thing, the phosphenes could just be the perception (in a strange sensory modality, no doubt) of the stimulation. For another, recall Campbell's metaphor of the highly volatile glass. It's open to the relationalist to say that in this case, the “glass” loses some of its usual transparency because of the direct stimulation, and in doing so it ceases to be transparent and therefore world revealing. Could this lack of transparency have its own phenomenology? Yes, according to the relationalist. Recall that relationalism does not deny that there can be mediating conditions on perceptual contact, and moreover does not deny that these can have a phenomenological character as long as that character is distinguishable from perceptual contact with the object. It seems to me that if one takes

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114 Campbell 2002 p.119

for granted that these phosphenes have a phenomenology, they can easily be placed into this class of mediating conditions.

The responses to these arguments do not establish that there are no mere appearances. They do show, however, that the case for accepting the *radical* understanding of hallucinations is weak. Our first option should be to pursue the illusionist route for understanding hallucinations. Illusionism sits comfortably with our commonsense view of perception, and while commonsense is not infallible, when we have little empirical or theoretical reason to overturn its judgments we should not do so. To depart from it for the case of hallucinations seems needlessly extravagant. Moreover, illusionism seems to provide a more substantive answer to the question of hallucinations than either hallucinism or dualism. This is because illusionism seems to burden us with actually substantiating our explanation of hallucinatory cases. When we make an appeal to a mere appearance, whether it is a content, sense-data, or qualia, our explanation of hallucinatory phenomenology seems to involve nothing but the positing an entity that is supposed to do the explaining. This seems like a dormitive virtue explanation: we misperceive because perception has contents/sense-data/etc. that allow us to misperceive. The illusionist position differs in its explanation. It does not appeal to a particular entity, but explains how the objects of the world can appear to us in this distinctive way. The illusionist carries the burden of explaining how something apparently unrelated to our world can turn out to be a way in which the world appears to us, and no other view does this. (It is true that dualism carries this burden in the case of illusions, but this still leaves

the most interesting cases, those of hallucinating and seeing "what is not there" with the dormitive virtue explanation.)

4.2 The Worldly Objects of Hallucination

If we are to begin with an illusionism, the first obstacle is explaining what we are in perceptual contact with in cases of hallucination. There are different types of hallucinations and a fully illusionist view would have to explain how all varieties of hallucination depend on world-contact. This means that the illusionist is committed to the following claim about all hallucinations:

> APPEARING: For any hallucinatory state P as of F, there is an appropriate object, o, perceptual contact with which accounts for F.[115]

APPEARING should hold true of four types of cases which are discussed in the literature. Fish distinguishes pure hallucinations which are "hallucinations that take place in the absence of any background experience of the world"[116] from impure ones which are cases that do not occur in the absence of a background experience of the world. Genone distinguishes total from partial cases, writing

> First, the hallucination of one or more non-existent objects in an otherwise normally perceived scene (a partial hallucination); and second, the hallucination of an entire scene, such that the subject's experience bears no relation to her actual environment (a total hallucination).[117]

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115 For instance, see Alston 1999 p.191, Sokolowski 1999 p.14-15, Gallagher and Zahavi 2008 p.131, Chalmers 2005, and Watzl (manuscript).

116 Fish 2009 p.93

117 Genone 2013 p.26 (draft)

These are two different distinctions. The partial/total distinction is about *how much* of a perceived scene is hallucinatory, whereas the pure/impure distinction is about *how* the perceived scene is hallucinatory. A total hallucination occurs when one does not co-perceive any worldly objects along with the hallucinatory objects, so that everything around one is hallucinatory. A partial hallucination, by contrast, entails that hallucinatory object is co-perceived along with other worldly objects. A pure hallucination is one on which the "subject's experience bears no relation to her actual environment", An impure hallucination does bear the relation. These two distinctions cut across one another, with total pure cases being the hardest to deal with (they most obviously involve a mere appearance), while impure partial cases are the easiest, often assimilated to illusions. But there are also pure partial hallucinations and total impure ones. A pure partial case occurs if, for instance, one eye is partially blind and a hallucination occurs in the blind part of the eye. A total impure case is one in which a perceiver with fully functioning eyes nevertheless has an experience that is entirely unlike what he is contact with. Altogether we get:

	Pure Cases	Impure Cases
Total Cases	Total pure Hallucinations	Impure Total Hallucinations
Partial Cases	Partial pure Hallucinations	Impure Partial Hallucinations

According to dualists and hallucinists, APPEARING must be rejected in at least one of these cases. To evaluate this claim, we can start by considering impure cases and proceed to pure ones. Even if these cases seem easier, they are not entirely easy to solve. For instance we can conceive hallucinating a cat against a background that has no cats or

anything resembling a cat. For those case, how can the illusionist maintain APPEARING?

The illusionist answer starts by explaining how objects can appear in a way that is radically different from the way they are, so much so that the perceiver's hallucination seem independent the perceiver's actual surroundings. This can be done through two arguments. First, recall that in the last section, it became clear that systematic variation with environmental changes cannot demonstrate the presence of mere appearances. Some perceptual cases are such that they manifest a systematic variation. For instance adding the arrows of the Müller-Lyer lines makes the lines appear unequal, and subtracting them unequal. But others do not. A wall painted two colors can vary between looking like it is one color, and looking like it is two colors, even if the wall and its surroundings are invariant. This is because some variation may be due to unperceived factors, such as variations in the perceiver's mediating sensory apparatus. If a scientist were capable of activating color-blindness and deactivating it in a perceiver, a wall's fixed color could appear to vary, and a wall with changing colors can look invariant. We can even conceive more sophisticated scenarios, for instance varying color-blindness mechanisms in part of the visual field but not others such that a a pattern emerges. So unsystematic variation does not demonstrate we are not in perceptual contact.

Second, the impressions that cases of hallucination occur in the absence of appropriate objects is based on a false starting assumption. The assumption is that the properties we might be related to when hallucinating are relatively limited because there are only so many objects that can serve as the source of those properties. We can call this

the *restrictive* assumption. So for instance, consider a state in which a perceiver is related to o. The appearance constituting the phenomenology of the state is F. On the basis of F, the state seems to the perceiver to be of a particular object, x. x, the apparent object of the experience, and o, the actual object of the experience, must somehow match according to the restrictive assumption. The strongest version of this assumption is the result of the so called sense-datum inference, which states that if the experience seems to be of a particular thing with certain properties, then its object must be that particular thing with its properties. In that sense, x and o must be identical, hence the need for sense-data which are exactly as they appear. And while the sense-data inference is now largely unpopular, less restrictive assumptions seem to still be operative when hallucinists and dualists reject the APPEARING thesis. The problem is no version of the restrictive assumption is plausible, even in veridical and illusory cases.

We can see this if we consider different restrictive proposals for the appropriateness of the object in veridical and illusory cases. Although the list of proposals I give is not meant to be exhaustive, and so does not demonstrate a principled bar on finding an acceptable restrictive condition, the list shows that some very plausible candidates fail. Without these restrictions, and in the absence of new suggestions, we should assume that finding an appropriate object to be related to is not particularly difficult.

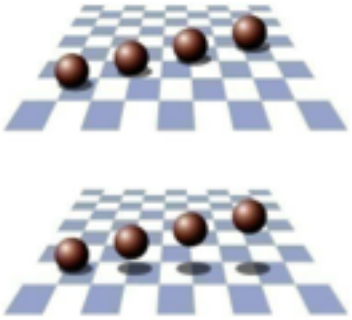
As a first proposal, consider this:

KIND: If the state is as of an F, then the appropriate object must be of the same kind as F.

This principle is obviously false. Consider a state as of perceiving a lemon. This condition says that if the state is as of a lemon, then the object it is of should be of the same kind. Perhaps that kind is lemon, or maybe fruit. But the state can clearly be one of perceiving neither a lemon nor even a fruit. A plastic decoration, yellow lights projected on a lemon shaped cardboard cutout, a wax lemon, would all suffice for the lemon-like appearance. A different proposal is therefore necessary. Consider this one:

> LOCATION: If the state is as of an F where the F is spatiotemporally located at L, then the appropriate object must have the same spatiotemporal location as F.

This proposal is much weaker than the first but fares no better. An object need neither be spatially nor temporally (much less both) located in the place it is presented as being. Starting with spatiality, consider the following image:



Where these spheres appear to be depends on the shadows. But shadows can be misleading. Consider the shadows in the bottom image. They look like they are cast by the spheres we see. However they could be cast by a straight line of horizontally placed spheres right under the light source and out of view. The same light source might also eliminate the shadows of the visible spheres. If this were to happen, we would take the spheres to be located at different heights (as in the lower image) even if they are

positioned as they are in the first image. The below image depicts a case roughly like that, where the shadow is mistakenly attributed to an object that leads us to mislocate it:

Such cases also carry over to other senses, for instance auditory stereo illusions appear to move around even though the source does not.[118]

The object need not be in the right temporal location no more than it needs to be in the right spatial location. A good example comes from an observation deployed in the time-lag argument.[119] A perceiver looks at the night sky and sees a star. But this star has long since perished. Whatever else might be happening in such cases, it is presumably true that the experience is not of a mere appearance. If it was, it would be a massive coincidence that we consistently hallucinate stars where real old stars used to be. So perceiving perished stars is a case of temporal mislocation. Similar comments apply to sound traveling (e.g. thunder).

So the worldly object appropriate to a state is not constrained by kind or spatiotemporal location. What about properties other than spatiotemporal ones? Consider this more general third proposal:

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118 A readily available online example is the virtual barbershop illusion.

119 Fish 2010 p.15.

PROPERTY: If the state is as of an F, then the appropriate object must posses the same cluster of properties as F.[120]

Like the above two principles, this one too is false. Objects perceived are affected by a whole host of factors (namely, those discussed in chapter 2), and this means that the properties manifested often differ from the object's actual properties. A song heard underwater differs from the song head above water and an object's color differs because of the lighting (effects of the environment), an object's taste changes depending on what one has eaten before and the temperature an object feels to be depends on what one has touched before (holism effects), and finally the distance at which we see the object may affect how it looks (spatiality effects). So a white table can appear red, lukewarm water could appear cold, a plane might look like a speck, and so on. Combining these effects might make it so that we perceive an object as having the wrong shape, wrong color, wrong sound, wrong texture, etc. Should we think these are cases of failing to perceive the object?[121] This claim requires that we twist the meaning of "perceive" in a strange way. Can one really say they do not see the plane in the sky when they see the speck? They might not see that the speck is a plane, but they certainly see the plane. It is the plane that currently looks like a speck, and the speck is clearly visible. The fact that the speck does not share properties with the plane is therefore not an argument against perceiving the plane.

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120 One might think that this principle requires restriction to perceptible properties. I do not restrict it as such since I think that even without the restriction the principle fails. If we add the restriction the principle fails all the more readily. So, I avoid the restriction by way of testing the principle in its strongest possible form.

121 Michael Huemer (2001) seems to think so but his reasons seem to derive from the analogy he draws with beliefs.

The various factors that affect the appearance of an object should convince us that not only is the above PROPERTY proposal wrong, but also two weaker related proposals are too. One might think we don't need a full intersection of properties but only some intersection, or one might insist that a single property should be shared. But it is not clear that there is a substantial intersection between a plane and a speck, and finding a single property seems to weaken the restriction to the point of admitting that there is no substantially restrictive matching condition on what can appear as what.

What other constraints might we suggest? Perhaps minimally this:

NUMBER: If the state is as of a given number of Fs, then the appropriate object(s) must be of the same number as the Fs.

But even this is false. The problem is that there are many cases in which a multitude of objects are experienced as one, and conversely, one object experienced as a multitude. For instance two distinct cat parts can be placed on each side of a pole to look like a single cat partly occluded. Similarly a group of objects can be organized such that looking at them from a particular angle makes them all look like one object. A specific example of this is the Hurwitz Singularity installation.[122] Just as multiple objects can be spatially organized to look like one, one object can look like a multitude. Consider the following image:[123]

122 I was alerted to the existence of this specific installation by Alex Byrne.

123 A video of these anamorphic illusions is available on youtube.

In this image, it seems as if there a Rubik's cube on a white paper. But in fact there is simply a white paper with an anamorphic image of a Rubik's cube on it. It looks something like this when not viewed from the right angle:

So, a single object can look like multiple objects too. This should lead us to conclude that NUMBER is also false.

Since these plausible restrictive proposals fail in veridical and illusory cases, there is no reason to think that hallucinatory cases will fare better. Hallucinatory appearances can seem independent from the surrounding objects because the appearances and what they are of can widely diverge. Coupled with the possibility of unsystematic variation, most things can appear as something else.

4.3 Watzl's Smooth Transition Argument

Even if APPEARING is true of impure cases, why should we think that the argument will hold for pure cases? One reason for this is that many philosophers think that pure and impure cases lie on a spectrum. For instance, both Fish and Genone discuss their cases as being on a spectrum

> Fish: As we become more inclined to classify situations as cases of hallucination, the influence of the layout of the environment will disappear altogether and the explanation of why the false beliefs occur will have only a correlate of the cognitive disorder component. At the end of this continuum, we find pure hallucinations of the kind discussed in chapter 4[124]

and

> Genone: at least some cases of partial hallucination would seem much more like illusions in that the cause of the appearance of the non-existent object(s) is environmental rather than being a matter of deficiencies with or manipulation of the subject's physiology.[125]

If hallucinatory cases lie on a spectrum and impure cases can be given an illusionist treatment, then we can show, through a sorites argument that pure cases can be too. Watzl (manuscript) presents such an argument in the only explicit defense of illusionism (the I know of) in the literature.

Watzl's defense emerges in the context of defending *particularist relationism.* The view states:

> Particularist Relationism *Necessarily*: You have a perceptual experience as of a particular object or even if and only if you are perceptually aware of some particular object or event (which need not be the one your experience as of) as being some way.[126]

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124 Fish 2009 p.171

125 Genone p.27 (draft)

126 Watzl (manuscript) p.5

Particularist relationism does not, by itself, entail illusionism. The view is compatible with both dualism and hallucinism since the view only commits us to the relational character of perceptual states, and we might be related to mere appearances like sense-data. Watzl, however, adopts the illusionism in his response to a premise of the argument from hallucination that threatens particularist relationism.The premise states

2. Possible: (a) it seems to you that you are attending to some particular object or event, and (b) it is not the case that there is an object or event that is spatially located and you are appropriately perceptually related to it.

To reject it, Watzl gives the *smooth transition* argument

> Contemporary philosophers often consider the bad cases in isolation from the good cases. There is a tomato present in the good case, while there is no tomato present in the bad case. Thus, they reason (using something like the spatiality principle), there is something to attend to and be aware of in the good cases, while there is nothing to attend to in the bad cases. But that is a mistake. There is a smooth transition from the good cases to the bad cases, i.e. a continuum of intermediary cases that lead from the good case to every bad case. Someone who rejects attentional relationalism would have to find some point in that transition where our perceptual attention ceases to have an object, where the perceptual relation ceases to obtain, and where we thus step from attending to something to merely seeming to attend to something. The smooth transition argument attempts to show that if we look at the transition with enough fineness of grain, we see that there is no plausible point where that could happen. What we see rather is a physically continuous series.[127]

Rather than going through each step of the smooth transition, I will divide the cases he considers into four types. The argument proceeds from cases of type 1 to 4

> Type 1: one is related to a tomato

127 Watzl (manuscript) p.29

> Type 2: one is related to something qualitatively identical to a tomato (for instance, a wax tomato), ranging from ordinary solid object to exotic objects like things made of light or magnetic fields.
>
> Type 3: one is related to multiple objects, located in different places, but arranged in such a way (with the help of lenses, prisms, and other light dispersing objects) that they appear as a single object, a tomato, before one.
>
> Type 4: one is related to progressively closer stimuli, first moving closer to the retina, then becoming direct stimulations of the retina, and finally penetrating the perceiver's body and becoming direct stimulations of various inner parts).

Watzl argues that since there is no nonarbitrary line for where we are no longer related to a particular object, there can be no principled difference between objects of veridical states and the objects of hallucinatory states; both relate us to particular objects.

The smooth transition argument does not *entail* illusionism. The argument only entails that veridical cases and hallucinatory ones are not essentially different, and that since veridical cases involve particulars, hallucinatory cases do too. This is still compatible with a hallucinist view. Watzl acknowledges this, writing

> Particularist relationism can be accepted without accepting any specific account of the nature of the particular objects and events we are aware of. In principle, it leaves open a wide variety of options. The smooth transition argument, though, strongly suggests that what you are aware of whether your awareness is veridical and or whether it is illusory is of the same fundamental kind. If we take as our starting point the veridical case, we will, thus, get the view that in all states of perceptual awareness you are aware of particular, spatiotemporally located, material objects and events. I shall call this The Natural View…[128]

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128 Watzl (manuscript) p.45-46

On the assumption that we are related to spatiotemporally located, material, and particular objects and events in veridical cases, the smooth transition argument becomes an argument for illusionism. Watzl's *the natural view* excludes the possibility of mere appearances, and in so doing establishes the premise that turns the smooth transition argument into an argument for illusionism. Watzl considers two elaborations on the natural view, the *physical space view*, where we are placed in perceptual contact with regions of space, and the *material view*, in which we are are placed in perceptual contact with *spatiotemporally located, concrete, mind-independent and existent material objects*.[129] The latter view is his preferred interpretation of the natural view, and as such hallucinators, through the smooth transition argument, are related to material objects.

The smooth transition argument rejects the possibility of pure hallucinations since every case involves perceptual contact. The difference between pure and impure cases tracks a difference between cases of hallucination that respect the externality principle and those that don't. Watzl defines the principle as follows

(THE EXTERNALITY PRINCIPLE) Necessarily: If you are perceptually attending to an object or event, then that object or event is part of your external environment.[130]

Although Watzl notes that most cited cases of hallucination do not need to violate this principle, he thinks that some cases (like the LSD case) do, and in those cases it is okay to reject this principle. He writes

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129 It is worth noting that Watzl's two elaborations are the same two that Alston (1999) considers. On the one hand we might be related to a region of space, on the other a material object. Alston, however, divides cases in which we are related to external material objects from cases in which are related to material objects inside the perceiver e.g. the brain.

130 Watzl (manuscript) p.40

> The main problem for the externality principle is … [that] there is no clear line between what is external to the subject's body and what is inside her body. Is, for example, the vitreous humor (the clear gel inside the eyeball) internal or external to the subject's body? It seems completely arbitrary to say that whether there is something you attend to depends on whether photons are, say, randomly created inside or outside this gelatinous body. (By straightforward generalization the same seems to hold of all other lines one might draw).[131]

If so, then the difference between pure and impure cases is only in whether the material particulars we are related to are internal or external. There are no hallucinations that involve no perceptual contact.

4.4 Pure Hallucinations

Watzl's smooth transition is convincing, but its solution to the problem of pure hallucinations is not fully satisfactory. One worry is that it leads to the implausible sounding idea that in some hallucinatory cases, we are perceiving our own body parts, for instance, our brains. It may be that the distinction between inner and outer is gradual, but some cases are clearly outside the body, and others clearly inside. For the inside cases, it seems hard to see how our perceptual capacities can be putting us in perceptual contact with such internal objects when they do not usually do so.

Even if this is right, and we should be worried about the argument, there are various other ways which help to explain the case of pure hallucinations. Pure cases of hallucination seem to involve a "gap" where a worldly object should be. Gaps have been invoked in some accounts of perceptual states, notably Schellenberg's (2010, 2011) and Tye's (2011). If gaps occur in hallucinatory cases, then there will be no perceptual contact

131 Watzl (manuscript) p.40-41

with the world, and illusionism and relationalism will be mistaken. Watzl's solution eliminates the gap by filling it in with internal objects, but there are many others ways of filling gaps depending on the nature of the hallucination.

One way is to focus on partial cases, and use the objects around the gap to fill the gap. There are many such objects. In pure partial cases, any of the objects co-perceived can be what we perceive when hallucinating. An example of such a case might involve hallucinating in a blind part of the eye while fully perceiving with the rest. Since where the hallucination appears and what properties it has are only loosely connected to the location and properties of the object appearing, there is no obstacle to thinking that the hallucination occurs in the gappy location. Objects from other senses can also fill the gap in cases that are pure and total but constrained to a limited number of a perceiver's sense modalities. Perceptual phenomena in which this happens abound in the literatures. Casey O'Callaghan (2008) cites various cases in which visual and auditory processing interact. These include the McGurk effect in which the sound heard is affected by the lip movement seen, the ventriloquist effect in which a sound is mislocated to its visible source, and the sound induced flash illusion in which a flash accompanied by multiple beeps is perceived as multiple flashes. In 2001, a study was published noting that vestibular stimulation (stimulation of our interoceptive sense for balance, amongst other things) caused amputees to hallucinate phantom limbs even when they have not experienced phantom limbs before.[132] A more recent study show that at least half of its participants could *see* their bodies when in full darkness through crossmodal

132 J.M. André, MD, PhD, N. Martinet, MD, PhD, J. Paysant, MD, JM. Beis, MD, PhD, and L. Le Chapelain, MD, PhD p.190-196

interaction.[133] There are also synesthetic experiences. Synesthetic perceivers receive inputs from one sense modality and process them in both the correct modality, and another modality. For instance, the *seen* object can be processed both visually and auditorily, Finally, there are also cases of using sensory substitution devices that allow perceivers to experience visual objects through bodily sensations. All these cases make it plausible to think that gaps can be filled in.

Another way of filling gaps is directed specifically at total pure cases. This route begins by drawing a distinction between two types of gaps, those that involve the *absence of perception,* and those that accept the *perception of absence*. To see how this distinction works, we can begin by simplifying the case to a creature with a single sense. We can make this a visual creature and call it Ocular. Ocular has eyes roughly like ours, and finds itself in one of four situations:

(1) Eyes Shut: The creature closes its eyes, and when it does, no light from the outside enters.

(2) Dark Room: The creature finds itself in a completely dark room.

(3) Blindness: The creature's eyes are damaged and it can see nothing.

(4) Surgery: The creature's eyes and visual system are surgically removed.

It is reasonable to think that each of these cases involves a gap. When Ocular undergoes a hallucination in any of these four conditions, it counts as having a total pure hallucination. This is because its experience is entirely hallucinatory, and its condition precludes perceptual contact with any object in its surroundings. However there are

133 see https://rochester.edu/news/show.php?id=7582

important differences between these cases. The first two are cases of perceiving absence, the third is underspecified, and the fourth involves the absence of perception.

Meditating on these cases reveals the distinction between gaps. In cases (1) and (2), it is clear that Ocular is still a sighted creature. It does not lose its vision just because it cannot see under its current conditions no more than we do. Moreover, in both cases, Ocular continues to be in perceptual contact with the objects around it. What it cannot do is discriminate many features of the object. In (1) it is in perceptual contact with its eyelids, in (2) it is in perceptual contact with the room and its objects. In both cases, the eyelids and the room look a particular way: they are completely dark. This makes the phenomenal character of Ocular's state the same in cases (1) and (2), and this is because the eyelids and the room look alike under certain lighting conditions. In general, all things that are entirely unlit look alike for us. So two entirely dark scenes, regardless of the objects composing the scenes, will be phenomenally indistinguishable. The darkness which results from being in perceptual contact with the eyelids and the darkness of the room is the reason why Ocular "cannot see". It cannot see in the sense that it cannot discriminate any details of the objects in its surroundings except for the one: that everything is dark.

One might think that this is not right. Ocular is not in perceptual contact with anything, it is not in perceptual contact with dark objects. But this seems wrong. Ocular is seeing in (1) and (2) because its state is *perceptually sensitive* to various changes in its environment. It sees darkness only as long as the the objects are dark. If the room it is in is lit, it will notice the change perceptually. Similarly if it opens its eyes, or a bright flame

illuminates its closed eyelids. The dark objects also occlude other objects, for instance an unlit object can block a pinhole light behind it. It is hard to see why this would be if not because Ocular is seeing the objects dark surface. Apart from sensitivity to its surroundings, Ocular is also seeing in the sense that it can visually attend to different parts of the darkness around it. It can turn its eyes to look at this part of the room or that part of the room, or this side of its eyelids or that. Of course everything continues to look the same to Ocular, but this is because it can't differentiate any feature but the darkness of the objects, and all dark objects look alike.

To make the idea that we perceive dark objects more plausible, we can compare the case of the gaps in (1) and (2) to a similar case that does not involve a gap. Consider Ocular in a state where everything in front of it is uniformly white. We can imagine a room designed and lit in such a way that no part looks any more or less white than the other. In that room, Ocular is in a similar state as it is in when it is in the dark room. It is sensitive to changes in the room, and it can look around but everything looks the same. Any *ganzfeld* case, a case in which the perceiver is related to an environment dominated by one uniform quality throughout (whether this is a single sound, taste, color, etc.), puts perceivers in a state that is like the one generated by the perception of absence. It may be that Ocular sees only red or only green. The only difference between darkness and a red or green ganzfeld is that in one case the ganzfeld consists of "positive" stimuli, whereas in darkness the ganzfeld is of "null" stimuli.

The idea that we perceive darkness or otherwise null stimuli like silence is not new. In his *An Essay Concerning Human Understanding* (Book 2 chapter 8 section 3),

Locke writes “the idea of black is no less positive in his mind than that of white, however the cause of that colour in the external object may be only a privation.” . More recently, Roy Sorensen has argued that we perceive absences in all the senses, and moreover that there are different sorts of absences like shadows and silhouettes.[134] So Cases (1) and (2) give us one way of understanding the gap produced in total pure perceptual states. Significantly, this understanding of the gap is compatible with perceptual contact with worldly objects. The objects look dark because of the perceiving conditions, and the perceiver sees them in their dark state.

How does the perception of absence help the illusionist explain hallucinations in such cases? The answer lies in the phenomenologically salient mediating conditions. One way to see that such conditions exist is by introspection on our dark experiences. We can do this by entering a dark room or closing our eyes. The objects are uniformly dark, but out experience of the darkness is not. There are moving glimmers and shimmers strewn occur the darkness. They make patterns, seem to shift location, appear and disappear, and so on. Significantly, these stimuli and their changes are ones you can attend to. They are phenomenally salient properties of your perceptual state. You can choose to focus on the shimmers in a particular location or another, or you can choose to focus on the darkness ignoring the moving lights. Moreover you can exacerbate these phenomena in a variety of ways. You can step out and stare into the sun and come back to the dark room to have even more glimmering. You may get up very quickly and see distinct floating lights. Finally, you can also see these lights in other states, not just null states. Afterimages are a

134 Sorensen 2008

particularly salient example. They are easily induced, we know that they are due to features of our visual system, and we can perceive those features when undergoing afterimages either against a null background or a lit room. Along with afterimages we can see such phenomena even in brightly lit room in which we standing up too quickly, or while lacking sleep, falling asleep, or waking from sleep. This is not unlike seeing things blurrily, undergoing double-vision, or hearing ringing from the loudness of a noise previously heard. In each of these cases, what we perceive are the conditions that mediate our perceiving of the objects of the external world.

Being in darkness, however, modifies the phenomenological impact of these mediating conditions. The reason for this is that in ganzfelds in general and dark ganzfelds in particular, there is very little else to attend to. When we are looking out into the world there is a large number of stimuli that we can attend to. The world is littered with objects, these objects are lit, reflect their light, produce sounds, emit smells, and have shapes and textures. Each of these features can be attended to. In a ganzfeld there is nothing but the uniformly distributed property broken up only by the mediating conditions. It is much easier to pay attention to mediating conditions in such cases. Moreover, attention has a profound impact on the mediating conditions. Just as focusing one's attention on a particular voice in a crowded room makes what is being said by that voice clear and salient, and just as object's in the center of our vision are more clearly detailed than those in the periphery, so mediating conditions that we attend to take on a detailed form. The fact that no other details surround them means that our attention is free

to be absorbed in the sole stimulus we find without occlusion or distraction. This is what gives the phenomenal character of total pure hallucinatory states.[135]

One way to think of the above proposal is by extending Campbell's metaphor which I discussed in the last chapter. Campbell argued that relationalism thinks of brain processing on the pane of glass model (which is in contrast to the television model). On that model, brain processing is required to make the highly volatile glass transparent. When the calibration is successful, we perceive the world. When it is not, we either do not perceive or else perceive features of the now non-transparent glass. For instance, when walking into a regularly lit room from the sunlit outdoors it usually takes our eyes a few seconds to adjust our perception of the room. Prior to that the room looks more dimly lit than it is. Campbell's metaphor can be extended with another metaphor dues to the 1950s psychiatrist, Louis Jolyon West, recently cited by Dominic H. ffytche (2013) in a paper about Charles Bonnet Syndrome. Ffytche writes:

> West provided the analogy of a man looking out of a window from a room containing a fire. In bright sunlight (analogous to sensory input), the man sees only the world outside; however, as night begins to fall, the man begins to see things inside the room reflected on the glass. While the fire burns brightly (analogous to cortical arousal), the man sees the contents of the room as if they were outside the window, but when the fire dies down he sees nothing.[136]

West was concerned with defending a particular theory of hallucinations (known as release theory). For us the point is to use the metaphor as a way of understanding how the mediating conditions become salient when undergoing a null stimulus. The idea is that the mediating conditions are always present. Campbell's metaphor explains that this is

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135 In fact its significant that often these conditions have a patterned character since many simple hallucinations do so too.

136 MacPherson 2013 p.55

because they are always needed to make the glass transparent (unlike the fire), and so do their job by remaining transparent when perceiving objects and their details. However as the external world is drained of its objects and details, as happens with all ganzfeld cases including null experiences, these conditions become more perceptible. As they do, we can attend to them and their properties. These are not typical objects of perceptual states in two ways. First, what we are in perceptual contact with are dark objects. Second, the salient part of the state's phenomenology is due to the mediating conditions, not to the dark objects we are in contact with. In this way, we fill in the gaps without positing internal objects to be in contact with, and thus do not violate the externality principle.

One may worry that accepting these sorts of gaps amounts to accepting world-severing hallucinations which would undermine illusionism. It may seem so because we argued that other accounts that appeal to gaps, like Schellenberg (2010, 2011) and Tye (2011)'s account, fail to procure world-contact. The response to this worry is noting the difference in the role the gap plays in the state's phenomenology. The gap's presence is not merely the absence of an object to perceive, but is itself a perceptual presence required for the resulting hallucination. Part of the reason for why we can experience the mediating conditions at all has to do with our *not* perceiving the positive qualities of the background. In this sense, gaps of this sort, unlike Schellenberg's and Tye's, enter into the constitution of the hallucination, and this makes the hallucinations widely individuated, as Hellie suggests. This also means that the gaps in this account clear us from the screening-off worry described by Martin (2004) and Fish (2009). The worry there focused on the possibility of mediating conditions that made the presence or absence of

the object we are related to irrelevant to the phenomenal character of the state. Both Tye and Schellenberg's views accept that the presence or absence of the object has no effect on the state's phenomenal character, this is what allows both to maintain that the veridical and hallucinatory cases can be indistinguishable. The illusionist proposal, by contrast, does not allow for this indistinguishability. The mediating conditions do not screen off the object's presence, so the state is not phenomenally the same whether or not the object is there. The mediating conditions are perceivable in the way they are (and thus deployable for cases of hallucination) *only when* the perceiver is related to the null stimulus. When not, the mediating conditions have a different effect on the state; often just being transparent and allowing perception of the object.

This brings us to the final two scenarios that Ocular finds itself in. While the above solutions sought to do away with the gap, these last two cases suggest a different route in which the gap is embraced, but the perceptual character of the state is rejected. If we accept that *some* gaps involve a null stimulus, are the perception of absence, then this leaves other gaps in which there is no null stimulus. These cases are exemplified by the blind Ocular case, and Ocular's state after the surgery. If Ocular is blind, then it is reasonable to suppose that Ocular is not seeing rather than seeing nothing. However this will depend on the nature of Ocular's blindness. This is because Ocular might still be able to visually process its world by virtue of having the relevant visual processing, but its eyes may be damaged such that no input is ever received. But it may also be that its visual system is damaged while its eyes are not, or it may be that both its eyes and its visual system are damaged. These cases differ, some of them involve a perception of an

absence, others the absence of perception. We can see this by considering a gradual series of (rather cruel) cases culminating in the case of Ocular's surgery. Consider an experiment in which Ocular has small opaque sheets placed on the retina of its eyes. In this case it is reasonable to suppose that Ocular continues to perceive, but perceives a null stimulus. Next these sheets are removed and instead the first few layers of sensory receptor cells are damaged such that they act as an opaque sheet. It is still reasonable to think that Ocular continues to perceive, they are now simply barred from receiving anything but a null stimulus. This is because Ocular still processes information visually. It is merely blocked from acquiring such information through its eyes, much as someone locked in a dark room permanently is. Next the experimenters remove or damage Oculus visual system itself, leaving the eyes intact in one case and not in the other. Either case now makes it seem less reasonable to maintain that Oculus perceives nothing. Instead, it seems that Oculus simply does not perceive. It has become a creature without sight. We might think of this difference as the difference between a creature that has a sense modality but senses nothing with it, and a creature that lacks a sense modality and so senses nothing with it. As an example compare humans to bats: Under certain conditions bats do not receive echolocation information. When they do not, they experience (provided they have experience) a null stimulus. We however do not. We simply lack the relevant system for echolocation information. As such, we lack the capacity to receive such information, the bat only lacks the information. Similarly Ocular in case (3) may either lack the capacity or the information, while in case (4) they lack the capacity too.

Assume that Ocular reports that it is having a visual hallucination while in cases (1) or (2), and it reports the same in case (4). Should we accept its reports on face value in all three cases? It seems to me that we should not. While in cases (1) and (2) it seems possible for Ocular to be undergoing a visual hallucination through the deployment of its visual capacities and its capacity to perceive into the null stimulus it is receiving, in case (4) Ocular seems altogether incapable of visualizing. This is because by stipulation, case (4) is one in which Ocular lacks a visual system. Whatever Ocular itself may think, what is going with it is not a case of perceptual phenomenology. It is barred from such a state because it lacks the relevant mechanisms for the state. By contrast, it is capable of being deluded. Since it has beliefs, it may come to believe all sorts of things about its state, however false they are. It seems to me that cases of "hallucinating" with an absence of perception (rather than the perception of absence) are simply not cases of hallucinating at all. The principled reason for why this is so is that one is not even using any perceptual capacities. Such null-stimuli can be perceived into because they put us in contact with the world in such a way that we can attend to the phenomenologically salient mediating conditions for such states, and thus see things in them. By contrast the remaining cases involve the genuine absence of perception rather than the perception of absence. The illusionist denies that such cases are hallucinations. This is because such cases involve no perceptual processes by stipulation, and hallucinations are perceptual phenomena. Rather, errors of this sort are more aptly labelled delusions. Delusions affect the way we experience the perceptual world, but are not themselves perceptual.

Chapter 5

Problems for Illusionism

In this chapter I consider three problems that arise on the illusionist view of hallucinations, and answer them. These problems are specific to illusionism because unlike dualist and hallucinist views that involve mere appearances, illusionist hallucinations involve world-contact. At least three features we associate with hallucinatory states and their objects become somewhat inexplicable if hallucinations relate us to worldly objects. First, when we perceive, all the objects we perceive are actual, and are located around the perceiver. But the objects of hallucination can be nonexistent, or even impossible. Second, worldly objects are public, but hallucinations seem private. Finally, hallucinations are perceptual errors, but if they involve relations to worldly objects, then it is not clear wherein the error lies. By answering these questions, we further develop the illusionist view of hallucinations.

5.1 The Missing Object of Hallucination

Illusionists think that hallucinatory phenomenology consists in nothing more than perceptual contact with objects in the world. If so, then it is reasonable to suppose that hallucinatory objects are just ordinary objects in the world. The problem is that

hallucinatory objects seem different from worldly objects. For instance, when we perceive an object, that object exists, and is perceptually present to us. But when we hallucinate, the object perceptually present to us may be an absent, nonexistent, or even impossible. An example of the first is hallucinating a dead Roman Emperor, of the second hallucinating Pegasus, and the third Escher's staircase. While the earlier arguments for illusionism focused on explaining how hallucinatory objects are constituted out of worldly objects and their properties, the challenge here is to explain what the hallucinatory object itself is.

There are different views that one can have on what the objects of hallucination themselves are. Watzl (manuscript) discusses four different alternatives to the material view he endorses: the Sensibilia view, Meinongianism, Platonism, and Constructivism. The problem is that many of these views are incompatible with relationalism and illusionism. For instance the sensibilia view accepts sense-data, and sense-data are perceptual intermediaries incompatible with relational views. Meinongianism (for instance, in Smith (2002)) requires positing an extraworldly object of hallucination, and this should be unnecessary if hallucinations are no different than illusions and illusions do not require nonexistent objects. The same holds for Platonic objects. This leaves only two alternatives to the illusionist: either hallucinatory objects are the worldly objects, or else they are objects that are constructed out of relations to those objects.

The first route is pursued by Chalmers (2005) and Watzl (manuscript), and I focus on Watzl's argument here. Watzl accepts this view as the best view of hallucinatory objects. On it the objects of hallucinations are material objects, albeit irregular ones at

times. They can be spatially dispersed or unusually close. For instance, in the sixth step of the gradual transition argument Watzl considers the possibility of an electrochemical objects half of whose events take place in one location and half in another, but through lenses appears as a single object before the perceiver. In the eighth step he considers the possibility of experiencing a tomato-like objects through electrically stimulating parts of the eye "in such a way this electrical simulation exactly matches the one that resulted from the optical stimulation in the previous cases."[137] Despite the unusual nature of these objects, they are nevertheless material objects to which we are perceptually related when hallucinating.

Although this view of hallucinatory objects is ideal for an illusionist because of its simplicity, material objects do not seem to be ideal objects of hallucination. While it is certainly the case that the *properties* of the hallucinatory object are the properties of things like spatially separated objects or electrical stimulations, it is less clear that the hallucinated tomato is itself *those* objects. On the one hand is the problem we began with, on which hallucinatory objects can be absent, nonexistent, or even impossible. When the perceiver hallucinates a tomato, a unicorn, or Escher's stairs, *that* tomato, and unicorn, and staircase, are perceptually present, but do not exist. The material objects are present and exist. So the material objects cannot be the objects of hallucination. Another problem concerns the identity of the hallucination across time. We can conceive of cases in which a hallucinatory object endures for its perceiver across various material objects. For instance someone can hallucinate a cat walking from one side of the room to another. The

137 Watzl (manuscript) p.33

experience is of a single hallucinatory object in motion, but the material objects in the background that provide the object's properties are changing. So the hallucinatory cat cannot be the material objects. Watzl acknowledges a further worry,[138] writing

> I agree with the intuition that … it seems strange to say that I can attend (as one) to two tomato halves that are in fact 50 degrees of visual angle away from each other. Against this intuition, it should be said that attentional relationism doesn't require us to say that the object of your attention is the fusion of the two tomato halves. It requires us to say only that there is something to which you attend, which looks to be tomato-ish. Instead the "thing" you attend to might be the light that shines on your retinas. It is unclear what the right thing to say here is, but in general it seems misguided to base our account of perceptual experience on such shaky grounds as our intuitions about what counts as one object.[139]

Although attentional relationism doesn't require saying that the hallucinatory object is a given particular, Watzl's material view commits him to saying that we attend to are the material objects. For instance, he writes "Such a brain in a vat will be aware of a certain portion of her brain (or, if you like, an event in that brain) as appearing, say, tomato-ish."[140] If this view is right, then when hallucinators attend (and also refer) to their hallucinatory objects, their act fails to pick out what they think is being picked out, instead they attend or refer to mereological sums of material parts (those parts constituting the hallucination). While it may be that this is the best illusionism can do, the view is counterintuitive. A hallucinator seems to be in a particularly good position to attend or refer to the hallucinatory object, since the object is in some sense her own invention.

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138 Indeed Watzl suggests four alternative views, the Sensibilia view, Meinongianism, Platonism, and Constructivism. Since the first three of these problematize relationalism, I only consider the constructive view which I take to be exemplified in Johnston's account.

139 Watzl (manuscript) p.39

140 Watzl (manuscript) p.48

This suggests accepting the second route on which hallucinatory objects are not themselves material objects, but are rather constructed out of them. Watzl (manuscript) discusses this view as a strong alternative to the material view, and the strategy is pursued by Johnston (2004). Johnston (2004) says

> we should distinguish primary and secondary objects of hallucination, where the secondary object is determined by how the primary object immediately strikes the subject. If the primary object were not particular but rather qualitative, this would explain why, when it comes to particulars, hallucination cannot be an original source of de re thought. As a first pass, hallucination gets to be of or about particulars as a result as striking the subject as of or about those particulars. Its so striking the subject depends upon the subject's existing repertoire of singular reference.[141]

On Johnston's (2004) view, hallucinations involve relations to uninstantiated properties only. Because of this, the primary object of hallucinations is purely qualitative, and there is no object of hallucination perceived. This explains why hallucinations can be an original source of de re thoughts about properties but not objects. The hallucinatory object itself is, instead, a construct

> Let the primary object incorporate everything about which the hallucination could provide original de re knowledge. Then we should allow that the particulars that are the secondary objects of the hallucination might be determined by two different mechanisms – the mechanism of anchoring or the mechanism of the primary object striking the subject a certain way.[142]

The object is an *interpretation* of the the perceived properties, with the interpretation depending on anchoring to past nonhallucinatory encounters with objects, or else the way which the properties strike us. Because hallucinatory objects are constructions, Johnston is able to explain how they can be absent, nonexistent or impossible, and how their

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141 Johnston 2004 p.132-133

142 Johnston 2004 p.134

identity can be preserved over time. In both cases, it is a matter of how the perceiver takes things to be, there are no hallucinator-independent matters of fact about what the object of a given hallucination is.

While Johnston's constructivist view explains features we associate with hallucinatory objects, the view raises other worries. For instance, Watzl, who is friendly to the view, says "[Constructivism] gives an account of how we construct, or "create", mind-dependent particulars by attending. This is a view that I believe we should take seriously. It is a view that fits well with structuralism about attention.[143]" Nevertheless he rejects it on two grounds. The first is that constructions would not be spatially located. Since the claim is that they are the objects of hallucination, and the objects of hallucination are things we perceive, then it seems that we perceive something with no spatial location. But this seems contrary to how we understand perceptual states. The second worry is that given the smooth transition argument, constructivism for the hallucinatory cases would spread to veridical and illusory cases. This would make veridical and illusory objects similarly constructed. This latter problem might be solved on a view like Johnston's on which the constructions fill in the gap generated by the absent object in hallucinatory (since hallucinations are, unlike veridical cases, relations to uninstantiated properties), but a different route is needed on Watzl's or my own view.

143 Watzl (manuscript) p.59

5.2 Perceiving One Thing in Another

There is something attractive about both the material view and the constructivist view, yet each view has problems. The material view gives us perceptible hallucinatory objects which do not go beyond the view's material resources, but which thereby do not fulfill all our ideas of hallucinatory objects. The constructivist view's objects are more exotic and so afford the variety needed for hallucinatory cases, but they are not clearly perceptible, and they threaten to spread to veridical and illusory cases. Is there a way of taking what is good in each view? Here I will argue that the virtues of both views can be combined by accepting a special variant of the constructivist view, the *perceiving in view*, on which hallucinatory objects are wholly constituted by material objects, and perceptible because they are *perceived in* the material object.

In visual perception, it is a commonplace phenomena that we can *perceive one thing in another*. This happens to us when looking at natural objects, as when we see a train in the clouds, the shape of an animal in a shadow, faces in an old peeling wall, or reflections in the water. It also happens most clearly with art objects; paintings, television, cinema, and other objects we construct all afford cases of perceiving in. The notion of perceiving is usually discussed in the context of pictorial art. Richard Wollheim (2003).[144] argues that *seeing in*, the visual case of perceiving in, explains how picture perception is possible. Picture perception involves a dual character in which one sees the medium of depiction and the content depicted. Both are perceived because the only way to perceive the content depicted is by perceiving the medium of depiction. (Whether or

144 In addition to Wollheim 2003, Jean-Paul Sartre (2012) discusses pictures and other images in the context of understanding the imagination. Like Wollheim, he think images may be applicable in cases of misperception.

not one is aware that one is perceiving the medium of depiction is irrelevant, what matters is that there is no way of perceptually accessing the content without perceptually accessing the object depicting that content.) Wollheim even suggests that seeing-in may be of use for hallucinations. He writes:

> This [seeing-in] special perceptual capacity …allows us to have perceptual experience of things that are not present to the senses: that is to say, both of things that are absent and also of things that are non-existent…
> If we seek the most primitive instances of the perceptual capacity with which seeing-in is connected, a plausible suggestion is that they are to be found in dreams, daydreams, and hallucinations…[145]

Perceiving-in also seems applicable to other senses, for instance the sense of hearing. [146] Two examples that should immediately strike us are the case of hearing something said in a sound heard, and hearing a melody or tune in a sequence of sounds. Of the first an easy case is that of taking a phrase or a word and repeating it many times over until the the sounds one is producing starts to be parsed differently and so result in a different word or phrase.[147] A mundane example is repeating the phrase “Of lions quarrel” until it becomes “A flying squirrel”. Another example involves hearing words uttered in one language (whether one knows that language or not) sound like another word uttered in a different language (which one does know). For instance one might hear the lyrics of a song or the dialogue of a movie and find a multitude of words that match

145 Wollheim (which book?) p.217

146 It is unclear to me that perceiving-in occurs in the other senses, but it is not necessary that it do so for the illusionist account to succeed since perceiving-in is only required to account for nonexistent objects. We can see this by considering a few examples. First, we can manipulate the subject's perceiving conditions e.g their sensory apparatus such that they smells, tastes, and touches appear differently. This can help us deal with many cases of hallucination tactile, gustatory, and olfactory hallucinations. For instance, in Sacks' recent book Hallucinations, chapter 3 discusses olfactory hallucinations that depend entirely on smelling one thing as another. He quotes "In September tomatoes and oranges started tasting metallic and a bit rotten, and cottage cheese tasted like sour milk” Similarly, when we are sick food tastes and smells different. Finally, after burning a finger, we may experience one texture as softer or rougher than we once felt. Such cases of hallucination, because they consist in perceiving one property as another, can be explained without the help of perceiving-in.

147 A similar sort of phenomena is semantic satiation in which one hears nothing but the sound of a repeatedly uttered word.

what one is hearing. A final example is when we hear words in ordinary sounds, as when we hear whispered words in the wind blowing through the trees. Similar to the cases of hearing something said in sounds heard or words uttered is the case of hearing a melody in one or more sounds. In these cases what is initially a series of unrelated sounds becomes a unified tune or melody. One might for instance hear the repeating sound of an insect or a frog turn into a melodic sound, or more commonly, one can hear a variety of different sounds be combined together to form a melody. An example would be hearing a tune in the hum of the air-conditioning, coupled with a repeated ticking of a clock, coupled with the sounds of a frog, and so on.

Perceiving in requires only two minimal commitments, and so should be acceptable to most views. The commitments are:

(1) We perceive images.

(2) Perceive one thing in another is not reducible to perceiving one thing, and perceiving the other.

Both should be uncontroversial. Anyone who denies (1) must carry the burden of explaining how it could be that we do not actually perceive images when there are pictures, paintings, and photographs all around us. To perceive images is just to perceive those sorts of things. (2) is not much more controversial, since the reductive alternative is implausible. If I see Nero in a picture, I do not see Nero, and see the picture. Nero is not there. At most I can say that I perceive Nero indirectly by seeing the picture, and indirect perception is still not direct perception. Whatever our analysis of perceiving in, whether

we understand it as a case of indirect perception, or a *sui generis* type of perception, it will not be just perception (The implausibility of (2) is further demonstrated below).

We can explain how perceiving in is possible by starting with two concepts

> Image (or image-object): A worldly object with the property of *depicting* something when perceived. The image is what we *perceive-into.*
>
> Content: The object or scene *depicted* by the image-object. The content is what is *perceived-in.*

We can say that an object counts as an image when the phenomenal character resulting from perceiving it allows the subject to perceive a content in it. Since we are working within the relational framework, it is an object's appearance that is the sole (in pure relationalism) or main (in impure relationalism) determinant of phenomenal character, and so the appearance which instantiates the property of depicting something. To successfully depict, the object therefore needs (i) intrinsic properties that allow for perceiving-in on some viewings of the object, and (ii) a an appearance that instantiates the property of depicting a content. (i) is necessary but not sufficient. An image-object, for instance a photograph, has various intrinsic features that allow it to instantiate the property of depicting some scene, but unless the photograph is viewed in a way that makes these properties perceptible, the photograph cannot instantiate the property of depicting a content. Looking at the photograph in complete darkness, or looking at its back side will not reveal the content. This is why (ii) is also necessary. The object cannot merely possess certain intrinsic properties, but must also manifest these properties on a token viewing.

With this, we can see how perceiving in gives us an easy way of explaining how objects of hallucination can be constructed, yet perceived. We see the following in Waterhouse's painting of Nero:

The image-object in this case is a sheet of printed paper or an LCD screen. Its content is Nero lying down full of remorse. Nero, with his expression, posture, and surroundings, are what we perceive-in the sheet, and the sheet is what we perceive-into. So:

(1) I see *Nero* in *this printed paper*.

From which follows:

(2) I see *this printed paper.*

(3) I see-in it *Nero.*

(4) There is *this printed paper* (that I see).

(2) follows from (1) because if I see Nero in the printed paper, then I see him by seeing the printed paper. In this sense, my perception of Nero is indirect, I see Nero's features by seeing the paper and the ink on the printed paper. (4) follows from (2) since perception is factive. (3) follows because the content of this printed paper is Nero. But notice that from (3), (5) does *not* follow:

(5) There is *Nero* (that I see).

This is because seeing Nero is not the same as seeing Nero in something. While we might casually respond to someone who shows us this picture by saying "I see Nero" or "I see a man" , what we are saying is shorthand for saying one of two things:

(6) "I see an image of Nero”

or

(7) "I see Nero in the image"

(6) is just to assert that we see the paper which is an image of Nero, (7) is to say we see the content of the image. Neither of these commit us to the existence of Nero, and this is simply because we accept a nonreductive account of perceiving-in.

If we consider these features, we can make three interesting observations. First, when we see Nero in this image, we do so wholly by seeing the printed paper and its features. This is because of the dual character of perceiving in, one sees the content by seeing the object instantiating the content. As such, the experience is distinctively perceptual. Second, Nero is not himself there. Even if the experience is of Nero, it is only so because the experience is of an image, and the image depicts Nero. What we perceive is the depiction of Nero (the image), not Nero. So we perceive something absent (Nero) by perceiving something present (the image). Third, Nero, or whatever else is depicted, can be absent in a multitude of ways. They may be absent now, they may altogether not exist, or they may be altogether impossible. The same is true of hallucinatory objects. What makes these features interesting is that they are the features we are seeking in hallucinatory cases. We want to say that hallucinatory objects are perceived by perceiving

worldly objects, and we want to say that hallucinatory objects can be absent in a multitude of ways.

5.3 Images in the World

Is it plausible that cases in which we hallucinate an object are cases of perceiving in? Given how pervasively we perceive into the objects of our world, the answer is plausibly yes. We pervasively perceive into the world for at least three reasons:

1- Almost any object or collection of objects, regardless of its specific visible properties (its shape, size, color, etc.), can be organized alone or along with other objects in a way that allows us to perceive it as an image. So, image-objects are easily made out of objects.

2- There are many types of images, ranging from the more forceful to the less forceful. This means many images are hard to avoid, and so some objects are primarily image-objects.

3- Objects can be *attended to* in a way that reveals images, and not only organized in a way that does.

The examples below illustrate these.

Single Object Cases:

Single-object cases are cases in which we perceive into a single object. Some instances of these are photographs and printed paper, and an example is the picture of Nero we began with. There are countless ways in which such images vary from one another, but here I will focus on three variations that produce interesting complications

with these images. A first variation depends on the artificiality of these images. In some cases the image-object is artificially prepared to transmit its content, and the content is placed their purposefully. For example, painters use canvases stretched on a wooden frame, where that canvas has various properties that make it suitable to be painted on with given materials. The painter then takes his painting materials and purposefully places marks in a way that will be content-depicting. But this artificiality is not essential. One might have an object that is not prepared for content-depiction, such as when an artist makes use of a rock to paint on. And the content itself might also been depicted naturally, as when the marks accidentally occurring on a wall allow us to perceive a man in them. As an example, consider the case below which is completely natural because the object is natural (it is a cat) and the content is similarly natural (the cat's fur pattern depicts a cat):

A second variation is also illustrated by the cat: image-objects vary in the material making them up. The image-object is not a paper or a canvas, but an animal. Other variations are also possible such as being made of matter that is in a different state. This means that contents may be depicted on the surfaces of solid objects, but also on liquids,

gases, and plasma. These depictions will also differ in ways that depend on the features of the object, much as the content painted differs depending on whether one uses water-based color or oil-based ones, or paints on paper or canvas.

To take a particularly interesting example, consider the still surface of water. Still water reflects objects in the surroundings, and which objects are perceived depends on the viewpoint from which we look at the water. Should we think that such cases of reflection (and refraction), which occur with water, mirrors, glass, metal, plastic, and other materials, are cases of perceiving-in? I think so. Reflective (and refractive) materials are not very different from televisions, cinema, and paintings. In both we have a pattern of properties on an object's surface which, so organized, instantiate the further property of depicting a content under certain viewing conditions. In some case the objects are artificial, as with the mirrors we construct, in others this is natural, as with the surface of a pond. But this of course makes no difference for image-objects.

One might think that the case of reflected images *seems* different because the content is not absent in the way it usually is in images, but this is a misplaced worry. First, while it is true that objects reflected in a surface *usually* exist, it is not true that they always do. We can see this by analogy to the time-lag argument where a distant object can be seen at a time in which it has ceased to exist. If such an object can be seen, then nothing prevents that object from also being reflected in the water's surface. But this means the object reflected (the content) does not exist, even though the reflection (the image) does. Second, even when it is the case that there is an existing object being reflected in the surface, it is usually the case that the object reflected and the reflection are not located in

the same place. We can construct cases in which the content and what the content is of are located in the same place, but these require elaborate setups, the norm is that the image object depicts its content in a place other than that of the object depicted. This is not to deny that reflections are not at all different from other cases in which we perceive-in, just that the differences are not differences in perceiving-in. So reflective (and refractive) surfaces, regardless of their state, are objects that allow us to see one thing in another.

A third variation of interest focuses on the relationship between the image and the content. In many cases, the image and the content do not share interesting properties. The object will neither be of the same shape, nor the same color, nor the same size as its content. In other cases, these properties will coincide, as with the cat above (the image is a cat and the content is a cat), or when an object is painted blue to depict blue skies (image and content have the same color property). In some cases, this coincidence can make it difficult to distinguish the object and what is perceived in it. For instance consider the following case:

> Alice meets the white rabbit: Alice is lying down on the grass near the pond. In the water is a duck that dives under water and then slowly resurfaces its head. Alice has just turned to look at it, and since she is lying on her side, she see the duck's head sideways, which roughly looks like this:

This duck/rabbit case is a case of seeing-in. Alice sees a content, the rabbit's head, in the duck's head. She does so because the duck's head is an object which naturally possesses properties that allow it to realistically depict a rabbit's head under certain viewing conditions (specifically, the condition of viewing the duck's head sideways). In this case, part of the reason the duck's head depicts the content is that the rabbit's head (the image) and the duck's head (the content) share a common shape (the same shape is rabbit-like under a sideways viewing orientation, and duck-like when viewed upright), and common features (e.g. the eye).

One might worry that this is not really a case of seeing-in. The hesitation comes from thinking that the duck's head is seen *as* a rabbit head, and seeing something *as* another is not the same as seeing something *in* another. Whether seeing-in and seeing-as are different notions is a substantive issue, and I cannot hope to settle it here. However, we can put the worry aside by noting that regardless of whether this is a case of seeing-as, and regardless of whether seeing-as and seeing-in differ in important respects, this is most certainly a case of seeing-in as I have defined the notion. This can be made clear by considering the difference between the image above and what Alice actually sees. The picture I have placed above is purposefully constructed. It is an image on printed paper

(or displayed on an lcd screen), and its content is a duck/rabbit. The lines its author has placed are not meant to be of a duck, or of a rabbit, but of both, one for each orientation. Alice's scenario differs in that the image for her is not a piece of paper or a screen, but the duck's head itself. This is not unlike the case of the cat above. The main difference is that the cat as an image-object does not share the dimensions of the content it depicts, only part of the cat's body contains the depiction. Not so with the duck, its whole head is required to depict the rabbit. So the artist's depiction is in fact different from Alice's experience. In fact, it would not be wrong to say that the content of the artist's depiction is Alice's perceptual experience. Finally, let us note that Alice's case is only one variant from a whole class of image-objects that bear contents which they resemble in some way. Some examples include cases of seeing a duck-facade in a duck, or seeing a duck in a duck because an actual duck may be painted in a way identical to itself. All such cases involve perceiving-in.

Multiple Object Cases:

Just as we can see a single object as a single image-object, so we can see multiple objects as a single image-object.[148] It is easy to see that this is so. Consider the printed picture of Nero. If it is cut in half, half of the content - Nero - will be on each paper. Placing the two sheets side by side will therefore depict the full content, and so the two sheets form the image of Nero. Here is a case like that (the ship is depicted in three sheets of paper):

148 To avoid worries about how we can individuate objects due to the fact that most if not all single objects we think of are actually a conglomerate of smaller objects, in all the follows I assume that multiple objects are separated from one another such that one can be moved or otherwise affected without moving or affecting the other.

Seeing something in multiple objects is essentially the same as seeing into a single object, but images made of multiple separated objects present their own interesting variations. Not only does each object vary in the ways listed above making for some interesting cases, but multi-object cases also have features original to them.

To begin with, when multiple objects are involved, the variations that affect an image made out of one object continue to affect multi-object images except that in these cases, each object constituting the image-object can undergo its own variations. This is to say that for every object that goes into making the image-object, that object will be either natural or artificial, be made of some material and be in some state of that matter, and will bear a specific relation to the part of the content it depicts. In that sense, multi-object cases are like mixed media artworks by contrast to single object cases which are like art constructed out of a single medium. As an example, consider a case I used in chapter one:

The man we see is the content of the image-object that is constructed out of the large variety of fruits, vegetables, and flowers. For any given object, say, the pear out of which the man's nose is constructed, we can say various things about that object and how it successfully plays its role in depicting the content. The pear, for instance, is a natural object, made of solid material, where the shape of the object largely resembles the shape of a human nose.

Aside from the variations that multi-object cases share with single-object cases, there are at least four interesting variations exclusive to multi-object images. These are all due to the fact that multi-object cases involve an *organization* of separated objects in a way that single-object images do not. These organizations, which are spatial arrangements of objects that allow the content to be perceived, can vary in several ways. First, they vary in whether they are accidental or purposeful. For instance, one might arrange fruits purposefully to look like the man above. Second, an arrangement can be more or less fleeting, and so the image-object can be more or less enduring. Consider this natural but fleeting arrangement depicting an eye:

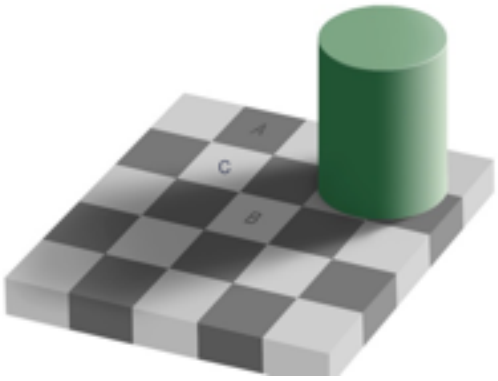
The fleeting arrangement of bubbles, draining water, and the sink appear as an eye, so with their disappearance the eye depicted disappears and with it the image-object. Third,

arrangements vary in their capacity to depict a content from multiple viewpoints. In some cases, the content will be visible from a wide variety of angles, as might be the case when one sees something in the clouds, and continues to see it even as they drive across the countryside. In other cases, the content will be visible from a much more limited vantage point, as with the image below:

Here the content is that of a woman picked up by the head by an oversized statue, but this appearance is only possible when standing at a particular distance and angle from the statue. Fourth and finally, multiple-object images can, in some cases, be perceived as moving images. Such cases occur when changes in one or more of the objects constituting the image are consistent with certain motions of the content. For instance, consider the following image:

The image's content is of a statue blowing out clouds. But we can imagine that on this windy day the clouds are moving rapidly away from the horn they appear to be blown out of. Because of this the content seems animated: we see a scene in which a statue blows out clouds that move away from their source. Of course more elaborate animations are possible since we can construct moving imagery.

Accepting the perceiving in account as an account of hallucinatory objects gives various advantages. First, because the argument for hallucinations involving perceiving in depends on the prevalence of perceiving in, it is clear that the problem of hallucinatory objects is not brought about ad hoc to deal with hallucinations. Rather, it depends on a well entrenched way of thinking about the objects of the perceptible world. Second, because of the features of perceiving in, Watzl's two concerns are misplaced about constructivism are misplaced. On the one hand, the constructs in perceiving in cases are distinctively perceptual since they are experienced by perceiving a particular object. On the other hand, there is no worry about the constructivism spreading to other perceptual cases. This is because perceiving-in can happen in all perceptual cases, and in general, every object is self-depicting. This is because every object can be seen as a perfect image of itself, and thus every object has the reflexive property of depicting itself. Third, by making use of perceiving in, the illusionist can explain how a worldly object with one set of properties can generate a different object with *its own* properties. We can see this through the example below:



This is the shadow illusion, and it is supposed to demonstrate how we can misperceive two identical colors (the colors of A and B) as being one lighter than the other because of other cues (namely, the shadow). In this case, note the following facts about the image-object's colors:

(1) the pigment used to paint A is the shade of gray, g1

(2) the pigment used to paint B is the shade of gray, g1.

(3) the pigment used to paint C is the shade of gray, g2.

And the following facts about the content's colors:

(4) In the image's content, the checkered surface, A is a shade g4.

(5) In the image's content, the checkered surface, B, is the shade g5.

(6) In the image's content, the checkered surface, C, is the shade g5.

From these facts notice the following:

(7) the pigment gray g1 can be used to represent shades g4 and g5 in the content of the image.

(8) the pigment grays g1 and g2 can be used to represent the shade g5 in the content of the image.

What this tells us is that a single pigment on an image-object can represent two different colors in the content, and two different colors on the image-object can represent the same color in the content. This does not depend on the fact that this image is thought to be illusory. Rather, the fact that a given property of an object can represent a different property in the content is a feature typical of images. For instance Nero's garb in Waterhouse's painting is painted using multiple shades of red, yet when we see Nero in the picture, we see him wearing a garb of a uniform shade of red. This is so even though Waterhouse's painting is not in any substantive sense an illusion. Moreover such cases are not constrained to color properties. We also perceive two dimensional shapes painted on surfaces as three dimensional shapes in the content (for instance when we see the flat image in the shadow illusion as a checkered surface with a certain thickness, or the flat green shape as a cylinder), and we perceive one texture as another (as when we see the textures and shadings used in Waterhouse's painting as being of metal, marble, and cloth textures). All of these cases are ones where one property is perceived as another.

A final advantage of the view is that it does not undermine relationalism. One might worry that it it does because of its appeal to contents. Perceiving in view is reminiscent of an old form of indirect realist form of intentionalism on which we *perceive* mental images which depict or represent the external world. But from a relational point of view, this sort of appeal to contents is acceptable. What relationalists *must* reject is a certain conception on which entertaining representational contents is sufficient for being in a perceptual state. In this case, the reverse is happening. It is being in perceptual contact with a worldly object that is necessary for entertaining the content. The

relationalist need not reject this idea. Without any other obstacles, the illusionist should adopt this view to explain hallucinatory objects.

5.4 The Privacy of Hallucinations

Along with the problem about what the object of hallucination itself is, another problem that the illusionist account encounters is the problem of the apparent publicity of illusionist hallucinations. Hallucinations involve perceiving worldly objects and perceiving into them. But the objects we perceive, and the contents they depict, are public. We can point out the object and the content for others to see, as we do with paintings, movies, and clouds. We do not usually think that the same is true of hallucinations, hallucinations seem private or specific to the subject that experiencing them. We might think it is impossible to get another to attend to our hallucinatory object, so illusionist hallucinations, and the perceiving in account are poor candidates for explaining hallucinations.

This problem is informative because it focuses on a central difference between the way illusionists think about hallucinations and the way alternative views do. Hallucinists and dualists both accept that hallucinations involve mere appearances. With such a nature, hallucinations acquire a private character in two senses: first, hallucinations are entirely independent from their surroundings, and so any explanation of the hallucinatory object need not appeal to the surroundings. Second, hallucinations are specific to the mind of their subject, and so are not objects publicly available to others. The illusionist cannot match this level of subjectivity. As we know, the illusionist must always relate

hallucinations to the world, and things are no different in this case. The illusionist has to deny that hallucinations are subjective in any substantial sense. They are as subjective as veridical experiences are, for the most part. Veridical cases can *seem* subjective at times, and so can hallucinations.

But hallucinations can *seem* more subjective or private because of two features they have:

(1) They depend on perceiving objects and properties that are accessible only from limited vantage points, and

(2) Hallucinations involve images, and some images have content that is hard to see.

(1) is true because hallucinations involve objects appearing a particular way. As we saw, there are a variety of factors that affect the appearance of an object. In some cases these are environment dependent, but in other cases perceiver dependent. So while in some cases a particular appearance of the object will be accessible only by spatially locating oneself in a particular place (e.g. the top of a hill), in other cases it will only be accessible given certain mental states (e.g. being on LSD). The city will appear a particular way from the top of the hill, and the room will appear a particular way when perceived on LSD. These latter vantage points are relevant for the apparently private nature of hallucinations because they dependent on the perceiver being in a particular state. They range from appearances that are only accessible if one's vision is of a certain level of blurriness, or suffering double vision, or paying attention to particular features of an object, to cases like having a particular chemical balance indicative of lack of sleep,

schizophrenia, or being on LSD. Given that most cases of hallucination occur under such special mental conditions like those induced by sleep deprivation or hallucinogenic substances, we can see why many hallucinations appear entirely subjective: they are simply not accessible to others who do not occupy the same limited vantage point. Still, this level of subjectivity is not fundamental. If two perceivers are roughly processing things in the same way, in the same mental state, and the same spatiotemporal location, then illusionism predicts that they could show one another what they were hallucinating. The process may not be easy, but in principle illusionists think that it is possible.

(2) supplements the case for apparent subjectivity by noting that insofar as some hallucinations involve images, and images differ in how easily accessible their contents are, then some cases will seem particularly subjective. We can see this by noting that depiction can be done in many way. It can be realistic or impressionistic, more or less abstract, more or less detailed, more or less representational, and so on. These differences affect the ease by which the contents are accessible. We can think of this as a scale ranging from those images that are unavoidable to those that are, in an important sense, imaginative or require a specific conceptual repertoire. The scale tracks *how inviting* images are. Consider the following four examples:

The first painting - Waterhouse's - depicts a content that is hard to resist because it is maximally inviting. When we look at the image, it seems almost impossible to not immediately see Nero lying down on a bed in a room with various objects around him. One has to draw one's attention away to going to the paint brush strokes are. In this sense, Waterhouse's painting is a *maximally forceful image,* one sees the content and almost

misses the object despite seeing the content by seeing the object. By contrast, consider Leonid Afremov's painting of a street. This image does not quite as forcefully force its contents upon us even though it too is such that it is difficult to not see the street, the houses, and the lamps. An image like this one is however not as forceful as Waterhouse's even if it is quite inviting. Certainly it is so compared to Franz Marc's Stallungen (Stables) where the contents of the image become even harder to grasp. With the help of one's imagination and careful attention to some of the details (in specific, the curves), it is possible to see the shapes of horses in the image. The content, however, is not nearly as inviting as Afremov's painting. In this sense that the image is somewhat *imaginative,* it requires that we look carefully, but also that we let our imagination wander across the details we perceive. Finally consider the fourth painting by Mirza Zupljanin which is a maximally imaginative image. In this picture, it is hard to see any objects at all. One might fail to see the image-object and instead see a merely colored and textured object, for instance if the image occurred in an inconspicuous location such as markings on a wall on some street. However looking at this image more carefully, and with the help of one's imagination, various things can become visible. One might see figures, or most centrally (for me, at any rate) a face just to the left of the center of the image. A case like this is not only harder to see into, but is also harder to show into. A perceiver can fairly confidently expect others to see Waterhouse's Nero and Afremov's street but will be much less confident in being able to convey the horses or the face in Marc's and Zupljanin's paintings respectively. By noting such differences in images we can start to see how hallucinations can seem even more subjective. Not only can they depend on mental

states, but they can also be constructed out of image-objects that are less than maximally inviting.

5.5 Hallucinations and Deception

A final worry about the illusionist account of hallucinations is that the view makes it unclear how hallucinations are perceptual errors. On hallucinist and dualist views, hallucinations are distinctive because they involve mere appearances. But if illusionist hallucinations involve nothing but relations to worldly objects, then it is not clear wherein the hallucinatory error comes from. The response to this problem illustrates a further difference between illusionist hallucinations and dualist and hallucinist ones: they are not fundamentally different from illusions. According to the illusionist, hallucinations are deceptive in the same way illusions are. Illusions involve objects appearing a particular way, where the perceiver misconstrues his perceiving conditions, and on that basis takes the appearances to indicate some object other than the one in fact present. Hallucinations do the same thing. While there are many interesting features that occur in hallucinatory cases, none of them are definitive of hallucinations. Since this is so, according to illusionism there is no cohesive category of hallucinations. Hallucinations simply belong on a spectrum with other illusory cases.

To begin with, consider the following envatted brain case

SCIENTISTS: Scientists decide to test the possibility of envatted brains. They surgically remove brains and place them in vats. The human whose brain is envatted perceives itself to occupy a city in which it leads an ordinary life

What features can we detect in SCIENTISTS? The first thing to note is that the scenario is clearly like an illusory case. In it

i- the scene before the perceivers does indeed look like a city.

ii- The perceiver misconstrues its perceiving conditions (it thinks it is in a city, not an envatting machine)

iii- The scene before the perceiver is more typical of looking at a city, given the assumed perceiving conditions.

In addition, SCIENTISTS seems to have the following features too:

(a) - The perceptual route is special: the envatted brain cannot be seeing since it has no eyes. Instead, it has a different way of detecting its surroundings.

(b) - The brain state is special: the brain is envatted and so is not in the same state as a normal brain.

(c) - The object is special: the brain is in perceptual contact with electrical stimulations, but these are not ordinary objects.

(d) - The case involves perceiving in: since the brain is in perceptual contact with the machinery or its electrical output, the city that seems to surround the perceiver must be an object perceived in the machinery or its electrical output.

Are any of these further features definitive of hallucinations?

The answer is no. The four additional features are not necessary to be in a hallucinatory state, and we can see this by considering different cases that are arguably hallucinatory yet do not possess these features. Against (a) and (b), consider the following case

ROBOTS: Robots rebel against human rule. They place living human bodies in special vats. Every human so placed perceives itself to be occupying a particular city and leading an ordinary life.

Like SCIENTISTS, ROBOTS is plausibly explained as an illusion. But unlike SCIENTISTS, it does not involve a special perceptual route. If the envatted person perceives anything, it does so through its ordinary perceptual capacities. So it cannot be definitive of hallucinations that they involve extraordinary perceptual routes. Moreover, it is less plausible to think in this case that the brain state is special, since the brain is an ordinary body that is receiving inputs. One might think that the inputs are special, but this does not entail that the processing is. So special brain states are not definitive of hallucinations. Against the second two cases, we can consider this typical hallucinatory case:

LSD: A man is given LSD, and sees color patterns on the wall.

LSD differs from the previous cases in focusing on internal rather than external manipulations, but like the two previous scenarios, it is a typical case of hallucination. The first thing to note is that like the previous cases it can be explained as an illusion:

i- the scene before the man looks like one in which there are various color patterns.

ii- the man misconstrues his perceiving conditions (i.e. that he is on LSD)

iii- The scene before them is more typical of looking at a wall with color patterns rather than a will without, given the assumed perceiving conditions.

Unlike the previous cases, however, LSD does not involve either special objects or perceiving in. While it is plausible to think that the patterns involve properties of our eyes (for instance, the firing in a particular layer of the eye) or a similarly internal object, it is also plausible to think that the object perceived is simply the wall. Just as a brain can calibrate well to its surroundings, it can miscaliberate. This happens, for instance, when we walk into a dimly lit room after being in the brightly lit outdoors. For a few moments, everything looks dimmer than usual because one's visual system has not yet recalibrated to the surroundings. The man on LSD may be construed as suffering a more radical miscalibration. Rather than adjusting to the surroundings, his pattern of firing continuously changes, and so continuously perceives parts of the surroundings differently, hence the colors. Since this is a possible construal of the case, and since the wall is not a special object, then hallucinations do not need to involve special objects. Moreover, since the hallucination involves only colors, then the hallucinator is not perceiving into the objects around him. He would only need to do so if he was perceiving some depicted object. So hallucinations do not necessarily involve perceiving in.

None of the four proposed features help us distinguish hallucinations from illusions, so a reasonable proposal is that hallucinations are not different. Like many other perceptual cases, hallucinations deceive us and can do so radically, but none of this depends on them involving a special feature. Instead, they are like illusions. They are a diverse category of perceptual phenomena that have the power to mislead us. In some cases, the ones which we can call *biological* hallucinations, we have a state that deceives us by involving a distortion of the perceiver's brain processing. In other cases, the ones

that allow us to perceive what is “not there”, the states deceive us by involving perceiving-in. And in yet other cases, the states deceive us either through the exotic nature of the object they relate us to, or through using a special perceptual route. What is clear is that in each case we have a distinctively *perceptual* error, since the error involves perceiving things in a particular way. So, for the illusionist, hallucinations are not best understood as representations, nor as relations to special objects, nor as nonperceptual phenomena. They are instead cases of perceiving the ordinary objects of the world in different ways. When things are perceived in this way, it becomes easy for us to be misled by them.

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