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Is my red yours?

Understanding experience and perception in light of spectral inversion

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Submitted for the degree of Master of Philosophy in Philosophy

March 2018

Keele University

ABSTRACT

The problem of Scepticism has long haunted the Philosophy of Mind—a particularly noxious form of Scepticism is articulated by John Locke’s problem of Inversion. The problem of inversion acts to undermine two of the dominant theories of mind: Functionalism and Representationalism. In this thesis, the origin of the problem of inversion is examined alongside the damage it causes to both Functionalist and Representationalist theories of mind. Through this examination, the problem is demonstrated to be uniquely Cartesian in nature. After this has been demonstrated, attention is then turned to articulating a theory of perception that does not rely on the truth of the Cartesian system of mind. This alternative perceptual system draws upon the work of the Existential Phenomenologists, Maurice Merleau-Ponty and Martin Heidegger, in an effort to demonstrate the redundancy of the Cartesian paradigm. By doing such, a dissolution of the problem of inversion and a more realistic model of perception are both advanced. A number of objections to the alternative, phenomenologically sympathetic model of perception are then rebutted.

KEY WORDS: Inversion, Heidegger, Merleau-Ponty, Phenomenal Consciousness, Phenomenal Objectivism, Cartesianism, Perception, Phenomenology, Representationalism, Functionalism, Scepticism.

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*“Don’t you wonder sometimes,
‘bout sound and vision?”*

-

David Bowie, *Sound and Vision*.

Low. 1977.

INTRODUCTION

The notion of Inverted Qualia is one that will be familiar to vast swathes of people; especially so to those with children, or those who can remember their own idle ruminations from childhood. Stripped of its glamorous title, it is essentially an extreme case of the kind of difficult questions associated with experiential uniformity—wondering if your experiences are aligned with those of your peers is the natural pastime of every child enamoured with *that* green of the leafy canopy above him, or every teenager repulsed by their first taste of coffee, sitting confused amongst the easy sips of the café around him. Due to the difficulties of answering these kinds of questions though, they are often clipped by busy parents or pushed to the back of one's mind, freeing up their attentional capacity to pursue something more useful. After all, it doesn't seem to matter at all if two people share the same experience of the world around them. *'Leaves look green to me and everyone knows what I mean when I say that they are green, so everyone must see them in the same way as me'* is the conclusion most commonly employed to justify not paying these kinds of questions due attention. Although these doubts of experiential uniformity do not necessarily interfere with the everyday workings of one's life (only a very slender section of humanity loses sleep wondering if *their* red is *our* red), they are far from harmless.

Think for a second. What is the most important tool for the surgeon? Surely, it is the scalpel? What of the architect—is it their drafting pencils? It doesn't seem as though a chemist would be able to do their work without the appropriate glassware, just as a Guitarist without a guitar is next to useless. Each and every profession adds value into the world through the skilful manipulation of a set of tools, specific to the industries to which

they belong. Indeed, we can on some level identify professions on the basis on the tools which they use—an author without a pen is indistinguishable from a plumber without his tool-bag. But there also seems to be a more fundamental possession universal to all professions, all human achievement, which is just as vital to success as these other tools. A tool that is often ignored: our senses. The collective achievements of humanity rest upon our senses. A surgeon could not operate if she could not see what she is doing, or feel the resistance of the flesh underneath her scalpel. An Architect could not draw up the plans for a building if they could not see their drafts and nor could a pianist fill a concert hall if they had no manner of sensing the music which they play. The entirety of human achievement rests upon our senses, but we do not yet understand our senses. We know that if we are to open a door, we have to grab the door handle before us, but we can't properly explain how we come to know that the door handle was there for us to grab. We resort to explaining this phenomena with vapid statements: "we see it". But the whole process of seeing, of sensing, is not robust enough to serve as the basis of humanity's achievements—even the bored child asking his mother whether *his* green is *her* green is able to shine light upon our shortcomings. Our senses are only useful to us insofar that they let us access our worlds. The possibility that worldly experiences may differ imperceptibly between agents is a dressed-up reformulation of the notion that our senses *do not* allow us to access our worlds with any convincing veracity. Until we quash the weakness in veracity that inversion articulates, we miss out an important factor of our intellectual story.

It is precisely this venture which the thesis endeavours to contribute to. Within, it hopes to highlight the mistakes in philosophical history that lend the problem of inversion its potency and set out an alternative group of theories to allow us to move away from the problematic past. With this move also comes the dissolution of the problem of inversion—

it is only of any philosophical significance if we endorse the erroneous theories of the past, so to move away from these is to render inversion philosophically uninteresting.

The thesis begins with an exploration into the modern origins of the problem of Inversion—rightly, its first articulation is traced back to the John Locke’s *An Essay Concerning Human Understanding*. The metaphysical beliefs of John Locke are first explored and it is argued that, despite his self-confessed sympathies to Substance Dualism, Locke presents a theory unusually sympathetic to contemporary physicalist metaphysics. What this metaphysical system means for our perceptual capabilities is explored. The paper then turns its eye towards a discussion of Lockean Metaphysics of Mind and the characteristics that physical thinking matter may take. Once this discussion has been concluded, the background to inversion scenarios is set and the paper explores Locke’s articulation of the problem of inversion and his assertion that inversion may not be overly problematic anyway.

Of course, inversion would not have endured as a thorn in the side of Philosophers of Mind if it were not problematic—the paper next endeavours to illustrate the damage that inversion causes to two dominant theories of mind, Hilary Putnam’s Functionalism and Michael Tye’s Representationalism. To begin this process, what is meant by inversion is made clear: it is an occurrence where an observer receives qualia from an object that are not properly consistent with its objective nature. With this established, the next step of articulating the destructiveness of inversion scenarios is demonstrating their feasibility. Clearly, if inversion scenarios are not possible, there is no point in worrying about them—that which does not exist cannot cause any problems. This though, is not so—inversion scenarios are possible, as will be illustrated. Following the demonstration that inversion

scenarios are possible, the paper turns to the difficulties Functionalism faces when presented with inversion scenarios—it is ultimately concluded that inversion demonstrates Functionalism explanatorily incomplete. The same conclusion is drawn following the exploration of Representationalism. Inversion scenarios cause their damage by positing occurrences that the theories cannot explain.

The thesis, in its third section, turns its attention to how we can negate the problem of inversion. Both Functionalism and Representationalism are shown to be operating within the same paradigm—a paradigm that arises as a consequence of Descartes' famous *Cogito*. The paradigm is articulated and its characteristics are isolated before then showing how Functionalism and Representationalism map onto these characteristics. It is the fact that these theories operate under the guise of this paradigm that causes their problems. Through the analysis of the work of Martin Heidegger, it is shown how the paradigm itself is problematic as it causes us to view humanity in a misleading way—an alternative paradigm, capable of explaining the way that we are with greater accuracy is then introduced and explored, as are the motivations to choose this alternative paradigm over the traditional Cartesian one.

In its final section, the paper takes the ideas linked with Heidegger's alternative paradigm and shows the impact that they have upon our perceptual capacities. The traditional theory of perception—which says our perceptions are constructed of atomistic 'sensations'—is articulated and then demonstrated to be unattractive by way of appealing to the work of Maurice Merleau-Ponty. Merleau-Ponty's holistic theory of perception is offered as an alternative to the traditional constructivist theory of perception. This alternative theory places a greater emphasis upon the arena in which perceptions occur than the traditional

theories of perception—it is shown, by reference to real world examples of such occurrences, that the environment in which we perceive things is capable of influencing its quality. Finally, it is shown how we can render the problem of inversion uninteresting through abandoning the Cartesian Paradigm in favour of the alternative articulated in this work.

CHAPTER ONE

MAKING MARIGOLDS OUT OF VIOLETS: THE ORIGINS OF THE INVERTED QUALIA PROBLEM

1.1 LOCKE'S METAPHYSICS¹

To fully understand Locke's Inverted Qualia Problem, it is first necessary to have an understanding of what he thinks there is in the world. This is because the Inverted Qualia Problem is intrinsically linked with perception and the very notion of perception is groundless without some kind of metaphysical theory—one cannot perceive nothing. One cannot talk about perceiving something without also making a proto-metaphysical commitment. To suggest that one sees the trees for they are there before you appears innocuous, but upon reflection it prompts the question of “in what capacity are the trees there before me?” It is questions of this kind that sit at the heart of any metaphysical enquiry. They form the foundations on which we can talk about our perceptions and the relation they have with our world, one simply cannot have a sensible conversation about our perceptual relations with the world without a theory of what the world is.

1.1.1 LOCKE: DUALIST, MATERIALIST OR IDEALIST?

The most basic question that one can ask of any metaphysician concerns the identity of the substances of the world. There are two major camps in which one can find oneself when talking of metaphysics: that of the Monists, who believe that there is a single kind of substance in the world and that of the Dualists, who believe there are two kinds of

¹ As is customary, any reference to Locke's *An Essay Concerning Human Understanding* shall be cited in book.chapter.section format.

substance in the world. For Dualists, there are both immaterial and material substances existent in the world—mental substances and physical substances respectively. Monists deny that there is a dualism of substance and instead solely endorse either the immaterial, the material or the neutral.

Locke's Metaphysical beliefs are somewhat unusual and their complexity is not aided by the lack of harmony within the scholarly literature. Whilst there is no debate that Locke flirted with Dualism, there *is* debate regarding the extent he endorses it. There are two conflicting views. Jonathan Bennett (1994) notes that Locke is sympathetic to Descartes' Property Dualism but stops short from endorsing his Substance Dualism—Locke is loath to make such a large commitment. Locke's enquiry into the possibility of 'thinking matter' seems sympathetic towards Materialism, yet Locke states that those who wish to know the truth of Materialism with certainty "will scarce find [their] Reason able to determine [them] fixedly for, or against the Soul's Materiality" (4.3.6. p.542) and thus Locke remains agnostic towards Cartesian Dualism. Other Scholars, specifically Matthew Stuart (2016. p.73) and E.J. Lowe (2005. p.61), suggest that Locke is undeniably a substance dualist but not without need of clarification. Locke is not a Cartesian Dualist, but does endorse a duality of substance—the immaterial and the material are equally at home within his metaphysics although the immaterial is reserved solely for deities.

I take the view that Locke is indeed a Substance Dualist, but not in the Cartesian sense—though he undeniably endorses a duality of substance, Locke's Metaphysics is closer to Materialism than it is to Dualism. The entities that he claims as immaterial go some way as to explaining why Locke does not wholly endorse Materialism: consideration has to be made for the notion that Philosophy does not occur in a vacuum. The entities that Locke

claims are immaterial all have religious significance and thus, their inclusion into his metaphysical theories may potentially have been done to sate his religious convictions. Although such a notion is undoubtedly speculative, it could potentially offer some insight into his agnosticism towards the nature of substance and the subsequent difficulties in ascertaining his metaphysical position. Due to this notion, in combination with the practical consequences of Stuart's (2016. p.73) claim that Locke is an Immaterialist in respect to Gods only—the vast majority of the objects of interest in the world remain physical—the thesis shall treat Locke, where appropriate, as a Materialist.

1.1.2 LOCKE ON THE WORLD

In the 17th Century, Science was undergoing a paradigm shift. Traditional scholastic science was under ever increasing scrutiny. The Scholastics endorsed a metaphysics from the Aristotelian tradition: objects of the world are composed of the unification of an immaterial and other-worldly form and a mass of nondescript physical matter (Sheridan, 2010. p.34–36). A tree bereft of the form of a tree would be nonsensical—it would only be a collection of physical matter lacking properties. Though widely accepted in the 17th century, this Aristotelian conception of objects did not enjoy universal assent. The conception was challenged by Locke's contemporaries who endorsed a metaphysics that somewhat resembles our modern day metaphysical theories.

Locke's Metaphysics was indubitably influenced by his contemporaries. Locke championed an atomistic conception of the world (Lowe. 2005. p.61 ff). He posited that all physical objects were ultimately constructed of minute, imperceptible particles called corpuscles (op. cit., 2010. p.37–39). It is these corpuscles that Locke believes to be the

fundamental substance of all material objects of the world; from trees to mugs to pens, all material objects are composites of these imperceptibly small particles. This theory prompts a few questions, namely: “what are corpuscles like?” and “if all objects are constituted out of the same fundamental material, why do different objects prompt different phenomenal experiences?”

To answer the first of these questions, one has to look at what Locke termed Primary Qualities. Corpuscles have a number of qualities ubiquitous in all material objects. These qualities are those such as size, location in the world, extension and shape. It is impossible to take these qualities away from material objects—it is only possible to change them (2.8.9). For example, if one takes a tree and turns it into a set of planks there is an irrefutable change in the size, shape and location of the object, but both the standing tree and its processed planks still *have* a size, a shape and a location. Qualities such as these, which cannot be divorced from an object are Locke’s Primary Qualities.

In addition to Primary Qualities, Locke also speaks of Secondary Qualities. Secondary Qualities are the more complex of the two kinds of quality. Whereas Primary Qualities resemble the objects we experience, Secondary Qualities do not (2.8.15). Secondary Qualities instead are a kind of power to produce ideas, such as ‘yellowness’, ‘vividness’ and ‘bitterness’ within us (2.8.8). As Secondary Qualities only exist in the form of a power, it cannot be said that the object in question is *actually* yellow, vivid or bitter. But then what is the relationship between Primary Qualities and Secondary Qualities? If, as Locke suggests, all of the objects of the world are made from corpuscular matter, it makes sense that the matter of each object should be arranged in a different manner—a pen, by virtue of its different shape and size, clearly must have a different corpuscular arrangement

to a desk. It is from these different corpuscular arrangements that Secondary Qualities arise. A blue flower is blue because its corpuscles are arranged in a 'blue' manner (Stuart, 2013. p.79). It is important to note though, that a 'blue' arrangement does not actually make the flower blue, it only makes the flower *appear* blue. The flower, in reality, is colourless (Stuart, 2016. p.75). Corpuscles have no colour associated with them, it is their arrangement that is key—a single corpuscle is as at home in a 'red' configuration as it is in a 'yellow' one. This means that Secondary Qualities exist in the form of an object's power to cause within us a particular phenomenal experience (op. cit., 2013. p.79ff). Ideas such as 'redness' are never instantiated in the world, they are only ever prompted to arise in our minds via configurations of corpuscular matter.

Locke claimed that ideas were the basic units of our thoughts (2.2.2). Locke uses the term 'idea' in relation to both pre-conceptual 'raw feels' and entities which result from conceptualisation; the particular pinkness of a rose and the notion of a soldier are both valid examples of Lockean ideas (Lowe, 2005. p.25). Ideas themselves are never truly instantiated in the world—in reality both 'pinkness' and soldiers are nought but configurations of matter—yet are acquired through two avenues: sensation and reflection (2.1.3–4). Ideas acquired through sensation are those acquired via the interaction between the material world and our sense organs and, as such, they consist of ideas with phenomenal significance. Bitterness, brightness, coldness and timbre are all examples of such ideas (2.1.3). Ideas acquired through reflection are distinct from ideas acquired through sensation: they require that the agent has already had a number of phenomenal experiences from which they have acquired ideas and thus are born from the reflection of how the mind itself operates in relation to these ideas (2.6.1). Examples are concepts such as belief, willing and thinking (2.1.4). There is a further distinction that Locke makes with

ideas: the ideas discussed so far have been examples of simple ideas, Locke also speaks of complex ideas (2.2.1). As with Locke's corpuscular theory of matter, Locke's theory of ideas is also constructivist and atomistic—simple ideas can be combined to make complex ideas (2.7.10). It is best to illustrate this with an example: a glass of wine. The idea of a glass of wine is a complex idea, and thus, it is possible to deconstruct the idea and be left with a number of simple ideas; colour, darkness, solidity, motion, sharpness, dryness and warmth, amongst others.

As was mentioned earlier, the simple ideas that constitute complex ideas are acquired through sensation or reflection, either discreetly or working in concert. These ideas are evoked in the mind, ultimately, because of the arrangements of the corpuscular matter of an object thus ideas such as 'yellowness' are never properly instantiated in the world. This seems innocuous until one highlights that this entails that the objects of the world are not as they appear—there is a disjunction between appearance and reality. This disjunction can be elaborated upon: because the objects of the world have the power to prompt certain ideas to arise in us and these ideas are the most fundamental units of our thoughts, it follows that reality is epistemically mediated by ideas. This entails that the real essence of an object—i.e., that which it truly is (corpuscles in Locke's *Metaphysics*)—is always obscured by the ideas it prompts (Lowe, 2005. p.34). One can never directly access what a 'blue' corpuscular arrangement is, because it is obscured by the blueness itself—we perceive not the real essence of an object but instead can only access an object's nominal essence. This notion—that we can only access sense data produced by objects rather than the objects themselves—is known as the veil of perception and it introduces a level of scepticism to Locke's metaphysics (ibid. p.41ff).

1.2 THE MATERIAL OF THOUGHT: LOCKE'S METAPHYSICS OF MIND

As we have stated before, Locke's metaphysics is unusual. His theory is unique because, his metaphysical claims are always tainted by his Pyrrhonian sympathies—Locke, aware of the limits of human knowledge, always stops short of endorsing the absolute truth of his claims. This means an opposing theory can always be conceived. This is felt at it strongest when Locke talks about the metaphysical status of the mind. Whilst Locke does irrefutably have Dualistic proclivities—he argues extensively for the existence of an eternal, immaterial thinking being—these proclivities are not without sceptical qualification. Indeed, Locke does not explicitly exclude the possibility of conscious matter: he (admittedly in the interests of setting up arguments to be knocked down) posits a number of hypotheses that could account for the existence material thought within an eternal thinking being. These hypotheses must be taken seriously in the context of Locke's Dualism of Substance, simply because there are no philosophical tensions between his brand of Substance Dualism and the claim that the human mind is material. The existence of two substances does not entail that the two substances are necessarily juxtaposed—purely material bodies are completely fathomable within Locke's metaphysical framework (Stuart, 2016. p.73). When Locke presents arguments for the existence of God these are, in effect, arguments for the existence of a purely immaterial being and there is no reason that this purity of substance cannot cut both ways. As such, the metaphysical arrangements Locke posits as a sufficient account of material consciousness will be explored in turn.

We shall begin by exploring Locke's questioning of whether consciousness could be explainable by reducing mental activities, such as thinking, willing and believing, to the physical properties and mechanistic interactions of and between particles. Such a theory

has a distinctly Lockean character as it, in essence, equates mental states with primary qualities: being in mental state X means that one is also in a corresponding physical state. Locke expresses limited scepticism towards this view. He claims that it makes little sense to attribute the existence of thought to the mechanistic interactions of a number of particles, themselves lacking perceptual abilities (4.10.5). This seems to neutralise this theory immediately, but it is important to note Locke's frame of reference—he claims this to be impossible in relation to God, but not to humanity. Locke does not condemn the notion that God makes conscious beings (op. cit., 2016. p.76). Indeed, Locke explicitly claims that it is impossible to know whether “[God] has not given to some Systems of Matter ... a power to perceive and think” (4.3.6, p.540). Because of this, it is possible to make the claim that thinking matter could exist in humanity, but not in God, because it is God that transforms matter into thinking matter. Thus, such an argument pertains only to questions concerning the ultimate origin of thinking matter—as we are concerned not with its genesis, but its existence the issue remains only with a narrower scope. Instead of being applicable to all thinking entities, the theory is now only applicable to humanity.

1.2.1 MECHANICAL THINKING MATTER

If it is possible that the existence of thinking matter is due to God's volition, one can be forgiven for prying into what it is God has done to transform mindless unaware systems of matter into conscious beings. Stuart (2016) claims that Locke posits several views as to how material consciousness could arise. The first of these is found within the work of Michael Ayers. Ayers (1993. 2, p.148) concedes that Locke is correct, the erratic and arbitrary interactions between material particles cannot feasibly constitute any form of sentience. Although, hidden within Locke's claim is a suggestion which Ayers is keen to

capitalise upon—if arbitrary interactions between particulate matter provide an insufficient basis for the genesis of consciousness, it may be so that the measured and deliberate manipulation of the machinations of matter *does* constitute a sufficient basis for consciousness. It is precisely this that Ayers argues—the arbitrary movements of particles are useless, but it is not arbitrary particulate movements that constitute thinking matter; the movements in thinking matter are divinely ordained. Such a theory is neat, for it seems to mirror other notions in the world—in a similar way that motion begets motion, it seems proper that one would need to put deliberate thought into something to get deliberate thought out. The neatness of a theory though, does not mean it is what Locke intended. Ayers’ interpretation seems troubling. In essence, it entails that there is a particular arrangement of matter, only possible through God’s volition, “fitly disposed” (4.3.6. p.540) to acquire the ability to think. If consciousness is due to a particular system of matter, with particles moving in a particular ‘thinking matter’ pattern, it is entirely possible that the particular ‘thinking matter’ pattern may have arisen organically by chance and thus, according to Stuart (2016. p.77), this undermines Locke’s claim that consciousness is necessarily a product of God’s volition, thereby rendering this interpretation untenable.

This is not necessarily the case. The interpretation from Ayers may well be in line with Locke’s intentions. For instance, it is possible to attribute God with ultimately causing consciousness, purely through the insistence that God caused the matter that constitutes it to exist originally. If God caused the matter to exist, it follows that all of the machinations of the matter are in some manner attributable to him. This notion provides cohesion with other Lockean concepts. It sits alongside Locke’s religious convictions with little trouble and more importantly, aligns with Locke’s thoughts on freedom. If one is to accept that God is ultimately responsible for the machinations of matter, it entails a form of

Determinism. If one assumes the God Locke speaks of reflects the standard Christian conception of God, i.e. omnipotent, omniscient and benevolent, and one also accepts that God brings all matter and the laws that govern it into existence, it follows that the machinations of the matter are also somehow constrained by God's volition. If one then accepts that mental states are based on physical configurations of matter, the Principle of Transitivity would deem them similarly constrained. Therefore, it is so that one's actions are somehow determined, not in the sense that Mental State Y is necessarily preceded by Mental State X, but in the sense that there are a finite number of mental states in the pool that *could* precede Mental State Y. Such limitations can be elucidated by an appeal to a pair of dice—one cannot throw a thirteen, but one is free to throw any number between two and twelve. Such a notion is largely in keeping with Locke's compatibilist sympathies and thus, it may be so that Ayers' interpretation of Locke is correct by virtue of its cohesion with wider Lockean thought.

1.2.2 ALTERED ESSENCE THINKING MATTER

Another theory explored in Stuart (2016) concerning thinking matter comes from Lisa Downing. Downing (2007) argues that Locke suggests that it is entirely possible for consciousness to arise as a consequence of God manipulating matter in such a way that its properties are no longer solely material. The essence of material objects is divinely manipulated in such a manner that they gain non-mechanistic properties that are explanatorily sufficient for consciousness (Downing, 2007. p.365–369). In short, consciousness is matter with the correct 'thinking matter' essence and normal matter is matter without a correct 'thinking matter' essence. There is a certain tension with this theory. As suggested by Leibniz (ibid., p.366), to add the capacity to think to a collection

of matter seems arbitrary—Leibniz claims that all of the qualities of an object need to be explainable by nature of the object, to change the qualities one needs to explain the change in quality. Downing (ibid., p.369–373) asserts that her interpretation avoids this criticism by stating that such a change would naturally entail a change in the real essence of the object (i.e., what the object truly is), but that change is obscured as only the nominal essence (i.e., what the object appears to be) of the object is available to us. It only seems like there has been no change to the material because there has been no change to its nominal essence. This response, by utilising the obscure nature of the ‘we-know-not-what’, seems viable only because it seems that there is no manner in which we could disprove it—to prove that the addition of non-mechanistic properties entails a change in the real essence of the object one would need to puncture the veil of perception. This is not to suggest that Downing’s interpretation is impervious from attack by virtue of its refuge in obscurity—if it is in contention with other notions of Locke’s Philosophy it would be demonstrated untenable. This is precisely the avenue of attack that Stuart (2016) pursues.

Stuart (ibid., p.77–78) highlights that such a theory would be difficult to reconcile with Locke’s claim that that God is immaterial—Downing’s claim would mean that God is material. To guard against this attack, Downing (2007. p.376–380) concedes that her theory would make God material, but not standardly material—God would be constituted of the special ‘thinking matter’ material. This, she claims, is well within the framework that Locke constructs. To evidence the claim that Locke did not rule out that God was made from the ‘thinking matter’ material, Downing employs some textual analysis. She claims that the manner in which Locke talks about the immateriality of God, only acts to rule out matter bound entirely by solidity and extension. As Downing’s ‘thinking matter’ material is not bound entirely by its physical properties, for it also has the immaterial

features that allow for consciousness to arise, it would be exempt from Locke's definition of material. This reading, though clever, simply is not what Locke intended. As Stuart (2016, p.78) highlights, during correspondence with Bishop Stillingfleet, Locke clarifies his definition of matter as "an extended solid substance", even going as far to say that "wherever there is such a substance, there is matter". This is where Downing's reading becomes untenable. Even if one accounts for the lexical differences between the 17th century and the present day, it seems clear that Locke intends not to label matter as that with *only* extension and solidity, but instead intends to label *anything* with solidity and matter as material. So, whilst the alteration of the essence of a substance to give it the capacity for consciousness may explain 'thinking matter', the inconsistencies with Locke's assertion that God is immaterial would render this interpretation of Locke's work incorrect.

1.2.3 FLOATING PROPERTIES THINKING MATTER

There is also a third substantive reading that avoids appealing to Locke's epistemic modesty. This reading is very much informed by Downing's theory. Whereas Downing believed that the capacity for consciousness resulted from God manipulating the real essence of an object, this third reading claims that the capacity for consciousness results from God adding such a capacity to a material object *without* altering the object's real essence (ibid., p.78–79). This claim goes some way to neutralising some of the criticism levelled towards Downing's claim: it allows Locke's God to remain immaterial and thus soothes the tensions between material thinking beings and immaterial thinking beings. As such, Stuart argues that this is the interpretation closest to Locke's intentions.

This though, seems to be where its merits end. Such an interpretation seems arbitrary at best—asserting that consciousness is present in humanity because God made it so lacks the usual philosophical clout characteristic of Locke’s work, and, indeed, it can even be seen as contradictory to Locke’s Empiricism. This is not only because the addition of consciousness cannot be empirically verified but also because it is unclear how such a notion could operate. Material addition entails alteration of matter—ungrounded immaterial addition is completely unfathomable. We simply cannot know if, or how, God ‘adds’ consciousness to us—a scepticism that Locke would be loath to endorse. It is because of this opaqueness that we can dismiss this interpretation—in the light of Locke’s wider work it does not appear viable.

1.2.4 FURTHER THINKING MATTER THEORIES

There are two more theories concerning how thinking matter could have come to arise that Locke spoke of. We shall start by looking at the weaker of the two theories.

The weaker of these two theories states that all consciousness could have arisen from “only one atom” which is capable of thought (4.10.15. p.626). This notion is not appealing simply because there is nothing to differentiate the single instance of thinking matter from a single instance of standard matter apart from its ability to think—there are no physical grounds on which you could distinguish the thinking matter above the rest of the matter in order to account for this ability. It therefore becomes impossible to argue for this position owing to the adage: *ex nihilo nil fit*—there is no way that we can account for the thinking matter’s ability to think without positing another instance of thinking matter, but if we should do this, it voids the original premise—there would not be only a single atom of

thinking matter and thus, the claim that consciousness arises from a single thinking atom is incoherent, thereby damaging the viability of this interpretation.

The stronger theory suggests that consciousness arises not from “only one atom” (ibid) but from the fact that all material particles have consciousness (4.10.14). Locke dismisses this theory upon the basis that Panpsychism would undermine that which makes God unique—Panpsychism would entail an innumerate amount of eternal thinking beings (Stuart, 2013. p.252–256) and because God is necessarily unique it can be safely asserted that this is not the interpretation Locke intends.

The interpretation posited by Ayers’ (1993) seems to be the closest to what Locke intended when he spoke of how one could account for material consciousness—the cohesiveness with Locke’s wider philosophy is undeniable and thus it is more plausible to assert this interpretation over its competitors, all of which suffer from problems cohering with Locke’s wider thought in one way or another. Ayers’ interpretation is also interesting because it appears to be the one with the most potent philosophical merit; it contains within it one of the central tenets of contemporary Physicalist Philosophy of Mind—that mental states are somehow linked with physical configurations of matter.

1.3 LOCKE ON THE NATURE OF CONSCIOUSNESS

In the previous section, we established that Locke presents a notion of material consciousness that is remarkably advanced for a Philosopher operating in a the 17th Century. But unfortunately, such foresight does not offer much insight into the nature of consciousness itself—positing that consciousness is a product of material processes does

not tell us what consciousness is, in much the same way that saying a house is made from bricks and mortar offers little insight into its architectural style. This is not to say that one cannot find any insight into consciousness in Locke's work. Indeed, in typical fashion Locke's scepticism has given rise to a number of competing conceptions of consciousness. We shall now explore them.

1.3.1 CONSCIOUSNESS AS INTERNAL SENSING

There are those who believe that Locke intended to conflate his notion of consciousness with his notion of perception. Clearly, the plausibility of this assertion is dependent on what is meant in regard to 'perception'—the nature of consciousness could change with each competing definition of the word. A standard usage of the term is none too dissimilar from sapience—perception, under this definition, would simply be the ability to sense things, to *feel* them, in much the same way as one feels the warmth of the sun on a summer's day. This is not strictly the definition that Locke intends. The definition of perception most sympathetic to Locke's intentions is that of *awareness*—the apprehension of a present 'something'. Of course though, this only paints half of the picture. We cannot have a comprehensive understanding of what consciousness is without knowing just what it is that we are aware of. Graciously, Locke makes this explicit: "consciousness is the perception of what passes in a man's own mind" (2.1.19. p.115). This seems to suggest that Locke deems consciousness to be the awareness of one's being in a particular mental state, or, in other words, *the being aware of one's own awareness*. This theory shares a great deal of conceptual ground with Higher-Order Theories of consciousness. For instance, William Lycan (1995)—who ratifies the interpretation of Locke above—claims that consciousness should be thought of as the awareness of Lower-Order mental states or

processes, e.g., being in receipt of specific sensory stimulus. Similarly, David Armstrong (1981, p.723–728) argues for the existence of Introspective Consciousness—a notion best elucidated through the ‘zoning out’ that occurs when one performs a lengthy action at which they are proficient. To ‘zone out’ in such a manner is to become temporarily lacking in introspective consciousness. Indeed, both of these notions seem to echo Locke’s claim that humans “think without being conscious of it ... a man is always hungry, but ... he does not always feel it” (2.1.19, p.115). Both theories envisage consciousness, to employ an analogy, as the spymaster sitting in his office, actively tracking the whereabouts of his agents whilst they simultaneously send back reports of their situations.

There are two objections that can be levelled at this conception of consciousness. The first, as noted by Weinberg (2008), is that it causes unwanted conclusions when it is combined with Locke’s assertion that the ability to reflect—i.e., the ability to observe one’s mental states, must be acquired: it would mean that before a person acquires the ability to reflect, they lack consciousness. This is an odd claim—to deny a pre-linguistic infant consciousness on the basis that it cannot reflect upon its mental states seems absurd. Locke does hint at a way to get out of this bind—he states that ideas of reflection (i.e., those that are acquired through internal monitoring) “pass [through the mind] continually yet ... they make not deep impressions enough to leave in the mind clear distinct lasting ideas: (2.1.8, p.107). This suggestion seems impotent until one combines it with a notion found within Leibniz’s critique of Locke’s *Essay*: there are perceptions that pass through the mind unnoticed because of their diminutiveness and thus, must be combined with other perceptions to pass the threshold at which one begins to perceive them (1765, §55). It may be so that ideas of reflection are of this kind and those who have not acquired them have not done so because they need to be scrutinized before they become opaque; the Lower-

Order mental states are present within the minds of pre-linguistic infants waiting to be uncovered. This notion would seem to be somewhat troubling for Locke, for in his diatribe against Nativism, he claimed that there were considerable difficulties in arguing that there are ideas in the mind of which one was not aware. This though is not applicable in this case. Locke is not claiming that the ideas of reflection in a pre-linguistic infant are wholly obscured—he instead argues that the infant has a kind of awareness of the ideas which is insufficient for their clear perception; to quote Locke, the awareness of the Lower-Order mental states come in the form of “floating visions” (2.1.8. p.107) rather than opaque, substantial ideas of reflection. It seems that this theory consciousness stands up well to this objection.

Another, more serious critique comes as a consequence of the structure of consciousness such Higher-Order conceptions of consciousness endorse. If consciousness is the Higher-Order awareness of Lower-Order awareness it would follow that Higher-Order awareness is no less of an awareness than the Lower-Order awareness and thus, would need a ‘Higher-Higher-Order’ state to be aware of it, so on and so forth. As noted by Leibniz (1765. §118), such a scenario would cause an infinite regress which itself would entail an agent to become infinitely transfixed upon their original thoughts—a notion that is clearly nonsensical. Attempts have been made to circumvent this problem by claiming that “consciousness must be a relational property” (Rosenthal, 1986. p.354), specifically the “property of being accompanied by higher order thoughts” (ibid.). It would seem though, that such a solution does little to assuage Leibniz’s critique—it does not seem that we can claim that consciousness is simply a kind of relation without severely misrepresenting what consciousness is. Consciousness is not a relational property between mental states—it has its own discrete existence. It is a thing in its own right. Therefore, we cannot escape

the regress by saying consciousness is a relational property, because that is not what consciousness is. Leibniz' regression still stands and thus, the 'Higher-Order' interpretation of Locke's formulation of consciousness is rendered unpersuasive.

1.3.2 AN ALTERNATIVE CONCEPTION OF CONSCIOUSNESS

There is, though, a manner in which one can overcome Leibniz' regression. To do this, one has to look at an alternative way in which Locke's work may be interpreted. This alternative conception attempts to account for the *awareness of awareness* found within Locke, without falling fowl of Leibniz' regression. It does so by collapsing the Higher-Order and Lower-Order layers of the 'Internal Sensing' model of consciousness into each other. It posits that a conscious experience is a hybrid, capable of being split along the lines of sensory data and intentional content—a notion dismissed by Rosenthal (1986) due to his belief it did not solve the regression. To superimpose this notion onto to Locke's work and thus make clear its coherency: the receipt of the sensory data provides the raw data from which one can acquire ideas and the intentional content acts to make us aware from what source we have acquired these ideas. In addition, as we also acquire ideas via reflection upon the workings of our mind, it must be so that the intentional content of the conscious experiences that give us ideas of reflection must be conscious experiences themselves. This would mean that for conscious experiences, there must be an intrinsic element of intentional reflexivity; as stated by Weinberg; "every act of perception has two objects ... the idea ... [and] ... the perception ... itself" (2008. p.26). It is clear how this would escape Leibniz' regress. There is no Higher-Order state to sit above the perception to cause the regression; so despite the hybridity of conscious experiences, the two constituent parts—the sensory data and the intentional content—sit within the same

brackets. There are no tiers—no higher states or lower states—present to cause the regress. This notion of ‘hybrid’ conscious experiences also seems to be able to account for why pre-linguistic children are unable to acquire ideas of reflection—the reflexive intentional content of those conscious experiences is absent. It is because this conception of consciousness is able to both escape Leibniz’ regression and cohere with Locke’s claim that our reflective capacities must be acquired, that Weinberg is correct to endorse this conception of consciousness as closest to what is intended by Locke in his *Essay*.

1.4 THE INVERTED QUALIA PROBLEM

Allow us to look back on what we have achieved so far. We began by exploring Locke’s *Metaphysics*, concluding that Locke endorses a Dualism of Substance but reserves immateriality for God alone (Stuart, 2016. p.73). Indeed, it is possible to strip away the theistic elements of Locke’s metaphysics and be left with a material conception of the world, none too dissimilar to a conception held by mainstream physicalist philosophy today. Although, there is an intrinsic element of scepticism within Locke’s metaphysics—as we can only ever access the nominal essence of an object, not its real essence, such that we can never verify the true nature of the objects of the world (Lowe, 2005. p.41ff). The true nature of reality is hidden behind a veil of perception.

After exploring Locke’s general metaphysics, our attention turned to the notion of material consciousness. We established that Locke leaves clear the conceptual space needed to argue for the possibility that God has imbued particular “systems of matter” (4.3.6. p.540) with the capacity for consciousness—attention was turned to what the nature of this divine manipulation could be. The notion that consciousness could be ‘tacked on’ to material

beings, as suggested by Stuart (2016) was shown to be at odds with Locke's empiricism and thus an untenable interpretive candidate. Similarly, Downing's (2007) notion that the divine manipulation occurs within the real essence of an object conflicts with Locke's assertion that God is immaterial and thus is also untenable. Finally, the notions that "every particle of matter thinks" (4.10.14. p.626) and "only one atom [thinks]" (4.10.15. p.626) were also shown untenable due to their unintended consequences—Panpsychism would entail inordinate amounts of eternal thinking beings and the 'single atom' theory privileges a single instance of atomic matter with no real grounding for doing so. Thus, because Ayers' (1993) theory avoids these cohesive difficulties, and itself coheres well with some of Locke's wider thought it was chosen as the interpretation that resembles Locke's intentions the closest. This also had the added benefit of being in line with the beliefs of swathes of contemporary Physicalist Philosophy.

Finally, Locke's conception of consciousness was examined. We dismissed a conception of consciousness based upon Locke's notion of perception on the basis that it prompted an infinite regress. Instead, a conception of consciousness that claimed that all conscious experiences have two kinds of intentional content—an external kind and an intrinsic reflexive kind—was argued for.

A curious problem arises from Locke's model of the world. As we have stated prior, the ideas we acquire when we look upon an object are not due to those ideas being truly instantiated—a lemon is not instantiated yellowness—but instead, these ideas are ultimately dependant on the matter of the object being configured in a manner sympathetic to the idea—lemons are configured for yellowness. Indeed, Stuart (2016. p.75) interprets Locke as asserting that "no object has any colour to it when it is not being observed" thus

entailing that colour exists as a configuration of corpuscles alone. As such, it does not seem to be incorrect to claim that if an object is configured in a “yellow’ manner it cannot also be configured in a ‘purple’ way—if this were so, it would contravene the principle of non-contradiction. Yet Locke claims that it is possible for identically configured agents to look at one object, configured in an identical manner and receive from it two different ideas: “a violet [may] produce in one man’s mind ... the same [ideas a] marigold produce[s] in another man’s ... and vice versa” (2.32.15. p.389).

The knee-jerk response to this occurrence would be to assert that one of the agents is mistaken, but as Locke suggests: one phenomenal experience is as valid as any other (2.32.16) and thus the issue remains. Locke suggests that the strange scenario is not a particularly contentious issue—a notion he bases on the fact that such an inversion would be largely undetectable. Say Alice and Belle look upon Locke’s violet and Alice receives the ‘violet’ ideas from the flower and Belle receives ‘marigold’ ideas, provided both are fluent in the same dialect both would use the same words when talking of the flower—“the names would [not] be at all confounded” (2.32.15. p.389). Both Alice and Belle could happily converse about the flower with not a hitch. This is because, as Locke seems to suggest, the terms associated with phenomenal experiences—e.g., yellow—are set within the community to which an agent belongs, but the reference of the term—i.e., the phenomenal experience it picks out—is set privately by the agent themselves (2.32.8–9). So long as such a disjunction between the conventional, public conditions for correctly using the term and its internal reference exists, according to Locke, such inversion would be imperceptible. Although, Locke does seem to make a nod towards the potential difficulties of the inversion—he claims that when an object “produces constantly the [‘incorrect’] idea” (2.32.15. p.389) within an agent the agent will “regularly distinguish

things for his use by those appearances” (ibid.), but this contains the implication that if the inversion was *not* consistent the agent would not be able to do so and thus the inversion would not be as imperceptible as Locke posits. This does not seem to concern Locke—he even suggests that it could be of little interest to endeavour to ascertain whether or not the phenomenal experiences of particular objects retain intra/interpersonal uniformity claiming that to do so would offer no “improvement of our knowledge or conveniency of life ... so we need not trouble ourselves with it” (ibid.). Such a view is mistaken. The inversion problem noted here causes considerable problems in contemporary Philosophy of Mind, regardless of its manifest perceptibility.

CHAPTER TWO

TO SEE THINGS EYE TO EYE: INVERSION AND ITS DESTRUCTIVENESS

2.1 WHAT IS INVERSION?

If we are to examine the effects of inversion, it would be prudent to define inversion with greater clarity. To begin with, we should look at the metaphysical backdrop to inversion problems.

We live in a world filled with objects. Each of these objects possesses a certain surface, that reflects light a certain way, which in normal individuals under normal conditions, prompts an experience of a particular quality. For example, light reflected from a post-box found in a sleepy English village will prompt a particular experience—in this specific instance, we use the colour term ‘red’ to refer to both the light-reflecting property of the post-box and the quality of the experience that it prompts. The light-reflecting property of the post-box is thought to exist independently of observers and thus, we shall use the word ‘objective’ to signify when we talk of these worldly properties. Similarly, we shall be using the term ‘phenomenal’ to signify when we are talking of the experiential qualities that the ‘objective’ properties prompt.

With this backdrop set and terminology settled, we can now introduce the notion of inversion. Say we have two agents—David and his friend. David is inverted. One day, he and his friend are on a stroll when they chance upon a strawberry plant, heavy with ripe fruit. These strawberries are objectively red—they have the quality of reflecting ‘red’ light. David though, does not have a red phenomenal experience. If it were possible for his

uninverted friend to access his experience, he would use the term ‘green’ to describe it. David is completely unaware of this mismatch of objective properties and phenomenal qualities. Like his friend, he naturally calls the strawberries ‘red’ and he also recognises the fruits as ripe—he is not deterred from eating them. It is just so that his phenomenal experiences are imperceptibly mismatched with the objective qualities of the world (Tye, 1995. p.26–27)

The inversion scenario explained above is known as Interpersonal Inversion. There is also a second kind of inversion—Intrapersonal Inversion—that pertains to an agent whose spectrum has been inverted during their lifetime. This means that the standard frame of reference, where objective red is properly coupled with phenomenal red, is not set within a population (as is so with Intrapersonal Inversion) but is instead set by the inverted agent’s own experiences at a time before they have become inverted. This Intrapersonal version of inversion shall be ignored here, primarily because it would be revealed in the inverted agent’s behaviours—they can simply tell you that their red has been replaced with green².

2.2 ON THE FEASIBILITY OF INVERSION

Discussion of inversion is without any potency if one cannot also demonstrate that inversion scenarios are possible; if they are impossible any examination is in vain. Inversion scenarios base their viability on the notion that the inversion is undetectable, therefore to deny that a person can experience a spectral inversion would be akin to asserting that Schrödinger’s Cat is certainly alive and well—one lacks the privileges

² This suggestion is, admittedly, disingenuous. It may be so that the inverted agent may be unable to report on their inversion. If the world were inverted alongside the agent, as per the Inverted Earth scenario (Block, 1990), the agent would not be aware of their inversion. This though, seems to be *ad hoc* in nature and thus is disregarded above.

required to make a rational claim either way. Yet, there are those who would deny the possibility of spectral inversion. For instance, Clyde L. Hardin (1987) argues that the spectrum cannot be inverted by virtue of the non-chromatic phenomena of colour experiences. Non-chromatic phenomena are best explained by contrasting them with their antithesis, chromatic phenomena. Whereas chromatic phenomena pertain explicitly to colour and would be referred to with terms such as red, bright or dark, non-chromatic phenomena are not coloured. They are the kinds of phenomena usually spoken of in terms such as warm, hard or cool. Hardin argues for the impossibility of inversion on the basis that humans have at least three binary chromatic channels; one responsible for the perception of red and green, another for blue and yellow and a third for the darkness or lightness of the perceived colour. These channels are receptive to the chromatic phenomena produced by the objects of the world: should one look upon a canary, it will stimulate activity towards the ‘yellow’ end of the relevant channel. Hardin then notes that the extremes of each channel, i.e., red/yellow and blue/green, each carry with them different non-chromatic phenomenal experiences—red and yellow carry ‘warm’ experiences and green and blue carry ‘cold’ experiences. Should then spectral inversion occur, one of two scenarios could ensue:

- a. The non-chromatic phenomena would also be inverted and the affected would see ‘red warm’ things as ‘blue cold’ things. This would lead to a situation where the inverted person’s experiences would be totally divorced from their actions—for example, they would still huddle around a campfire for warmth despite its glacial appearance.

- b. Only the chromatic phenomena would invert, leaving the non-chromatic phenomena unchanged, thus leading to “red cold” or “blue warm” experiences. Experiences such as these are nonsensical on the basis that one supposedly identifies a ‘red’ experience, not solely based on its chromatic properties, but also on the basis that it prompts ‘warm’ experiences. Warmth is a feature of redness, in just the same way that ‘red’ is.

These possibilities force the defender of inversion into one of two positions: they either have to accept the first scenario and concede that if inversion of human spectra is possible, it entails that the quality of our experiences have no causal efficacy, or they must abandon inversion because it would lead to the creation of contradictory and unstable nonsenses.

Such concessions do not have to be made. As noted by Joseph Levine (1991) the chromatic and non-chromatic phenomena associated with a ‘red’ experience are not as inseparable as Hardin would have us to believe. They are instead atomistic; one can separate ‘warmth’ from a red experience just as one can separate ‘coldness’ from green experiences. One can separate the different phenomenal experiences because it is not only the perceived ‘warmth’ of red experiences that allows them to be distinguished, one can also distinguish them purely from the ‘coloured’ phenomena they carry. Indeed, this is also consistent with common sense—by denying that phenomenal experiences may be atomistic, Hardin is (implicitly) endorsing the view that one could not recognise objects as red if one did not also possess the concept of ‘warmth’. Thus, because it seems that one can separate the chromatic and non-chromatic constituents of a phenomenal experience, it is possible to take the non-chromatic parts of an experience and apply them to a different chromatic experience—the “conceptual incoherence” that Hardin (1987. p. 292) speaks of is simply a

blind assertion; ‘red cold’ is entirely fathomable so long as one posits that phenomenal experiences are atomistic. Therefore, if one is prepared to accept the notion that phenomenal experiences may be split into parts, it seems that Hardin’s assertion that human colour-space—i.e., the range of colours humans are capable of perceiving—is unable to be inverted due to asymmetries in non-chromatic phenomena is untenable, thus leaving the path to inversion free from obstacles.

If one is not prepared to accept Levine’s atomistic conception of phenomenal experiences, there is a more robust argument for the feasibility of inversion. Let us say that one rejects Levine’s thoughts—the possibility of inversion is still not neutralized. If we concede that our physiology does not lend itself to a range of chromatic perceptions that are readily invertible, one does not also have to concede that there is *no being whatsoever* with physiology conducive to inversion. Indeed, it is a common trope that different animals have different colour-spaces—octopods are supposedly only to see shades of blue for instance—so it does not take too much imagination to posit a creature with a colour-space conducive to inversion. The claim that our colour-space is unable to be inverted is just that; *our* colour space may not be invertible, but that does not mean that *all* colour spaces are invulnerable to inversion (Shoemaker, 1982). Therefore, so long as the possibility of one of these invertible creatures existing remains, inversion remains feasible.

2.3 FUNCTIONALISM AND INVERSION

Now that we have a working definition of inversion and demonstrated that it is, at the very least, *logically* possible for inversion to occur, it is time to turn our attention to the problems caused by inversion. We shall begin by looking at the difficulties that inversion

causes functionalist theories of mind, but first, it will be prescient to establish what such theories entail.

2.3.1 WHAT IS FUNCTIONALISM?

Imagine there is a farmer, long ago, before any of our modern meteorological advancements. It is around the time of the year where the seeds need to be sown if he is to get enough crops to sell later in the year. He has invested a large sum of the previous year's income on seeds and, rationally, he does not want to head into the fields to plant them if a storm is on its way—not only will he get wet, his investment will be wasted should the seeds wash away. To predict the weather will be a great boon, so he observes the morning sky. It appears red. He then looks to the pasture holding the cattle—they are all reclining underneath an oak tree. Finally, he opens the farmhouse door and fills his lungs with the cool morning air. It carries upon it the earthy scent of an impending storm; the seeds will not be planted today.

The red morning sky, the reclining cattle and the earthy scent carried in the air are all clearly very different entities, yet it can be said that they all have something in common: they all provide the farmer with the ability to predict the weather. They all share the same 'weather-predicting' function, despite their wildly different makeup. This is not dissimilar to the way that Functionalists think of mental states. To the Functionalist and the Farmer alike, it matters not what is providing the function, only that the function is provided. What this means for the Philosophy of Mind can be better illustrated if one contrasts Functionalism with the Type Identity Theory. The Identity Theory claims that each and every mental state has a physical counterpart, in such a manner that if one is in the

arbitrarily named, Brain State X, they are also in the corresponding Mental State (Kim, 2011. p.91–129). This allows one to make type-identity statements about mental states, for example, one could assert that “*Pleasure is the transmission of Dopamine along the Mesolimbic Pathway into the Nucleus Accumbens*”. Under the Identity Theory the onus is on what a mental state *is*. This is not so with Functionalism. Functionalism cares not what a mental state *is* but instead, what it *does*. Whereas the Identity theorist would claim that there is no pleasure without the transmission of Dopamine along the Mesolimbic Pathway into the Nucleus Accumbens, the Functionalist claims that pleasure exists as a kind of mental ‘computer program’, and can be instantiated anywhere capable of ‘running’ the program (Putnam, 1967)

This likely needs some explanation. A mental state, to a functionalist, is a particular kind of functional state. A functional state can be thought of, in a rudimentary way, as a set of instructions. For example, imagine one is baking some scones: one follows the recipe. It is possible to think of ‘baking’ as referring to a set of actions, which follow instructions much like a flowchart, i.e., there are inputs which are acted upon in certain manner to reach an output. (Think of whisking eggs—the eggs are the input, ‘whisking’ the functional state and whisked eggs are the output). This is how the Functionalist views mental states—mental states are those which carry out the instructions on how to move from one state into another. Appropriate inputs for the Functionalist are either sensory or psychological—burning one’s arm and thinking about Tennis are both examples—and appropriate outputs for the functionalist are either behavioural dispositions or further psychological states—for instance, the disposition to emit a coarse utterance or thinking about strawberries and cream. It is the functional mental state that provides the bridge between input and output.

This is the framework that Functionalism follows, but there is a distinction to be made between two kinds of Functionalism. The first, we shall pay passing attention to as it is better categorised as a variant of the Identity Theory than a purely Functionalist theory. This theory finds its roots within the Identity Theory, and shall be referred to as Brain State Functionalism, or BSF (Block, 1980. p.179–181). BSF agrees with the claim that mental states are functional states, but it also claims that these functional mental states also have a corresponding physical twin (Lewis, 1969). For example, say we take pain to be the mental state that causes bodily damage to manifest itself in a coarse utterance, BSF would assert that pain would be identical to physical state in the brain (for instance, C-Fibres firing) that is then responsible for the disposition to act in a certain way (Armstrong, 1970).

The second kind of Functionalism is a more scientific variant, and thus shall be known as Scientific Functionalism (Scientific Functionalism shares much of its conceptual repertoire with Machine Functionalism) (Block, 1980. p.173–175). Scientific Functionalism, first advanced by Putnam (1967), stops short of making the identity claims found within BSF and instead asserts that mental states are definable by function only. Whereas BSF would claim that “Pain = C-fibres firing = the brain state that turns bodily damage into coarse utterances”, Scientific Functionalism would instead assert that “Pain = the state that turns bodily damage into coarse utterances”. Indeed, Scientific Functionalism believes that such functional definitions can be provided for all mental states. This is interesting because of what Robert Kirk (1994, p.89–92) calls *The Swiss Cheese Principle*—by defining mental states purely by their function means that there is nothing ‘special’ about the brain; it is not composition, nor material that makes the mental, only function alone. This means that it is theoretically feasible to construct a synthetic humanoid that, provided it had functional

parity with a normal ‘fleshy’ humanoid, would be fully conscious. Let us explore this further.

2.3.2 OF SYNTHETIC HUMANITY

On the face of things, the prospect of a synthetic human does not seem implausible. If mental states are somehow related to brain states, and brain states are (to simplify things somewhat) based upon electrical activity, it follows (per Kirk’s *Swiss Cheese Principle*) that anything that can replicate the electrical activity of the human brain can act as its replacement. This is the grounding for the Functionalist trope of “Neurone Replacement Therapy”—if Functionalism is a complete theory of mind then the gradual replacement of Neurones with functionally identical synthetic counterparts will cause no damage to consciousness (Kirk, 1994. p.88–89). But consciousness is complex. There are many different ‘kinds’ of consciousness and if Functionalism cannot account for each kind then it cannot be a complete theory of mind and thus, the notion of synthetic consciousness is relegated to the world of science fiction alone.

For the sake of simplicity, allow us to assert that there are roughly three ‘kinds’ of consciousness. The first we borrow from Ned Block (1995): Access Consciousness. Access Consciousness, is a mental state that is “poised to be used as a premise in reasoning ... [or for the] rational control of action and ... speech” (Block, 1995. p.231). It is easy to see how Functionalism can account for ‘access’ kinds of consciousness—the mental ‘access’ states are those that have the function of transmitting information to our cognitive faculties. This seems to be replicable in silicon (indeed, the ability to transmit information

is the basis of the Internet) and thus, we can assume that the synthetic agent would possess Access Consciousness.

The second kind of consciousness is one commonly associated with Higher-Order Theories of consciousness: Introspective Consciousness. This kind of consciousness is best elucidated by showing an example where it is not present—when one is driving, and one does so reflexively and so proficiently that one does not know how one arrived at their destination, they are introspectively unconscious (Armstrong, 1981). This means that Introspective Consciousness is an awareness of the operations of the mind itself—a reflexive relaying of information—much like a boiler monitoring its own temperature so it knows when to click off. Again, it is easy to envisage a functional explanation of Introspective Consciousness. It is simply a kind of state that monitors another state and makes that information available to other faculties. This function does not seem unable to be replicated in silicon and thus, we have good grounds to assert that our synthetic individual would possess Introspective Consciousness.

The final kind of consciousness is Phenomenal Consciousness. This is the kind of consciousness that has qualitative character—there is something it is like to be in a phenomenally conscious state (Chalmers, 1996. p.11-16). It is here where the synthetic agent begins to struggle. As we know, Functionalism identifies and defines mental states on the grounds of their function, i.e., what causes them, and what they themselves cause. Now, Phenomenal Conscious states are mental states and thus, a difference in qualitative character entails a difference in mental state. A phenomenal experience of ‘greenness’ entails a different mental state than a phenomenal experience of ‘redness’ for instance. Say then, we look at the experiences of our inverted individual, David, and his spectrally

normal friend. Were they to look upon the same bunch of objectively green grapes, David would be having a phenomenally red experience and his friend would be having a phenomenally green experience—and thus they are in two different phenomenally conscious states. These two states have the same causal input (seeing the grapes) and they also both ‘do’ the same thing (they both, perhaps, make their holder think of wine), so the functionalist will assert that both David and his friend are in the same mental state, due to their functional parity. But to do this denies the notion that each qualitative state requires its own mental state—David and his friend are not at all in the same mental state by virtue of their different experiences (Fodor, 1981). Inversion shows that Functionalism leaves phenomenal character out in the cold—qualitative states seem to escape functionalistic reduction—and thus, our synthetic agent will lack qualitative states and therefore will not enjoy the same level of consciousness as a ‘fleshy’ agent. The possibility of synthetic agents stands with the completeness of Functionalism, and thus, because Functionalism is incomplete synthetic agents are not tenable.

2.4 REPRESENTATIONAL THEORIES OF CONSCIOUSNESS AND INVERSION

As we have seen, inversion highlights the incompleteness of Functionalist theories of consciousness, but this is not the only damage it does. Inversion also acts to cause considerable problems for representational theories of mind.

2.4.1 THE FOUNDATIONS OF REPRESENTATIONALISM

Whereas Functionalism argues that mental states are those with particular functional purposes, Representationalism relies on the argument that all mental states are intentional.

Intentionality has little to do with deliberate action, and is instead a term used to refer to the ‘aboutness’ of mental states. Let me provide an example of this ‘aboutness’. Say for instance one is in an art gallery and one looks upon Henri Matisse’s famous *Blue Nudes* one can say that they are ‘about’ the female form, in much the same way that the little blue lines on the map one used to navigate to the venue are ‘about’ the rivers they represent. Representationalism is the claim that all mental states possess this ‘aboutness’; that “every mental phenomenon is characterised by what ... [is] called the intentional ... inexistence of object ... [identified by its] reference to a content [and] direction towards an object” (Brentano, 1874. p.68) This notion is not too contentious and is reasonably easy to understand. Say you look outside briefly, turn to your friend and say, “it’s raining outside”, your utterance is the verbalisation of a mental state—a belief—that is ‘about’ the weather. If one has a state, and that state is about something (i.e., it possesses intentional content) then that state is a mental state. This practice of identifying mental states on the basis on presence of intentional content was reformulated some years later, by Michael Tye to provide a theory of Phenomenal Consciousness.

2.4.2 A REPRESENTATIONAL THEORY OF PHENOMENAL CONSCIOUSNESS

Tye, in the same vein as Brentano, asserted that “all states that are phenomenally conscious ... have intentional content” (1995. p.93). This, in short, means that to be in a state where there is a something that it is like for you to be in that state, that state is ‘about’ something. Say that one is in a bar and one orders a glass of gin. One is in a particular state before one sips the gin. Then, when one sips the gin and experiences the juniper sting of the gin one is in another state. When the aftertaste of the gin is no more, one returns to their pre-sip state (provided relevant *ceteris paribus* laws are stipulated). It can be therefore said that the

change in state ‘tracks’ the taste of the gin. This means that the ‘gin-taste’ state carries information about the physical properties of the gin in much the same way that the presence of smoke carries information about the presence of a fire; the ‘gin-taste’ state is about the presence of pinene and limonene in the chemical constitution of the gin. This means that phenomenal quality does not arise from the ‘gin-taste’ state nor does it arise from the presence of specific aromatic chemical compounds—it arises from both in tandem. This is largely intuitive—one cannot expect to be in a ‘gin-taste’ state without drinking gin nor can one know that one is drinking gin without also being in a ‘gin-taste’ state. Because of this co-dependence one can safely assert that phenomenal experiences are replicable so long as they are ‘about’ the same physical properties of the objects of the outside world (Tye, 2005. p.45). This notion goes some way in explaining why the taste of gin is often evoked whilst walking in coniferous forests—the trees and the drink contain the same aromatic compounds and thus produce qualitatively similar states.

2.4.3 CHARACTER AND PANIC

The bare assertion that all phenomenal states possess intentional content is in need of some consideration. Relating phenomenal states to intentional states seems to neglect the notion that there are mental states that are not in possession of phenomenal quality. To return to a previous example, the belief that it is raining carries intentional content—the belief is ‘about’ the weather—but carries no phenomenal content. One cannot draw a comparison between ‘gin-taste’ states and ‘believes-its-raining-states’ for one cannot *feel* that they believe it is raining in the same way that one can *feel* the taste of gin.³ Perceptively, Tye

³ This notion, that beliefs are without phenomenal character, is admittedly disputed (for example, in Pitt, 2004) and it is relatively easy to supply anecdotal evidence in support of the notion, as I am sure anyone who has had the answer to a trivia question on ‘the tip of the tongue’ can attest to. Yet, we shall forgo proper discussion of this notion, for the sake of brevity.

pre-empts this objection. What is meant by intentional content must be qualified before one can assert that there is something it is like to possess it—it must meet the criteria set by the PANIC theory.

PANIC theory asserts that intentional content must also be poised, abstract and non-conceptual if it is to qualify as phenomenal character (Tye, 1995. p.137–144). This will benefit from some clarification. Intentional content is said to be poised if it created by our sensory organs and is available to the cognitive processes responsible for the creation of the kind of mental states that lack felt quality, e.g., beliefs and desires. Considerable parallels can be drawn here with Ned Block’s notion of Access Consciousness—both pertain to states that are positioned in such a way that they are readily accessible to cognitive faculties. Indeed, this notion also sheds light as to why mental states such as beliefs are thought not to possess phenomenal quality—beliefs etc. are not poised for the uptake into our cognitive faculties because they are a *part* of our cognitive faculties. Phenomenal experiences provide the raw building blocks from which we can create beliefs—we have beliefs about phenomenal character, not vice versa. Intentional content can be described as abstract if it does not necessarily pertain to a particular object. Say for instance we taste over-brewed coffee and burnt chocolate brownies—the particular bitter quale can be shared by both objects. Both over-brewed coffee and burnt chocolate brownies will cause identical changes in state (provided the correct *ceteris paribus* laws are stipulated). Finally, intentional content can be said to be non-conceptual if one does not need to possess the relevant concept to experience it. For example, one does not need to know that pain represents bodily damage in order to experience its felt quality. This criterion is largely stating the obvious yet is necessary to prevent a key problem—if one had to possess a concept before one could experience that which the concept refers to, it

would prompt unanswerable questions regarding the origins of the concepts. If intentional content satiates these criteria there is something that it is like to be in possession of this content, according to Tye.

2.4.4 ON INVERSION AND REPRESENTATION

Now that we have a working account of what a representational theory of consciousness entails and how it accounts for phenomenal experiences, it seems an apt time to introduce inversion into the equation. Inversion should, at this point, need little explanation—one agent would experience an objectively red object as phenomenally red whereas an inverted agent would experience the same object as phenomenally green. This concept though, is intensely problematic to proponents of representational theories of consciousness.

Inversion leads to a scenario where a single worldly object may, with no misrepresentation occurring, be accompanied by two different phenomenal experiences (Shoemaker, 1994).

This is incompatible with the view that phenomenal character is a kind of intentional content—even with the criteria posited by PANIC theory—as the quality of a phenomenal experience is set by the object being represented. The possibility of inversion entails one of two scenarios:

- a. Provided no misrepresentation occurs, inversion shows that phenomenal quality is *not* set by the objects of the world because the notion that a single object can be, for example, both red and green simultaneously violates the principle of non-contradiction. This would mean that phenomenal content is *not* intentional and representational theories of consciousness are to be discarded due their explanatory

insufficiencies (i.e, their inability to provide a representational account for phenomenal quality).

- b. Provided no misrepresentation occurs, the damage that inversion seems to entail can be mitigated through illustrating that an object *can* be red and green simultaneously without violating the principle of non-contradiction. Thus, there is no problem with asserting that phenomenal content *is* intentional and Representational theories of consciousness are therefore explanatorily complete and should not be discarded.

Sydney Shoemaker (1994: 2000) argues for the latter of these Scenarios.

2.4.5 SHOEMAKER AND THE FEASIBILITY OF RED-GREEN OBJECTS

Shoemaker's (1994) efforts to protect representational theories of mind from the damaging effects of spectral inversion begin with the assertion that the phenomenal quality of an object is not possessed by an agent's *experience* of the object but instead is a property of the object itself—if an agent has a red experience when confronted by a strawberry, it is because that strawberry is red. This assertion is useful for two reasons. The first is that it avoids what Shoemaker terms 'Projectivism'. If one claims that the quality of an object is a property of the experience of it, one is applying properties to the object that it may not necessarily have. If the redness of the strawberry is a property not of the strawberry, the strawberry itself could be any colour or it could be colourless: it is hidden behind a veil of perception. The second reason is, by attaching phenomenal quality to the objects of the world, Shoemaker is effectively denying that one can attach truth-values to perceptions—

perceptions are not wrong nor right, they simply *are*. Following these two reasons, misrepresentation is impossible.

This is important, because if misrepresentation is impossible, it follows that an inversion scenario illustrates that the standard and inverted agents are picking out genuine features of objects through their perceptions. It would seem therefore, that an object can indeed be red and green at the same time.

It is understandable to find this implausible—it goes against our common sense theories of the world to assert that a single object can be red and green at once. If Shoemaker is to be persuasive he must also provide a framework where such a notion is possible. If both inverted and standard agents are picking out a feature of an object it is clear that they cannot be picking out the *same* feature (for if they were, they would see the object in the same way). To solve this, Shoemaker posits the existence of a class of properties he terms phenomenal properties. It is these that a phenomenally conscious state is ‘about’ (and thus, the physical feature of the world represented by the appropriate change of state). This notion will benefit from some unpacking.

Say we have an object. Alongside size and shape, this object possesses a number of phenomenal properties. Let us say it has four such properties. The object is then presented to a group of five people: Anne, Brian, Charles, Desmond and Eric. When Anne views the object, the intentional content of her state is the first phenomenal property. She sees the object as blue. Brian’s state represents phenomenal property two and he sees the object as red. Charles’ state represents phenomenal property three and the object is yellow to him. Desmond’s state represents phenomenal property four and he sees the object as green.

Finally, Eric sees the object in the same way as Anne—blue—so it follows that their experiences are about the same phenomenal property.

It is clear now, how this scenario seems to absorb the problem of inverted qualia. The qualia are not inverted at all, it is just so that a standard and an inverted agent pick out two different properties of the physical object. There is also seemingly no issue with asserting that phenomenal consciousness is intentional—to experience an object in a particular way is to have an experience ‘about’ a particular feature of the object. It seems therefore that Shoemaker has neutralised the destructive potential of spectral inversion.

2.4.6 SHOEMAKER’S PROBLEMS

Whilst on first glance it seems as though Shoemaker has solved the problems inversion causes, this is not so. Firstly, it appears that Shoemaker is tacitly asserting that each physical object has an infinite number of physical phenomenal properties. Allow me to explain. Colour is not individualistic; it does not exist in discrete units like it does on an artist’ palette. It instead exists in a spectrum. To illustrate this point we can appeal to a similar phenomenon that occurs within time. Whilst we can say that there are 24 hours in a day, 60 minutes in an hour and 60 seconds in a minute—we can also keep dividing seconds into milliseconds, nanoseconds and so forth, infinitely. This is also true with colours. If we say that Phenomenal Property A is represented by a veridical red experience and Phenomenal Property B is represented by a veridical blue one, it could be said that a veridical purple experience can be explained through the representation of a third phenomenal Property. Should colours be individually supported by discrete qualities (i.e., a state for each colour, as Shoemaker (1994) suggests) it follows that there will be a physical

quality for each hue, shade, tint etc. and as one can always split the difference between two similar colours, each object is in possession of an infinite amount of physical properties. One could always retort with the claim that human colour perception is not so fine grained that one can always split the difference between two colours but this objection can be sidestepped—human colour space may not be sufficient for such sensitive chromatic demarcations but there always exists the possibility that there *is* a creature with sufficiently sensitive perceptual functions. Even if it is not impossible that an object possesses an infinite number of physical properties, the endorsement of such a notion incurs a significant ontological burden so it makes sense to be weary of the notion.

Secondly, if we are to accept that inversion can be explained through the representation of different physical properties of an object, we are left with the problems: “why do I perceive *this* property, not *that* property?” and “I perceive *this* property now, what is stopping me from perceiving *that* property should I shift my gaze from the object and back again?” One can claim that it is something to do with one’s physiology—it may be so that it precludes the perception of certain colours for instance. Similarly, one could claim that it is something to do with the context of the object—a blue shirt underneath the orange of a streetlamp for example, looks to be black. Indeed, Shoemaker (2000) does go some way to explaining why I perceive *this* property consistently, rather than *that* property: the phenomenal character of an object is, in essence, the disposition to produce an experience of a particular quality in an agent with a visual system conducive to experiencing that particular quality under normal lighting conditions. This answers the two questions above, but it also encounters some of its own difficulties.

Firstly, and most obviously, one can ask ‘what are normal lighting conditions?’ The notion of ‘normal’ lighting conditions is clearly population-relative: our Scandinavian friends experience near constant darkness in the winter, we here in Britain experience dreary weather more often than not and our African friends live under the harsh blaze of the sun. Clearly, each scenario entails a different normal and whilst the subjectivity inherent to ‘normalness’, in my opinion, lends itself well to something as subjective and fluid as human perception, there will be those that are loath to include a notion so vulnerable to fluctuation in an explanation of visual consistency.

Secondly, one can use inversion to posit a situation that demonstrates these criteria false. Inversion does not have any bearing on the colours that an agent can perceive; it is just so that colour experiences are mismatched. An inverted agent can still see both red and green, just not in the same circumstances. Say then, an inverted agent and a standard agent look upon the same strawberry. Shoemaker’s criteria would claim that the perceived character is due to the strawberry’s disposition to prompt the character in an agent capable of perceiving the character, whilst in certain lighting conditions. Well, both agents have a physiology capable of perceiving red and green, and both are in the same lighting conditions so it would follow that the two agents would have the same experience (i.e. that they would both pick out the same feature of the strawberry) yet this is not so (Tye, 2000. p.102). One sees the strawberry as green, the other red. It seems then that Shoemaker’s criteria for the reliability perceptual character are conceptually unsound and thus, his theory must be disregarded until sufficient criteria can be set.

2.4.7 TYE AND INVERSION

As Tye was so keen to highlight the flaws of Shoemaker's theory, it seems only fair to see if his method of neutralising inversion fares any better. Allow me to ensure the inversion scenario is fresh in one's mind: an agent is inverted if an objectively red object is experienced with a phenomenally green quality, for example. This presents a problem to Tye because representational theories of mind claim that the quality of an experience is set by the object that is represented—a single object cannot prompt two mutually-exclusive phenomenal experiences without violating the principle of non-contradiction. Tye (1994: 2000, p.105) tries to deal with this problem through the assertion that the inverted agent is merely misrepresenting the object—the state that the inverted agent enters when they are presented with an objectively red object is the same state that a normal agent would enter when presented with an objectively green object; “What determines [the introspective quality of an experience] is internal physical constitution ... the [objectively red object] can look green to [an inverted agent] so long as his brain is not in the same physical state as [a standard agent]” (Tye, 1994. p.171).

Tye's assertion that an inverted agent is simply misrepresenting an object is troubling. If we are to agree that an inverted agent can experience an object differently from his standard peers by virtue of a different brain-state, it seems that the quality of an experience is not 'about' the object any longer—it is 'about' (at least partially) our brain-states. But if this is accepted, it means that we run into Shoemaker's Projectivism—if qualities can be misrepresented through the presence of 'incorrect' brain-states then the objects in our world are not objectively coloured. To defend Tye is to be forced into accepting some

degree of colour irrealism—a notion which Tye seems untroubled by—“colour irrealism ... is surely a conceptual possibility [and] ... it may well be the most commonly held view among colour scientists” (Tye, 2000. p.106). But if one is to endorse colour irrealism it means that we are constantly misrepresenting objects (as per Shoemaker’s Projectivism) because objects—phenomenologically speaking—undoubtedly seem properly ‘coloured’. It is here where Tye’s theory becomes unsalvageable. If we are constantly misrepresenting objects as coloured, it is a complete nonsense to assert that a subsection of these misrepresentations are not misrepresentations at all and instead correctly represent the objects of the world—it seems as though Tye has painted himself into a corner, and if he wishes to get out, he must drop his defence against inversion.

As Tye’s defence against inversion is untenable, it follows that his representational theory of mind must be disregarded until it can properly defend itself against the concept of inversion; until then, it joins the good company of Functionalism and Shoemaker’s Representationalism as theories of mind toppled by the possibility of inversion.

2.5 ON INVERSION AND ITS DESTRUCTIVENESS

As before, it seems wise to look back upon what has been achieved so far. In this chapter we have clarified just what is meant by inversion. The feasibility of such scenarios was then evaluated: if they are not feasible, investigation into their effects is useful only for vanity. It was noted that instances of inversion are undetectable behaviourally. This means that an inverted agent is not deterred from buying tomatoes thinking them unripe nor will they trip up in conversation—they still call tomatoes red. It is this behavioural continuity

between standard agents and their inverted counterparts that lends inversion much of its credibility.

There are those though, that claim that inversion is not actual. Most significant of these is C.L. Hardin (1987) who claims that inversion is impossible due to the asymmetries of the human colour space. His claim is that different chromatic (coloured) quale carry with them non-chromatic qualities—i.e., red is often reported as ‘warm’ as blue is ‘cold’—and thus they cannot be properly inverted without entailing nonsense concepts such as ‘hot blue’. This was shown to be false by Joseph Levine (1991) who claims that phenomenal experiences are atomistic—one can separate the warm from red and attach it to other chromatic quale—thus meaning that Hardin’s objection to the feasibility was defeated.

A second argument for the feasibility of inversion was given for those not convinced by Levine’s phenomenal atomism: even if it may be so that human colour space cannot be inverted to due non-chromatic asymmetries, this does not exclude the possibility that there exists a creature with a colour space conducive to inversion (Shoemaker, 1982). So long as one cannot exclude the possibility of such a creature, inversion remains feasible.

With inversion shown feasible, we begin to look at the damage it does. We begin by looking at Functionalism. A definition of Functionalism was given: the view that mental states are identifiable and definable by their functional role. A distinction was made between the Brain State Functionalism of Armstrong (1970) and Lewis (1969) which, in essence, is a kind of Identity Theory, and the ‘Scientific Functionalism’ of Hilary Putnam (1967) which simply claims that all mental states are definable in functional terms.

Inversion was then introduced to Functionalism to demonstrate that the Functionalism is indeed an incomplete theory of mind—one can provide a functionally identical account of qualitatively different states and because a difference in felt quality entails a difference in mental state, it follows that there must be more to phenomenal consciousness than its functional relations (Fodor, 1981).

With Functionalism discarded due to its incompleteness, we turn our attention to representational theories of consciousness. We begin by showing that representational theories of mind use intentionality as a method to identify mentality—if a state has intentional content (in other words, if it is ‘about’ something), it is mental (Brentano, 1874. p.68). We then look at how Tye (1995, p.137–144; 2000, p.60–64) utilises this to formulate a notion of phenomenal consciousness i.e., that phenomenal conscious states are those that have Poised, Abstract, Non-conceptual Intentional Content (PANIC).

Following the establishment of a working definition of Representational Phenomenal Consciousness, we demonstrated that by asserting that Phenomenal experiences are intentional the Representationalists have difficulty in accounting for inversion scenarios—the possibility of inversion entails that objects must simultaneously be both X (where X is an experience referred to by a colour term) and not X. Sydney Shoemaker (1994; 2000) attempts to soothe these tensions by providing a framework where this is possible. An object can be both red and green, for example, because the redness and greenness pick out two different physical properties of the object—these properties are termed Phenomenal Properties. It was then shown how the positing of these properties is problematic. Firstly, if one claims that for each colour experience there is a related phenomenal property, it follows that all objects must have an infinite amount of phenomenal properties as one can

always ‘split the difference’ between two colours. Secondly, it was demonstrated that Shoemaker could not account for the seeming reliability of phenomenal experiences, i.e., why we see *this* property reliably rather than *that* property, by appealing again to inversion scenarios.

Finally, we looked at Tye’s own responses to the prospect of inversion—that inverted agents are simply those that are in a state that misrepresents the object in question (1994: 2000, p.105) before dismissing this because it entails colour irrealism which ultimately acts to make Tye’s position incoherent.

We have demonstrated that inversion defeats both Functionalism and Representationalism. If we are to nullify disruptive capacities of inversion, another theory is necessary.

CHAPTER THREE

INVERSION, THE *INVERTIBLE METAPHYSIC* AND PRACTICALITY: AN ALTERNATIVE TO THE TRADITIONAL SYSTEM

3.1 AN ALTERNATIVE

Our last section demonstrated the difficulties that arise when one shines the revealing light of spectral inversion over the two dominant theories of mind. It seems therefore sensible to dismiss these theories and ponder an alternative—in this section we begin to explore a conception of experience that breaks with those found within Functionalism and Representationalism. The work done in this section is introductory—it sets forth the philosophical understanding and theoretical background that our reformulation of experience requires. To begin this work though, we need to isolate and evaluate just what it is that makes inversion so problematic.

3.2 FOUNDATIONAL INSTABILITIES

The notion of inversion, as we have demonstrated, renders the theories of Functionalism and Representationalism untenable. So far as inversion scenarios are plausible, the two theories cannot stand. There are two mechanisms through which this can occur. The first is that inversion scenarios attack Functionalism and Representationalism independently. In this case, inversion attacks something unique about each theory which then renders that theory unattractive. The second mechanism is that inversion attacks the theories in tandem, i.e., there is a shared element of their theoretical dependencies and it is this that Inversion acts to undermine. In this case, inversion does not attack the theories as separate entities,

but instead attacks the foundations upon which the theories are built. Due to the destructive efficiency of inversion scenarios, it seems as though this second mechanism is the correct one. A weakness has been drawn up into the theories and now manifests itself as an Achilles' heel, a weakness ready to be exploited. If we are to render inversion philosophically unproblematic, we should identify this weakness and act to cut it out of our thinking.

3.2.1 INVERSION, AGAIN

The best way to identify the weakness that inversion exploits is to cast a fresh eye upon inversion. The mechanics of inversion should be familiar by now. If Alice and Belle look upon the same ripe strawberry and it causes a red phenomenal experience in Alice and a green phenomenal experience in Belle, Belle can be said to be inverted. From this, we can peel back the mask on inversion: it is a variant of scepticism. If there is a strawberry, which is objectively red, and it causes a green experience in Belle, one would be entirely justified in extrapolating this notion and applying it broadly to cast doubt upon the reliability of our experiences. Put bluntly, inversion appears only to be a suitably dressed-up version of the archetypical sceptical question: “are things *really* as they appear to me?”

If one looks closely, the mechanics of inversion offer insight into the metaphysical structure needed to facilitate inversion (and indeed, other varieties of scepticism). Through examining the scenario, we can ascertain the criteria that must be met for Inversion to work:

1. **Inversion needs an external world, full of objects that have a particular nature, which exists independently from any observer.** If a strawberry hidden in the depths of an overgrown English garden does not have the same ontological status as a strawberry displayed proudly atop a pavlova, and hence there is no invariant external type ‘strawberry’ (for example), then inversion cannot operate. There must be a *way-things-are* in the world, because if there were not it is nonsense to call Belle’s experience inverted—for something to be inverted a standard frame of reference is necessary. It is this that the objective world provides.
2. **A private mental realm, full of experiential data is also necessary.** Belle’s green qualia must exist, supported by some substance (either immaterial or material depending on your preferences) and this realm must be private to ensure that the inversions are not explicitly manifest.
3. **A distance between the objective world of objects and the subjective mental realm is required for inversion to occur.** The two realms need to be somewhat independent from each other because if they were not so, the doubt that inversion leverages would cease to exist—doubt creeps in through distance.

It is quite plausible to see how Functionalism and Representationalism can be transposed onto the structure exposed by the above criteria—in fact, the *raison d'être* of the two theories is to try and solve the difficulties they present. Take Functionalism for instance—by giving us the tools with which we can identify mental states and understand their purpose within the objective world, it is clear that Functionalists are using their theory to erect a conduit between the two realms endorsed by our criteria. By ‘rebranding’ the

traditionally subjective mental states as a subtype of objective functional states, Functionalism seeks to sooth the tensions between the two realms simply by asserting that the kind of thinking we use to understand the objective world is also appropriate for mental states—thereby attempting to collapse the distance between the two realms by asserting that, through Functionalism, we come to be in possession of the conceptual toolkit needed to understand our mentality. A very similar process happens within Representationalism—it is just so that the theory attempts to breach the two realms using intentional content rather than Functional states. By bringing elements of the world ‘into’ the mental realm via intentional content, Representationalism also seems to try and strip mentality of its subjectivity and fluidity in an attempt to convince its sympathisers that we can understand mentality in the same way as we can the objective world. If the objective world can somehow puncture the mental realm through intentional content, then it follows that the distance between the two realms is eradicated. But, as inversion highlights, to collapse the two realms in on each other by stripping the mental realm of its subjectivity—i.e., to make it understandable in objective terms with either a Functionalist or Representationalist slant—is doomed to failure. To make the mental objective is oxymoronic—the mental is subjective and anywhere this is denied, inversion can enter to demonstrate the error. It seems therefore, if we are to neutralise the destructive potency of inversion, we must find another method of closing the distance between these two realms whilst respecting the subjectivity of mentality.

3.2.2 THE ORIGINS OF THE DISTANCE

If we are to close up the dichotomy between the realms and thus wipe away the metaphysical picture that lends inversion its destructive potency, it is prudent to be aware

of its genesis. Of course, it does not appear to be too contentious to claim that a metaphysic which is so intertwined with scepticism is likely born from scepticism itself; the creation of anything will always bear the marks of the tools used to make it. As such, it is appropriate that the origin of this metaphysical picture is found within Descartes' work—inversion bears the hallmarks of Descartes' radical scepticism. The conceptual space between Inversion and Descartes' characteristic claim that “the senses deceive, and it is prudent never to trust completely those who have deceived us even once” (1641. p.12) is so slight that one can be forgiven for thinking there is no space there at all. To begin our exploration into the genesis of what I shall term the *Invertible Metaphysic*—the metaphysical system characterised by the existence of a dichotomy and distance between an objective world and a mental realm—we should look at Descartes' methodical application of scepticism for it is precisely this that provides the foundations for inversion. Locke, the first to articulate the notion of inversion, belonged to the generation of Philosophers who directly succeeded Descartes, so naturally, his thinking was heavily influenced by the work of his predecessor.

Descartes' methodical application of scepticism to the phenomena of the world was not without motivation. Descartes, by devoting himself to the “general demolition of [his] opinions” (ibid.) wished to identify a solid foundation upon which the sciences could be built in order to ensure their stability and longevity—he wished to isolate an indubitable notion through the application of radical doubt to serve as this foundation. Such ‘demolition of opinion’ involved rejecting all that “[one] acquire[s] either from the senses or through the senses ... [as] from time to time [it had been] found that the senses deceive” (ibid.) and thus such sensory information alone cannot provide a sufficiently stable foundation upon which to base the sciences. It is not difficult to supply anecdotal evidence to substantiate Descartes' claim that our senses may deceive us—one only needs to think

of Plato's ubiquitous example of a stick appearing disjointed when half submerged in a clear body of water in order to corroborate Descartes' rationale—and thus this notion enjoys some intuitive plausibility. This process of applying radical doubt leads eventually to the identification of Descartes' famous *cogito*, the indubitable truth that serves as the foundation of his epistemology: *Cogito Ergo Sum* or, I think therefore I exist (Descartes, 1637. p.127). The sceptical robustness of the *cogito* is clear: thought cannot exist independently from a thinking agent, in much the same manner as running cannot exist without a something that runs. To doubt the *cogito* is to prove it correct, since to doubt is to think, and thus, it is impervious to doubt.

The robustness of the *cogito* may serve as a useful base for an epistemology, but it has consequences that reach beyond providing a justification for worldly inquiry—its indubitable nature entails the existence of a 'thinking thing', namely, the Cartesian Ego—the entity capable of thought. The mental substance of the Cartesian Ego can be contrasted with substance that is manifest within the objects of the world. It makes little sense to claim this other substance is also *res cogitans*, for *res cogitans* is immanent—it is intrinsic to, and thus exclusive to, the mental realm—and thus impossible to doubt; whereas the objects of the world are vulnerable to doubt. Another substance must support them: the *res extensa*, or physical substance. It is doubt that motivates Descartes' distinction between these two substances—the “thinking thing and [the] corporeal thing” (Descartes, 1644. p.195). Through this systematic application of doubt, Descartes carves the world into two spheres. In one sphere, we have the objective worldly objects—Alice and Belle's strawberry—and in the other sphere we have our mental lives, our thoughts, our experiences, our beliefs and so on—Alice and Belle's phenomenally dissimilar experiences belong to this realm.

It would seem that two of the three criteria that inversion requires to operate have been met. Descartes' doubt gives us two worlds: an objective physical one and a mental one. All that remains now is to demonstrate that there is a distance between the two. The traditional assumption—and indeed the one made by Descartes himself—is that this distance is causal: if “the mind is completely different from the body” (Descartes, 1641. p.59) by virtue of the differences in their supporting substances, it is not at all clear how the two could interact with each other (Gassendi in Descartes, 1641. pp.233–240). Two *res extensa* entities can interact with each other—a falling book may knock a glass of water over—and two *res cogitans* entities may interact—one thought may cause another thought—but it does not seem one can swap and change between the two. To posit a causal relation between the two is problematic. Of course, Descartes did offer a mechanic via which the two could interact, the pineal gland—the “principle seat [of the rational soul]” (1662. p.102)—but this does not achieve anything other than prompting the reformulated question “how does the pineal gland operate?”. Indeed, one may seek to close this distance between the two spheres by arguing that the Cartesian Ego is actually constituted from *res extensa*. This is the path physicalist Philosophers, including Functionalists (at least those whom are committed to physical instantiation of functionalist states) and Representationalists have taken and it is a fruitful one. If the objective world and the physical world are both *res extensa* entities, their interaction is now feasible and the distance supposedly stipulated by the *Invertible Metaphysic* is gone. But this is not so. As we have previous demonstrated, theories that take the step of “materialising” the mental are still vulnerable to inversion, so it makes sense that the distance that inversion scenarios leverage is not causal in nature as inversion has efficacy even in scenarios where mental-physical interaction is feasible. Another kind of distance must be relevant.

The distance relevant to our dismissal is that which is articulated by the notion of interiority and exteriority, or immanence and transcendence. These terms mean little on their own, so it is prudent to clarify them. The immanent, or the interior ‘is traditionally conceived as the sphere of ... conscious life’ (Dillon, 1997. p.36) and this is to be contrasted with the transcendent, or the exterior: “the universe of things existing in themselves ... independent of consciousness” (ibid.). As one can see, the immanent and the transcendent refer, respectively, to the mental realm (i.e., the Cartesian Ego) and the objective world required by the *Invertible Metaphysic*. Now, to highlight the distance between the two, we must not lose sight of the fact that their postulation is intimately related to Cartesian Epistemology—we must enquire after the nature of knowledge in the Cartesian System to properly elucidate the distance. Allow us to return to Descartes’ indefeasible modicum of knowledge—the *cogito*. Descartes’ rationale for assenting to the *cogito* is that it expresses a notion “very clearly and distinctly [perceived] as true” (Descartes, 1641. p.24); the robustness of the *cogito* is reliant primarily on the notion that all which cannot be ably doubted inherently expresses a truth. This naturally prompts questions on how the *cogito* acquires its epistemic tenacity—just how is it that we come to perceive the *cogito* with clarity and distinctness? One has to look again at the *cogito*. When expressed in its translated subject/predicate form—*I think therefore I am*—it becomes clear that the *cogito* is, in essence, the expression of a belief about the existence of a being that is capable of believing—a thinking being. This means that the materials needed to ascertain the clarity of the *cogito* are brought into light by the *cogito* itself—the clarity of a perception (in the Cartesian sense) is essentially a comment about its veracity and the veracity of a perception is only ascertainable if one can verify it against something, and because all ideas are mental, all ideas about one’s own mental states are intrinsically

indubitable because the materials needed to ensure their veracity are naturally present. This notion also explains why we can always doubt the veracity of the beliefs we hold about the external world. If it is so that for a perception to be ‘clear and distinct’ it must be veridical and the only way one can ascertain the veracity of a belief is through verification, the fact that we can always doubt our senses interferes with the process of supplying the evidence against which we can check our beliefs. For instance, to borrow an example from the *Meditations*, our perceptions of the sun seem to justify the belief that the sun is rather small, whereas astronomical inquiry suggests it is several magnitudes larger, but neither of these doubts about the nature of the sun has any impact upon the truth of one’s belief that the experience of the sun exists, because the evidence required to verify it is readily available. Only beliefs that concern the immanent mental sphere can be verified with certainty, because the process of verification needed to ascertain the truth of beliefs about the external world is vulnerable to scepticism owing to the unreliability of our senses⁴. Here lies the ‘distance’ necessary for the *Invertible Metaphysic*—the distance is epistemic and for as long as the dichotomy between interior and exterior stands, and a convincing theory remains absent, scepticism remains an important issue in Philosophy.

3.3 REPAIR

Our ultimate goal is now clear: if we are to deflate the significance of the scepticism expressed by inversion, we must provide a convincing theory to guard against it. But first, some ‘housework’ is necessary, if we are to be successful we should capitalise upon the failures of the *Invertible Metaphysic* in order to sculpt a system where the damage caused

⁴ This may not *necessarily* be true—if one posits a guarantor for the veracity of sensory experience, as Descartes does through his inclusion of God into his metaphysic, this problem does not arise. But, due to the fact that one should be always be weary of adding unnecessary baggage to our ontological commitments, it is understandable why this route may be unconvincing.

by inversion scenarios is minimised. Let us return to traditional epistemological methodology. It has long been held, and indeed still is so by scientific disciplines, that truth about the world can only come to be known if one can, in essence, ‘remove-the-human’ from the situation. Knowledge is the product of a reliable and justified move from first person experiences to third person objectivity—i.e., when all subjectivity and human biases have been removed or when ‘I see trees’ has reliably morphed into ‘trees can be seen’, it can be said that a truth about the world has been ascertained. This view, that a manner of anti-human detachment is a desideratum for knowledge, is the view that has been traditionally espoused by philosophy (Dreyfus, 1991. p.45). This process of detachment finds its keenest articulation within Descartes’ methodical application of radical doubt. The dogmatic belief that truth is only the product of disinterested and detached processes may do justice to the physical objects of the external world as illustrated by the achievements of Engineering, Science and the like, but it also engenders a peculiar view of humanity. It leads us to believe that we can treat ourselves in the same detached manner and by viewing ourselves with this detached ‘god’s-eye’ perspective, we come to misrepresent the nature of humanity. We begin to see ourselves as the only subject and humanity, as a collective, as a kind of object acted on by the world, unable to properly act for itself. But this is wrong; “[a] person is not a thing, not a substance, not an object” (Heidegger, 1927. p.47). Humanity and humans are not a *what*, they are a *who*, and ignoring this distinction entails a number of problematic issues.

To properly appreciate the significance of these issues, a discussion about the meaning of the term ‘world’ is necessary. Without proper grasp of the term, these issues lack adequate potency. The term ‘world’ has multiple different referents that should be explored. The first sense of the term is the one most commonly attributed to it by both the layperson and

the philosopher—the world is nothing more than the collective “totality of beings ... objectively present within the world” (ibid., p.64). It is this ‘world’ that is traditionally engaged with by philosophy. Intimately related to this sense is the second sense of the term—in this sense, ‘world’ refers not to *the* totality of objective beings, but *a* totality of objective beings; a subsection of the totality bound together by the subjective reference of an agent. To make better sense of this, it is best to consider an example: when a stamp-collector talks of the *world of stamp-collecting*, or when a motorsport enthusiast talks of *the world of motorsport*, they are employing this sense of ‘world’. The first sense of the term contains within it a nod toward its third sense—the claim that the world is the “totality of beings ... objectively present *within the world*” (ibid., emphasis added) clearly needs some unpacking—if the world is the totality of beings, just what world are they objectively present within? The meaning of ‘world’ in this context is best thought of as an arena of experience, the aggregate collection of opportunities for deliberate action and self-expression presented to us by the totality of objective entities. Clearly, this sense of ‘world’ is complex. It is possible to distinguish between collective arenas of experience and personal arenas of experience (ibid., p. 65). One may ‘possess’ a personal arena of experience—an arena that encompasses the totality of the possible opportunities of action and expression *available to you*—that is distinct from your neighbour’s, but there may be opportunities available to both of you that constitute part of “the “public” world of the we” (ibid., p.65), i.e., a capacity for action or expression that features in both of your ‘worlds’. You may find particular objects to be of significance, your neighbour may find other objects to be of significance and thus in this way you would occupy different worlds—the objects that share the same significance to both yourself and your neighbour unite you together in the world of ‘we’. An example may be of value: you may be a fisherman and your neighbour a woodworker. Your fishing pole does not have the same significance to

your neighbour as it does to you and the same applies inversely to your neighbour's lathe. But let us say you were both Christian—the village church would share the same significance to both of you so it sits within your shared world. It is these networks of significance to which the third sense of the term 'world' refers. How objects gain their significance will be explored in depth later. The fourth and final sense of the term 'world' refers to "structural totality of particular "worlds," but contains in itself the *a priori* of worldliness in general" (ibid., p.65). It is best to think of this sense as referring to the aggregate totality of the individual personal and collective worlds from the senses prior—it is the overarching 'total' that allows us to understand the particular worlds it encompasses. The important senses, for our purposes, are the first sense and the third sense—the sense of world as the totality of object and the sense of world as the arena of experience and significance. The importance of this distinction shall be shown in the following pages.

The fundamental issue that arises from treating humanity as a kind of object—of analysing humanity as one would analyse the objects of the world—is that by doing so, we completely misinterpret our proper relationship with the world. There are few that would be enthusiastic in endorsing the notion that humans live in a world that is *not* populated by physical objects. In fact, so pervasive is this Materialism that to suggest otherwise to those outside of Idealist circles borders upon the absurd; Materialism has become an invisible frame to our existence. Because of this, though, it is not often that our relationship with these objects is examined—it eludes examination by virtue of its acceptance—but this does not mean that it should not be examined. Yes, we live a life amongst a collection of physical objects, but just what does this mean? What does it mean to be *in* the world? If one thinks of the world as the totality of objective beings and takes the detached 'god's-eye' perspective that supports the *Invertible Metaphysic* the answer is clear: we are in the

world in the same manner “as water is ‘in’ the glass [or] the dress is in the closet” (ibid. p.54). If the world is the totality of objects and we are worldly, it makes sense to say that being in the world is simply a fact about spatiality, proximity and location—humanity just happens to be occupying a similar location to the objects of the world and whilst this should not be argued against, as we are indeed ‘in the world’ in this sense, we should be careful not to reduce our relationship with our world to the same kind of relationship an apple may have with a fruit bowl. If we do reduce our relationship with the world in such a way, we fail to capture how humanity is properly in the world in two major ways. Firstly, as is suggested by the ‘other-worldliness’ of the Cartesian Ego, it makes it seem that our relationship with the world is indirect, contingent and severable (Mulhall, 2005. p.40-41). To think of our relationship with the world as one based solely upon proximity suggests that a human can be removed from the world in the same way that a football can be removed from a tree, but this is incorrect. We must realise that we are necessarily worldly beings—there is always an “‘*in-which*’ [where humanity] ‘*lives*’” (Heidegger, 1927. p.65). We are in eternal possession of an experiential arena—we are necessarily embedded amongst subjectively significant objects. Even if our spatial relationship with the world is damaged, i.e., if we change our location within the world, destroying our proximity with our surrounding objects, we do not destroy our relationship with the world *as a whole*. We retain our spaces of experience. We will find ourselves in proximity to new surrounding objects and with them we will form new networks of significance—we cannot break our link with the world, we can only change it. Even if we could remove an agent from the Earth in its entirety they would still inhabit a world (albeit a more barren one) by virtue of their existence—simply moving a chess piece to another co-ordinate does not mean that it is out of play.

In addition to making our relationship with the world seem contingent, thinking of our relationship with the world as one of proximity alone makes us misunderstand its nature. The true way that humans are ‘in the world’ builds upon this notion of proximity and is best captured by casting our eye briefly to semantics—it can be articulated through distinguishing between two senses of the word ‘in’ (Dreyfus, 1991. p.42–45). The first sense we should be familiar with: it is ‘in’ as a preposition and refers directly to proximity. It is the ‘in’ of this sentence: “Brian is *in* the car”. The second sense is subtler. It is the sense articulated by these sentences: “Alison is *in* love with Brian” and “Julian is *in* trouble”. This second sense refers to the way that a human is *involved* with entities in the world. If this notion is not yet clear, we can also proffer further clarification elsewhere: it is not only ‘in’ that captures this notion of involvement. For instance, the word ‘at’ can be employed to illustrate the same notion; should one contrast the sentence “Alison is *at* Brian’s house” with the sentence “Misha is *at* play”, one will find the first sense captures a fact about physical location and the second sense captures a fact about what an agent is doing, or, more broadly, how they are involved in the world. It is through this that we highlight a distinction which is lost when viewing humanity through the detached ‘god’s-eye’—two objects cannot be involved with each other in this sense. An object cannot establish another object as a node in its network of significance; a teacup cannot long for its contents nor can an apple find itself absorbed in its work. We humans become involved with the objects of the world and we imbue them with importance: we become “*occupied with things*” (ibid. p.43). We take up relations to the objects in our presence (Heidegger, 1927. p.54–55)—we do not encounter the objects of the world as meaningless passive entities, as two objects would encounter each other, we instead encounter things as meaningful, as useful, as *available* for use, and we come to “understand ourselves and our existence by way of the activities we pursue and the things we take care of” (Heidegger,

cited in Dreyfus, 1991. p.61). We do not see a mug as a shaped piece of fire hardened clay—we see *our* mug, emblazoned with the pattern that appeals to *our* aesthetic which we use to drink *our* coffee. To view humanity through a detached gaze, as traditional inquiry encourages us to do, is to miss what it is that makes us unique: the fact that we breathe meaning into our worlds via our involvement with its objects.

3.3.1 ON INVOLVEMENT

There are those who are loyal to the metaphysical picture created by Descartes that would be keen to argue that there may be a manner in which our involvement (i.e., the process of attributing meaning to the objects of the world, so that we come to care about them) can be accounted for in Cartesian terms. The best account of such is found within Husserl's *Cartesian Meditations* (1931). Imagine one is in a room, and in that room there sits a small desk and upon that desk sits an unfamiliar object; a die. One then walks in small circles around the desk, observing the die from all angles. The object before oneself, the die, at this point is meaningless—or more accurately, we have no meaningful relationship with it. It is simply the content of a series of visual experiences and thus involvement with the die at this stage is thought impossible due to its meaninglessness—in much the same way as an isolated, pure red sensation does not give up its meaning unless it is taken alongside other theory, the simple perception of the die is not sufficient grounds for human involvement. Meaning has to be given to the die following a mental process: the information carried by these visual experiences must be 'stitched' together via the process of "*synthesis*, a mode of combination exclusively peculiar to consciousness" (Husserl, 1931. p.39). Once this synthesis has occurred, one comes to see the die as a solid object and thus the die is transformed from the content of a number of visual images into an object ready to facilitate

games of chance. It is at this point, once the synthesis has been completed, that our involvement with the world becomes possible. Under this model, “theory is prior to practice’ (Dreyfus, 1991. p.47), i.e., our involvement with our world necessarily involves mental processes.

This view, whilst providing a fairly amicable account of human worldly involvement using Cartesian mechanics, is flawed. Let us look at what it is that synthesis is and does: it is the intake of experiential data which is then manipulated, mentally, to provide the justification for a belief, which is then used to inform our involvements with the world. To transpose this into the terms of Husserl’s example: the experiential slices of information are used to justify the belief that the die is solid and this is then used to justify the notion that it may be used to play games of chance. There is a necessary mental element to this process and this mental process effectively equips an agent with an interior, immanent belief—e.g., that the die is solid—that cannot be demonstrated to be consistent with the exterior, transcendent world. The epistemic gap of the *Invertible Metaphysic* has again allowed scepticism to flourish and thus, to assert that mental processes are somehow prior to our practical engagements with the world is to cloak our actions in an impenetrable uncertainty—how can we know that our belief that the die is solid is correct?—and thus we become paralysed, unable to act with confidence, at the mercy of our unreliable sensory information. Indeed, this notion was recognised by Husserl and we can speculate that his Idealism is an attempt to deal with this problem. Yet, the undesirability of a case vulnerable to scepticism is clear, but thankfully, Husserl’s example contains within it the materials necessary to build its successor: a model where mental processes, such as synthesis, are not necessary for human interaction with the world.

The motivations of finding such a theory are clear—if there is a way that we can demonstrate that there is a method of engaging with the world that does not directly rely on mental processes such as synthesis, explicit propositional beliefs or anything similar, it follows that this method of engaging with the world would not need the characteristic interior/exterior, immanent/transcendent distinction of the *Invertible Metaphysic* and thus, the damage that inversion and its sceptical kin causes would cease to be of any philosophical concern. If there is an alternative method of explaining our relationship with the world and the way that we attribute meaning to worldly objects, that does not insist that ‘theory precedes practice’, it does not matter if scepticism interferes with any theorising processes, because we have the alternative system to fall back on. We are no longer playing an ‘all or nothing’ game and positions of radical scepticism, such as solipsism, lose any persuasiveness they may have had.

As has been suggested, it seems as though Husserl’s die example contains the materials needed to take the first steps into our practical theory of involvement. It is undeniable that when Husserl circles the desk, receiving the sensory information poised to be synthesised, his actions are an example of the kind of detached observation we spoke of earlier. But what is detached observation if not a way in which humanity involves itself with the objects of the world? It does not seem too bold to suggest that Husserl, when circling the die observing its faces, was in some manner “*taken in by the world*” (Heidegger, 1927. p.61) and absorbed in the task of observation, in much the same manner that a painter may be absorbed in the task of capturing the likeness of the model before him. As such, it makes sense to view both detached observation and practical action as two aspects of the same phenomena: the human process of attributing meaning to the objects of the world via our involvement with them. Granted, it makes little sense to argue that the detached

observation of an object is akin to the practical manipulation of an object, but this does not mean that they are necessarily unrelated phenomena. In much the same way that one can argue that darkness is a mode of lightness—specifically its absence—it is possible to argue that detached observation is simply a mode of involvement: on one hand you have the mode of involvement concerning practical manipulation, typified by sculptors sculpting, musicians playing and the like, and on the other hand, you have the mode of involvement “refraining from every manipulation and use” (ibid., p.61) typified by detached observation. When viewed this way, it becomes clear that the claim that ‘theory precedes practice’ is not necessarily true; Husserl’s steps around the die, his observation of the die and, arguably, even the synthesis of the visual data itself, are all examples of theory emerging from a fundamental involvement with the objects of the world—an involvement that is based primarily upon action, not Cartesian detached theorisation.

3.3.2 PRACTICAL MEANING GIVING

To explain this action-orientated involvement which typifies humanity’s basic relationship with the world, it seems wise to review Husserl’s die example and shape our theory from its errors. Imagine that you are the agent in Husserl’s example—you enter a room and there, on a desk, lies a die. Husserl’s theory entails that the die before you is useless and without meaning until one has synthesised its visual aspects together and deduced its solidity and its ability to facilitate play. This seems strange. It does not seem to be the method through which we usually ascertain the solidity, the physicality, of an object of this kind. Does it not seem much more plausible that when confronted with a die for the first time, one would not duck and weave around it but would instead come to know the object’s solidity simply by taking it up into one’s hand? It does not seem that we come to

understand the solidity of the die through “perceptual cognition, but, rather [through] handling, using and taking care of things” (ibid., p.67). Such a notion is so natural that it is invisible. Any number of mundane instances—from shopping at a supermarket to making oneself a cup of tea—can be employed to demonstrate how we come to identify the contents of our perceptions as physical objects of the world via practical manipulation. At no point did we ever *have* to deduce that a mug is solid through detached examination—we have always had the option to simply take it into our hands to find this out.

It is here where radical scepticism—the noxious kind that supports extreme sceptical positions such as solipsism—begins to loosen its stranglehold. If we say that we come to know the physical existence of objects through physically manipulating them in one way or another, it follows that we can no longer justifiably doubt their existence. The justification for their existence is no longer mental—we do not know that the clutter on our desks is present because of some mental representation of it, but rather because we have likely placed it there ourselves. It is our interactions with objects that provide the evidence for their existence, not an internal representation of them. So it seems, for the brute purpose of guaranteeing the existence of the objects of the world, physical manipulation is sufficient—thus transforming this kind of knowledge from a type of internal state, into an external human activity (Mulhall, 2005. p.44ff). There are those though, that would offer an objection to this manner of dispelling radical scepticism by way of it being replicable by unconscious entities such as robots. It seems that if there were no mental representations underlying the physical interactions, they would not be dissimilar to those of a piece of machinery. This is an interesting train of thought, but it is not one that derails our project. Human (i.e., conscious) interaction is dissimilar from robot (unconscious) interaction to such an extent that to properly understand them is to render them incomparable. Luckily,

the difference between the two can be summarised briefly by paraphrasing John Haugeland's pithy statement: *robots don't give a damn* (Haugeland, 1979).

This is best elaborated upon through an example, let us look at manufacturing. It is an act that originated as a conscious involvement with the world, that has recently become appropriated by unconscious entities, so comparison seems readily available until one pays attention to the *purpose* of the involvement. In both cases, the eventual assembly of a product is undoubtedly the primary purpose, but it is the secondary purpose that shows us the distinction. The human creates a product to take a stand on itself (or to acquire the capital needed to take a stand on itself)—the secondary purpose of manufacturing for the human is to (ultimately) express oneself. The unconscious being lacks this purpose and acts with no expressive purposes in mind. This disinterestedness is the basic mode of being with robotic actors—yes, it may be able to ascertain the existence of worldly objects in the same manner as a human (maybe a sensor could confirm the presence of an item in a robotic hand, for instance) but the robot does not even have capacity to recognise these objects as *things*. They can only recognise their presence, and even that is in a cold brute fashion. There is no such thing as purpose to an unconscious robotic being. If one is to swap the materials that the robot uses, the robot does not pay attention to this—it does not care if the fixings it uses are fit for purpose or properly decorative. It would just continue its pre-programmed processes undeterred. It is only humanity that cares about objects in the way it does—only humanity imbues the objects of the world with meaning.

Physical interaction does not merely confirm the existence of a physical object, but it also helps us to uncover its meanings. Let us return to the die in Husserl's example. It is only after the die is ascertained to be solid that its meaning comes to be known; it is a tool for

playing games. But let us ask the question of how this meaning arises. How do we know the object before us is a die and that a die is used to play games? It seems as though the detached observation in Husserl's example could indeed provide this meaning—one could see that the die interacted with other physical objects by its resting neatly atop the desk, one could see that the size of the die allowed for it to be comfortably taken into the hand and one may even go so far as to understand that the item was intended to randomly generate numbers through the observation of the markings on its faces. But this is not the *only* method in which one could ascertain this meaning. Does it not seem, as we have said, more natural that one could instead pick the die up to ascertain its physicality? And that the purpose of the die—as a thing that generates random small integers—can be found out through active engagement with the object, i.e., rolling it and observing its behaviours? This seems possible. If so, it is of great importance because it seems to suggest that the Cartesian hegemony over meaning giving is incorrect—conceptualisation does not necessarily precede meaning-giving because there is an alternative method of meaning-giving: practical engagement (Heidegger, 1927. p.66–72).

One must not lose sight though, of the notion that both observation and engagement are modes of involvement—they are both paths in which humanity can become absorbed into the world, inhabiting worldly objects and transforming them into a “part of us” (Dreyfus, 1991. p.45). Practical engagement with objects and theoretical contemplation of them achieve the same goal—“in one case we observe and in the other instance we act (op. cit., 1927. p.69) but in both instances meaning is breathed into the world. It is worldly involvement that ultimately brings meaning to worldly objects. This is true but lacking important nuance. Both observation and engagement may tell us that the die is used for generating random small numbers, but this in itself is largely meaningless. Taken in

isolation the generation of random numbers is necessarily meaningless—for one to disclose the true meaning of the die it must be viewed against a situation; a practical, goal-orientated backdrop. It must be combined with other useful objects before its true meaning can be discovered: “there “is” no such thing as *a* useful thing [because to be useful it has to exist within] a totality of useful things [in order for] this useful thing [to] be what it is” (ibid., 1927, p.68). If our worldly involvement is tasked with establishing a network of subjectively significant objects, it is clear why isolated objects are lacking in proper meaning—it is from the network that the object draws its proper meaning and one cannot have a network with only a single node. To provide an example: our die is not *for-playing-Snakes-and-Ladders* unless it is encountered amongst the correct objects—a Snakes-and-Ladders board and a willing opponent, for instance. Some clarification regarding this would not go amiss: when encountering an unfamiliar object, we come to provide that object meaning by becoming involved with that object, either through detached observation or practical engagement, but always against a backdrop of other objects and personal goals. For instance, one may encounter a hammer, see it is physical via observation and take it into one’s hand, feel its weight and put it to work in a certain way depending on the surrounding objects and one’s goals—we can put the hammer to work as a *thing-for-driving-nails* if we see protruding nails and it is our wish to sink them; or we can put it to work as a *thing-that-holds-down-papers* if we are struggling to keep our paperwork still in a particularly blustery workshop—the context in which we encounter an object impacts upon the significance we bestow upon it; different contexts prompt us to imbue the object with different meanings.

Of course, the process of meaning-giving outlined above is not undergone every time we meet an object. We forgo such processes when we recognise the object before us, when we

are familiar with its meaning, its “*what-for*” (op. cit., 1927. p.69). Such a process of recognising the practical applications of an object is known as *Circumspection*—when we recognise the set of keys as *useful-for-entering-my-house* or the watch as *useful-for-telling-the-time*, we are said to circumspect the ‘handiness’ of these objects (ibid.). We recognise the object as something useful for something. It would be easy to conflate the notion of *Circumspection* with ‘standard’ observation, i.e., the visual perception of worldly objects, as it is indubitably a *method* of *Circumspection*—we recognise the usefulness of the equipment only after we recognise the equipment itself and seeing the equipment is a useful method of recognising it. But to conflate the two is incorrect—one can come to recognise the handiness of an object in different ways. A blind man, for instance, never sees his cane but he will recognise its usefulness for getting around the moment it is placed into his hand⁵ (Merleau-Ponty. 1945. p.144–145).

But as we have said, we do not undergo the process of practical meaning-giving when presented with every object—think back to how one acquired the ability to use a door handle. It was unlikely to be acquired via your own practical process of meaning-giving or through your detached observation of the mechanisms before you (it is most probable that one cannot pinpoint how or when one acquired the know-how to use a door handle). It is instead, due to the pervasiveness of the object—a day without encountering a door handle is unusual—more likely that the handiness of the door handle and the ‘know-how’ necessary to capitalise upon it was disclosed through the observation of another agent and the subsequent mimicry of that agent’s actions. We see our peers grasp the door handle, turn it and walk through the door frame and then we understand its purpose and how to

⁵ The example of a blind man is a useful one to consider, for his ability to get around in the world illustrates the worth of our engaged model of meaning-giving—the blind man cannot know the meaning of the objects in the world through synthesis of visual ‘frames’ as he does not have that information available to him. He cannot engage in detached visual observation, for he lacks that capacity. He must instead learn to cope in his world through physical engagement, practice and, to some extent, trial and error.

realise it. One can learn about objects not only by personally assigning meaning to objects, but also by observing the meaning that others have assigned to the object and acting in according with that meaning (Merleau-Ponty, 1945. p.369–372).

At a young age, we see that our peers have disclosed footballs as *for-kicking* and ropes as *for-jumping-over* and after we watch their behaviours, we can emulate and master them. As children, we “find ... objects around [our]selves ... like meteorites from another planet ... [only to] take possession of them and learn to use them as others use them” (Merleau-Ponty, 1945. p.370). We see the other people of the world as a “second myself ... because that living body has the same structure of my own” (ibid., p.370). We see our friends kick the football and we recognise that they do so with a foot attached to a leg like our own and thus we come to know; to understand how to kick. Thus it is clear that we can discover our own capabilities for action within those of our peers— through watching our peers make sense of their worlds we encounter “a miraculous extension of [our] own intentions [and] a familiar way of encountering the world” (ibid., p.370). We see our peers apply themselves to the world and we recognise that they do so in the same way that we do; we sense their mentality daubed over the objects of the world, we see how they become involved in their worlds and how they establish their networks of significance. Via observation, the potentialities for action uncovered by our peers become *ours*. This process of recognition and emulation opens new avenues of manipulation up to us, new worlds are disclosed to us. We do not need to rely on fragile detached observation to attribute meaning to the objects of our world, instead we either engage with the object ourselves, discovering its usefulness against a backdrop of goals and desires, or we can delegate the work and look at what usefulness our peers have discovered and mimic that. No structure of explicit beliefs is needed to justify these actions, to kick a ball we need not to first believe that the football

before us exists and nor do we need to believe it is suitable for kicking, our interactions and the interactions of our peers are sufficient to justify our actions. Indeed, it seems that these beliefs are secondary to our involvement—the fact that our foot connects with the ball justifies its existence and its parabolic flight path justifies its suitability for kicking. We need not to presuppose an internal conceptual schema of the world before we can cope with it in a practical manner, contrary to what Descartes and his followers believed. This though, is not to say that mental states can be disposed of completely—for as long as there is a subjective *what it is like* to being a human, mental states will need to be postulated to deal with this. Without them, our actions will lose their agency—we will not lose our know-how about *how* we do things (as the Cartesians suggest) but we will certainly lose sight of *why* we do things.

3.4 PROGRESS

To recap, to begin with, it was suggested that Functionalism and Representationalism become untenable when faced with inversion because inversion highlights a common premise in both theories that is problematic. To identify the premise we looked at the specific metaphysical situation that inversion needs to operate. Three criteria needed for inversion to operate were isolated. The first was that an objective, external world of objects that exists independently from any observers, was necessary to act as a ‘standard’ against which experiences can be compared in order to ascertain if they are inverted or not. The second criterion was that a private mental realm must be posited to ‘house’ the experiential data in a manner where it would not be explicitly manifest, to ensure the imperceptibility of inversion. The final criterion isolated was that these two worlds—of objectivity and

subjectivity—must have some distance between them to facilitate the doubt that inversion leverages.

After these criteria were isolated we turned our attention to the metaphysical system that captured and articulated them with the greatest lucidity—Cartesian Dualism. It was illustrated that Descartes sculpted such a metaphysical system when he sought to isolate his indubitable truth—*I think therefore I am*—it is the vulnerability to doubt that informs the distinction between the two realms (Descartes, 1644. p.194–195). The *res extensa* realm, vulnerable to doubt, is the objective external world of our first criterion and the *res cogitans* realm, impervious to any doubt, is the private mental realm of our second. After this illustration, it was explained that the distance between the two realms (as required by the third criterion) was not causal, as theories that have no issue with mental-physical interaction are also vulnerable to inversion, but instead epistemic. This distance is best captured through contrasting the immanent—the intrinsically and exclusively mental—against the transcendent—the objective and external (Dillon, 1997. p.36). Because Descartes believes that truth is recognisable due to its clarity and distinction (Descartes, 1641. p.24) and the external world is vulnerable to doubt (because of the unreliability of our senses) it follows that we can never reliably come to know truths about the external world as they lack the clarity and distinction needed for truth—the only realm where such clarity is possible is the immanent mental realm. It is this distance that inversion leverages.

Following the clarification of the distance mentioned in our third criterion, work was done to introduce an alternative manner of thinking about these problems. It was shown that the detached observation method of ‘truth-finding’—the method traditionally held dear to philosophers and scientists alike—causes us to take a misleading view of humanity

(Dreyfus, 1991. p.41–46; Heidegger, 1927. p.47). This is because by believing that we can discover truths about ourselves in such a way, we are encouraged to look at ourselves in the same manner as we would look at the objects of the world—we are encouraged to think of humans not in terms of *who* but instead in terms of *what* and this is erroneous. Firstly, it makes it seem that the way we are in the world is the same way that oranges are in a fruit bowl: our relationship with the world is reduced to a fact about location and proximity and thus it seems our worldly relations are contingent and severable (Heidegger, 1927. p.54). This is not so: humanity is necessarily in the world. Secondly, believing our relationship with the world is one of proximity encourages us to endorse the notion that our relationship with the world is largely disinterested, it misses out the fact that we become involved with the world, changing meaningless objects into meaningful entities. Humanity is not passively located beside objects, but is instead actively involved with them (Dreyfus, 1991. p.40–45). To think of humanity as in the world in its true sense is to pay attention to this involvement, this process of active meaning giving: to ignore it is a mistake.

At this point, a possible Cartesian account of involvement was given through reference to a passage in Husserl's *Cartesian Meditations* (1931) where Husserl posits that an agent can only engage with the items of the world (specifically a die in Husserl's example) after "first perceiving perspectives, then synthesising the perspectives into objects, and finally assigning these objects a function on the basis of their physical properties" (Dreyfus, 1991, p.46–47) It was then highlighted that this account of involvement, where practice was subsequent to theory, is problematic as any beliefs given to us via synthesis are equally vulnerable to scepticism—how can we know our observations truly represent the nature of the die? From this point, we then highlighted that detached observation of the kind employed by Husserl, was indeed a kind of human involvement with the world—it is a

way of practically engaging with the world—so his notion that theory must precede practice is in some manner incorrect (Dreyfus, 1991. p.47ff: Heidegger, 1927. p.66–72). It seems therefore that we can offer an account of our relationship with the world that is based not necessarily in mentality, but in physical engagement and involvement: articulation of this account was the next objective.

To do this, the errors of the Husserlian model were highlighted and it was explained that the Cartesian assertion that theory precedes practice was mistaken—both theorisation and practical engagement with an object are sufficiently able to be used for the process of giving the objects of the world their meanings. Of course, before this conclusion was drawn, an account of how this practical variant of meaning giving was articulated—it was shown that we do not have to rely on detached observation but instead, to find an object's meaning, we can simply use it (Heidegger, 1927. p.66–72). It was also shown how the meanings given to the objects of the world were only suitably comprehensive when one did not take the object in question as an isolated entity, but instead took the object against a backdrop of other objects and goal orientated behaviours—for example, the hammer in a stonemason's workshop is not for driving nails into a wall. It was then highlighted that we do not necessarily give meaning to the objects of the world through practical manipulation (or detached observation) upon every encounter with them—the meaning of the object: its *what-for*—is recognisable via circumspection, a special kind of perception where the usefulness of worldly objects is revealed to us (ibid.). Similarly, it was also shown that the *what-for* of an object can be transmitted between agents through a process of mimicry and imitation (Merleau-Ponty, 1945. p.370). With these processes explored and the hegemony of detached observation ended, the philosophical understanding necessary for an account

of perception sympathetic with this alternative manner of thinking is in place. Giving this account is our next objective.

CHAPTER FOUR

COLOURS, OBJECTS AND POSSIBILITIES: THE WORLD AND HOW TO SEE IT

4.1 A BRIEF RECAP OF THE TRADITIONAL CONCEPTION OF PERCEPTION

Now that our non-Cartesian paradigm has been introduced, it is pertinent to give an account of perception sufficiently sympathetic to this alternative approach—it makes little sense to argue for a position that cannot also offer a theory of perception that is sympathetic to the role of the human as an agent of action. Before we do so though, it seems wise to briefly refresh our memories of the traditional conception of perception. To articulate the traditional theory of perception, we shall return to the work of John Locke⁶. The process of perception shown in his work, although well-aged, still dominates epistemic discourse in one form or another.

Locke deemed ‘ideas’ to be the basic unit of our mental worlds (2.2.2) acquirable through two channels: reflection and sensation (2.1.3–4). Ideas of Reflection are those which arise through the observation of the operations of the mind (2.6.1) and Ideas of Sensation are those which arise via the interaction of the external world of material objects with our sensory organs (2.1.3). Through this process of sensory interaction, we gain what Locke terms simple ideas—these are the basic units of our perceptions that can be combined in order to create our complex ideas. An example is likely best suited to explain this notion.

⁶ As prior, these references to Locke’s *An Essay Concerning Human Understanding* shall be cited in the customary book.chapter.section format.

Say, for instance, one perceives a dog. The Lockean conception of perception would argue that each of the dog's phenomenally significant properties—e.g., its size, its brownness, its shape, its four-leggedness etc.—are the product of an interaction between the dog and our senses. At this point, when we are in receipt of the basic 'dog' properties, they are combined within our mental realms to produce the complex idea of a dog—our perception of a dog, to Locke, is constructed from atomistic elements of our phenomenal experiences. We take internal sensations, prompted by the objects of the world and combine them into rich and complex perceptions.

This atomistic conception of phenomenal experience is found within the Functionalist and Representationalist doctrines. Functionalism looks upon qualitative states as one of the products of material interactions with sensory systems and it betrays its sympathies towards an atomistic theory of perception by assigning each quale a discrete functional role. For instance, a 'red' qualitative state has a different functional purpose than a 'hot' qualitative state (the former may simply elicit 'red'-type utterances, the latter may prompt a reflexive physical 'escape' reaction) yet both qualitative states can be prompted by a singular object; a flame perhaps. Similarly, Representationalism also can be thought of as supporting such a conception of perception. Recall Michael Tye's notion of PANIC (1995, p.137–144). The very notion of intentional content guarantees the notion that perception is the product of some manner of interaction between a material object and the human sensory systems and, moreover the abstract nature of phenomenally significant intentional content betrays the presence of the kind of atomism Locke spoke of. Tye claims that phenomenal experiences are abstract in the sense that they do not necessarily have to be prompted by the same object, for instance over-brewed coffee and burnt chocolate brownies can reliably cause the same 'bitter' changes in the brain. This though, seems to

entail a situation where one can split the whole perception down into its basic parts in order to isolate the shared bitter quale. If this were not so, and it was impossible to isolate the bitter quale shared by the two entities, it would not make sense to say that the same ‘bitterness’ was shared by the two objects. One must be able to isolate the bitterness in order to claim that it is shared, and thus because the bitterness is isolatable (even in the crude sense of “bitterness = the presence of bitter stimulus causing *this* change in brain-state”) it follows that our perceptions must be made up of discrete and isolatable experiences. Therefore, it is clear that both Functionalism and Representationalism have a distinctly Lockean slant to their theories of perception—in all three cases our perception is based solely upon the objects of the world stimulating our sensory organs and prompting discrete internal sensations.

4.2 PERCEPTUAL REVOLUTION

The belief that perception is fundamentally constructed through the co-presence of isolatable elements is helped along by its intuitive plausibility and explanatory efficacies. It seems to explain how one can recognise the similarity between the leaves on a birch tree, the flesh of a kiwi fruit and the left-most stripe on the Italian flag—they all prompt a ‘green’ sensation. Similarly, it also seems to help us with explaining at which point an object can be differentiated from another—for instance, a horse and a dog share a great many properties (e.g., they may be coloured similarly, they are both quadrupedal, both are caudate, etc.) but they can be told apart on the basis of their shape, their temperament and the fact that the former prompts a sensation of ‘strength’ that is of a greater magnitude than the one prompted by the latter. But despite this, there are persuasive arguments to support

the denial of this constructivist theorisation of perception; the most powerful of which comes from Maurice Merleau-Ponty.

Before Merleau-Ponty's argument is explored, it may be useful to spend a moment making the motivations for attacking Perceptual Atomism clear. Beyond the failings that Merleau-Ponty leverages in his argument, there are other reasons that we may not wish to endorse Atomism. For instance, Atomism commits the same error as Cartesianism in assuming that the human capacity for action somehow is irrelevant—both theories rely upon the mistaken assumption that the human is a passive entity, an unusual kind of object. To Atomism, the human is nothing more than a receptacle of experiential data that automatically stitches sensations together into coherent ideas. Moreover, Atomism operates with too narrow a definition of the term 'world'. Atomism thinks of the world in the first sense, as the totality of objective beings. To Atomism there is nothing more to perception than an interaction between two passive entities; the perceived object and the perceiving 'object'. But as we have shown in the previous chapter, there is more to worldliness than the brute presence of objects. Atomism does not pay due attention to humanity's unique way of being in the world so there is no role for our arena of experiences, our networks of significance in Atomism. The opportunities for action and expression presented to us by the world play no major part in Atomism. These two qualms are not enough to defeat Atomism alone (for it is always possible to add auxiliary premises to absorb these criticisms) but they are enough for us to be enthusiastic about seizing the opportunity presented to us by Merleau-Ponty's argument. The success of his argument presents us with an opportunity to build from the ground up a theory of perception that is sympathetic to our true worldly manner of being, rather than simply altering Atomism into an *ad hoc* 'Frankenstein theory' capable of

meeting our objections. Merleau-Ponty's argument clears the ground needed for us to create something more suitable for our purposes.

Merleau-Ponty's attack on the constructivist theory of perception is motivated by his claim that the idea of sensations—the abstract basic units of perceptual experiences—“distorts the entire analysis of perception” (Merleau-Ponty, 1945. p.13)—if we are to understand perception in the proper manner, work must be done to dispel perception's traditional atomism. The first step in demonstrating traditional perceptual atomism unattractive is to illustrate that the ‘atoms’ of perceptions—our sensations—are necessarily homogenous (Romenh-Romluc, 2011. p.37). For a sensation to be homogenous, it must be entirely uniform with no deviation from its intrinsic character—a sensation of redness must be red through and through. The argument for the homogeneity of sensations rests upon the idea that if one experiences an object as extended—i.e., in possession of a size, a shape and location—it must “already form some scene before [us ... ceasing] to be a part of [ourselves]” (op. cit., 1945. p.3); to experience an object as extended entails that one is experiencing an external entity because internal mental states are not extended so this cannot be a case of mental self-awareness.

There is an objection that can be levelled at this notion though. It is not impossible that experiencing extended entities is down to an internal mental state being *represented* as extended, not by directly experiencing an external world of extended objects. This objection can be disregarded upon the basis that it plays into the hands of noxious scepticism—if mental states can represent themselves as extended, then it is entirely fathomable that our entire experience takes place internally, leaving solipsism significantly more plausible than it would be otherwise. With that objection defeated it becomes

possible to take the notion that the experience of extended objects is an experience of an external entity and combine it with the notion that our experiences of external objects are necessarily varied, i.e., that they are *not* homogenous. Once this is done it leads us to the conclusion that internal sensations are necessarily homogenous because non-homogenous things belong to the external world. If an experience is varied, it must be an experience of an external entity and vice versa regarding homogenous experiences—they are the possessions of our internal mental realms. With this, the homogeneity of sensations seems to be secured.

An objection can be levelled at the claim that the ability to differentiate between the elements of one's experience is necessarily reliant upon extension. It seems that it is entirely plausible that one may differentiate between two sensations, associated with non-visual sensory organs, on the basis of their phenomenal quality alone. Say for instance one is blindfolded and taken into a forest: one would be able to differentiate between the rustle of the leaves and the birdsong despite being unable to discern their physical locations with any precision (Romdenh-Romluc, 2011. p.38). This argument is persuasive. If one can differentiate between the different elements of one's experience on the basis of pure phenomenal quality then it seems that the role spatiality plays in differentiation is overstated at best. But this does not mean that sensations are not homogenous—a more robust supporting argument exists. Sensations, as we have covered, are claimed to be the fundamental atoms of our experience: this definition is all we need to demonstrate that they are homogeneous. If sensations are not homogenous, it would be possible to split them down into their different parts and thus they would not be fundamental in much the same way as atomic matter cannot be thought of as fundamental because they can be further broken down into protons, neutrons and electrons. Therefore, by matter of

definition, to think of sensations as fundamental is to assent to their homogeneity (ibid.). This secures the first premise of our argument against the traditional, constructivist theory of perception.

With the homogeneity of sensations successfully established, attention should be turned to the idea that perception of homogeneous entities is entirely impossible. Such a move is valuable if we are to deny the traditional conception of perception and usher in new theory of perception. Luckily, such a notion is supported by our experiences. Say for instance, one looks out of one's window and notices a small bird sitting upon the branch of a tree. It is evident that one's perception of the bird is framed by one's simultaneous perception of the tree—it is impossible to isolate the bird in such a manner where it is the *only* element of one's perception. This betrays the structure of our experiences. Our experiences are structured in a manner where a “figure against a background is the most basic sensible given” (op. cit., 1945. p.4). Our experiences are structured so that we naturally perceive a holistic whole that can then be broken down into two parts: the background and the figure. The distinction between the two is simple—the figure is that which stands out against the whole by means of an agent focussing their attention upon it, the background is all other parts of the perception. To return to our example, the bird assumes the role ‘figure’ and the tree, the sky, the window itself and so on, constitutes the ‘background’. If the claim that our perceptions are necessarily ‘layered’ in this way is true, as our experience seems to suggest, then perception of a homogeneous, atomic, undifferentiated ‘something’ is absurd (Romdenh-Romluc, 2011. p.38–39).

An objection can be levelled at this way of thinking—what is there preventing us from perceiving a homogenous figure against a background? It seems entirely plausible that the

individual qualia that constitute our experiences can be homogenous and somehow stitched together to make the scene stretched before us. But this is not so. Allow us to posit an agent, born with such a disability that only their sense of hearing is functional. All other sensory systems, from those responsible for touch to those responsible for taste, are damaged in such a manner that their associated sensations are unfathomable to them—to our agent, ‘bitter’ and ‘red’ are naught but words. It seems to make sense therefore, that if one is to play them a tone of consistent quality that they would indeed be perceiving a homogenous sensation. But this argument denies two important features of human perception—temporality and spatiality. Our perceptions are temporal in the sense that they are always perceived as occurring at a particular instance, distinct from that which precedes them and that which comes after them. Our agent experiences the tone as distinct from that which he could hear before and it is possible to argue these previous experiences—because they “confer meaning on [our] current experience” (ibid., p.41)—constitute a necessarily part of our perceptions (ibid.). Similarly, our perceptions are spatial in the sense that they are prompted by the objects of the world, which exist as dwelling at a particular location. This means that our perceptions have a sense of location conferred to them: perceptions occurring ‘over there’ are distinct from those which occur ‘here beside me’. For instance, the sight of a toy cow before oneself and a real cow some distance away are remarkably similar in size and quality—yet it is possible for us to distinguish between the two. It is not impossible that this perceived spatiality constitutes another necessary part of our perceptions and therefore, by virtue of the necessarily spatiotemporal nature of experience, the idea that we can perceive homogenous qualia is not persuasive—there is always a perception of temporality and spatiality alongside any quale we perceive⁷.

⁷ It seems as though we have neglected an argument that undermines this notion—it seems as though we can stabilise the background spatiotemporal variables to argue that our agent perceives a homogenous sensation if the tone is eternally persistent and forever perceived as ‘over-there’. Perhaps our agent has had tinnitus since birth. In such a situation, though, it does not seem as though our agent would constantly and uniformly

The above is not the only objection that can be presented against the claim that we cannot perceive homogenous sensations. It seems as though it is indeed possible to perceive a homogenous ‘something’—for instance, it seems as though one need only cover one’s closed eyes with a hand to experience a homogenous blackness. But I invite you to try this—no homogenous blackness is experienced. There is considerable visual noise to be found behind closed eyes (a phenomenon called *Closed-Eye Visualisations*). But even if this were not so, and one did theoretically experience homogenous blackness the figure/background structure of perception would still not be undermined by experience. We must be keen to reiterate that we are in possession of more sensory systems than vision alone. If we do this, it naturally leads us to the conclusion that the figure/background structure of perception endures. If one covers one’s closed eyes with a hand it does not entail that one, all of a sudden, loses the ability to smell the coffee brewing in the room adjacent, nor does one become incapable of hearing the chatter that surrounds them, tasting the mint in their mouths or feeling the touch of their clothes against their skin. It therefore is possible to argue that the perception of the darkness would be the figure of our perception and the unattended sensory chatter that necessarily accompanies it is the background to our perceptions; thereby demonstrating that perception of homogenous sensations is impossible due to the holistic nature of perception and their necessary figure/background structure (ibid., p.40–41). When this conclusion is taken alongside that from the paragraph prior, it illustrates the significant difficulties faced by the atomistic conception of perception.

perceive the tone at full intensity—they would likely ‘get used to it’ when the tone slips from the centre of their attention only to have it return with full intensity when they refocus their attentions upon it. This entails sufficient contrast between intensity to make the perceptual background clear. The temporality highlighted by the statement “the tone was psychologically unbearable earlier but is isn’t too bad now” seems sufficiently capable to act as the background to the perception.

4.2.1 PERCEPTUAL HOLISM: BACKGROUND

As it is clear that the atomistic conception of perception faces significant problems, it seems wise for us to explore an alternative that is more sympathetically aligned with the Non-Cartesian paradigm explored in the chapter prior—Perceptual Holism. The traditional conception of perception, motivated by its belief in perceptual atomism, oversimplified the nature of our perceptions. This oversimplification is manifested most keenly in the total neglect of Perceptual Holism’s defining feature: the figure/background structure of our perceptions. As Merleau-Ponty argues: “the perceptual ‘something’ is always in the middle of some other thing” (1945. p.4). The omission of the background within the traditional theory of perception is indeed a mistake, for the background plays a very important role in our perceptions—as perceptions are holistic, the background of a perception can influence its overall quality⁸. The phenomena of the figure’s quality being influenced by its background is at its clearest in examples concerning colours.

Think of a time where one has redecorated. One goes to the hardware store and picks a colour out, buying enough paint to satisfy one’s needs. The person then takes it home and begins to paint their walls. Quite often in this situation, much to the chagrin of the decorator, the colour of the paint looks dissimilar to how it did in the hardware store. This is a real-world demonstration of how the background to the figures of our perception can influence their character. The difference in the perceived quality between the paint colour in the store and the paint colour in one’s home is not due to any changes within the physical structure of the paint, or a change in our sensory equipment—both remain exactly

⁸ It should be noted that whilst the traditional theory of perception omits the background of our perception, it does not *have* to omit it. It does not seem impossible to think that one could construct a background and figure out of atomistic parts. But to do this seems to be *ad hoc* endeavour to try and salvage an increasingly fraught theory with demonstrable flaws—one must question the motivations doing so.

identical—but is instead due to the quality of lighting illuminating the two locations. Shops tend to be illuminated with a far cleaner, brighter light than the warm lights we find in our homes—“changes in ambient light produce changes in the appearance of coloured objects” (Noë, 2004. p.125). With the change in background comes a change in perceived colour. A similar notion can also be demonstrated that does not entail a change in lighting quality (or a change in the object’s location, as implied in the above example). Think of one viewing a black vase with a glossy glaze, illuminated from above by a bright white light. As one shifts position, walking around the vase, the brilliant white highlights will shift around the vase in relation to the person’s position (ibid.). In a third similar phenomenon, it also seems that an object’s appearance is influenced by the milieu of other objects it finds itself amongst. For example, a small slip of grey paper appears to be of a whiter hue when placed against a dark background than when it is placed against a pale one (ibid.), or to offer another example: “view a chocolate bar in sunlight through a tube that is painted matt black on the inside and it will appear yellowy-orange!” (Tye, 2000. p.106). This third phenomenon does not just effect coloured entities; it also impacts on an object’s perceived size. Indeed, this is the basis of many optical illusions. Perhaps the two most famous of illusions which leverage this notion are the Müller-Lyer illusion where two lines of equal length appear to be unequal due to the addition of auxiliary lines and the Ebbinghaus illusion, where two identically sized circles appear dissimilar due to the additional circles that surround them (Gallagher and Zahavi, 2012. p.106–107).

It is possible to categorise these above examples into two broad groups of what Noë calls “colour-critical conditions” (op. cit., 2004. p.129). The first group is *movement-dependant*. This group refers to the correlations between our movements and the changes in our sensory experience that they entail (ibid.). Instances where an agent moves and the object

remains stationary—such as the vase example above, or perhaps the way one moves back from a painting in a gallery so as to see its entirety (Merleau-Ponty, 1945. p.315–316)—or where an agent physically manipulates the object—for example, when one moves a book into an optimal position in order to bring its text into focus (Noë, 2015. p.79)—would constitute those that fall into this group. The second group, Noë calls *object-dependant*. Where our first grouping pertained to instances where the movements of the observer caused changes in an object’s appearance, this second grouping refers to instances where the *object’s* movements causes changes in *its own* appearance. Any instance where a change in lighting conditions causes a change in appearance would find itself in this group, as would the several examples used to evidence the latter phenomena in the preceding paragraph.

There are those sympathetic to perceptual atomism who would balk at the notion that movement plays such an active role in our perceptions. Their objection would be based upon their belief in the Constancy Hypothesis. The Constancy Hypothesis holds the notion that our perceptual experience is an “exact ‘reproduction’ of what is perceived” (Romdenh-Romluc, 2011. p.42) as one of its central tenets. This “claim that there is a one-to-one correspondence between stimulus and the effects they produce” (ibid.) naturally entails that sameness of stimulus is met with the sameness of experience; a ripe tomato, if the Constancy Hypothesis were true, would always prompt a red experience regardless of the context it is viewed in. Such a rigid relationship between the object and the effect it produces seems to be the motivation for our ability to tag the objects of the world with their corresponding colour terms; a strawberry is ‘red’ because it *always* prompts a red sensation, a lawn is ‘green’ because it prompts a green sensation and so on. Therefore, if the appearance of an object is as contingent as perceptual holism seems to entail, then it

seems that our ability to tag the objects of the world with colour terms is compromised—is a piece of paper that appears white on a black background but dark grey on a white one, white or grey? If the colour of an object depends on the quality of the light it is illuminated with, how can we say with any certainty what the object’s colour is?

The above objection is bolstered by some intuitive plausibility. Whilst it seems that our ability to tag the objects of the world with a coloured term is impaired under a system of Perceptual Holism, this is not so. Perceptual Holism rejects the Constancy Hypothesis, instead asserting that the human ability to tag the objects of the world with colour terms is derivative from the notion that “learning to perceive colour is ... a process of coming to understand the behaviour of colour as we move and as [the object’s] environmental conditions change” (Noë, 2004. p.126–127)⁹. This process of learning, of observing how the colours of an object vary as the *movement-dependant* and the *object-dependant* conditions of the object change manifests itself in our ability to reliably recognise colours in these different contexts and thus perceive our colours reliably. This process of learning might seem alien to us but there exists a similar process for the consistent recognition of shapes with which we may be more familiar (ibid., p.127–128). If we rest our heads upon a table, not only does it look vast and expansive, but it also takes on the shape of a trapezium. If we were asked of the shape of the table though, we would accurately report it as rectangular due to our ability to hark back to a time where we were “in the best context for perceiving [the table]” (Romdenh-Romluc, 2011. p.115). Our ability to track the changes in the colour of an object in order to negate them and correctly identify the colour of the object in a number of contexts illustrates the above objection unpersuasive.

⁹ A very similar notion is found here: (Merleau-Ponty, 1945. p.318-326.)

4.2.2 PERCEPTUAL HOLISM: SUBJECT

It is not just the perceptual background to which the traditional theory of perception turns a blind eye—it also “forgets the subject of perception” (Gallagher and Zahavi, 2012. p.106) entirely. There are a few ways in which it does this.

The first, we have already explored in some depth in the previous chapter, and is related to the way that the subject, i.e., humans find themselves involved (in the Heideggerian sense) with the world. Look around yourself. There will be a collection of objects. Amongst them, I would wager the presence of a desk, a chair and a pen. Now these objects are not ‘mere things’, but they are viewed with an eye to their usefulness in achieving a personal project. Your pen, for instance, is only perceived as useful in the context of your wanting to take notes, or jot down a phone number or some similar task. Similarly, your chair is only useful insofar as it is your goal to rest your legs. It is in this way that a system of potentialities for action in the context of one’s goals is influential to our perceptions. The traditional theory completely eschews this capacity to “reckon with the possible” (Merleau-Ponty, 1945. p.112) and the role it plays on our perceptual experiences.

The second sense in which the traditional theory turns a blind eye to the role that the perceiver plays in perception is subtle. Indeed, it is not one that we are even aware of, but this is not to say that it might not be important for understanding perception properly. It is put forwards by Merleau-Ponty that the perception of “colour has an effect on muscle tonicity of which the perceiving subject is not aware” (Gallagher, 2016. p.238). In his

work, Merleau-Ponty references experiments by Goldstein and Rosenthal upon agents with an ‘illness of the cerebellum or frontal cortex’ (Merleau-Ponty, 1945. p.216). These experiments sought to study the effects of colour on the motor abilities of these agents—it was found that the subjects of the experiment would lift their arm in a different manner depending upon the quality of the visual stimulus they were presented with. For example, “red and yellow encourage smooth movements [when the agent raises their arm] whereas blue and green encourage jerky movements” (ibid.)¹⁰. It is important for us to be aware of this notion, because it is not impossible that these “motor accompaniment[s]” (ibid., p.217)—if present in healthy individuals—could have a role in how we recognise the colours of the objects in the world.

The final manner in which the traditional theory of perception neglects the role that the perceiver plays in perception is probably the most significant of its omissions. It is the notion that “perception is not something that happens to us, or in us [but] it is something that we do” (Noë, 2004. p.1). The traditional theories of perception envisage humanity as a passive entity where the quality of our perceptions is “produced within us ... by the operation of insensible particles on our senses” (Locke, 2.8.13). This though, completely denies the role that the human ability “to move, explore and act” (Gallagher, 2016. p.236) plays in our perceptual capacities. Humans are not passive entities. We are, under ordinary circumstances, mobile. We can move our bodies around the worldly objects we are embedded amongst. We can tilt our heads and swivel our eyes around in their sockets. We can scramble on the floor to see what is beneath the bed and we can stand atop a stool to check what titles are on the top shelf of a bookcase. Our perceptual experiences are demonstrably and reciprocally linked to our capacities for movement and action. The

¹⁰ Other examples of how the application of coloured stimulus can effect muscle tonicity can be found in (Merleau-Ponty, 1945. p.216-217).

content of our perceptions is the product of what we do, how we act, but our perceptions also reveal to us other potentialities for action. Our drive to get a glass of water will inform our movements, which in turn will inform the fact that one can see a glass from our new location, which then itself prompts our movements towards the tap. Understanding these potentialities for movement is an integral part of our perceptual capacities. To borrow an example from Shaun Gallagher and Dan Zahavi (2012. p.110), imagine viewing a car. You stand before it and know that the ‘front’ of the car is visible from the coordinate at which you stand, but you also are aware that you are able to mobilise yourself. If it so pleases you, you could move around the car and view each of its hidden perspectives, coming to understand the whole of the car as an unspoken expression of ‘I am here and it looks like this, if I move over there then it would look like that’ type statements.

This deep and symbiotic relationship between perception and movement is also interesting because it demonstrates how our theory of perception sidesteps the problem of scepticism caused by appealing to the Cartesian notions of external worlds and internal mental realms. If our perceptions are “determined by what we do” (Noë, 2004. p.1) then it follows that our phenomenally conscious experiences are not due to any internal sensations, or any kind of neural representations, but are instead due to our ability to directly access the worlds in which we are embedded. To assert that our consciousness is somehow bundled up within neural representations of our world is erroneous, primarily because it is redundant (op. cit., 2012. p.110–111). We do not need to make up an internal replica of our environment, complete with all of the information necessary for us to act and achieve our goals, when all of that information is available out there in the world and accessible to us simply by moving ourselves into a position from which we may retrieve it. If we intend to bake a cake, we do not need to hold the recipe in our minds—we can always check our next step

by looking back into the recipe book. Such is the same with our perceptions. By not requiring any internal representations in our theory of perception, we do not need to engage with the interior/exterior dichotomy in the way that lends inversion scenarios their tenacity.

This alone though, does not properly articulate what a perception actually *is*—stating what something *isn't* does not tell us what it *is*. To understand perception, we must understand that a perception cannot be reduced to static entities such as neural representations or visual impressions—“perception is ... a kind of skilful activity” (Noë, 2004. p.2). This means that a perception is an instance of activity, a specific occurrence of ‘perceiving’ in much the same way that a ‘run’ is a specific instance of ‘running’. To perceive is to become involved with the world in a meaningful way; significant similarities between perception and the kind of goal-orientated action typical of Heidegger’s thinking can be drawn. In both instances, we skilfully manipulate some form of equipment in order to achieve our goals. It is just so that, when perceiving, the equipment we manipulate is our own bodies—our sensory systems. We have become blind to the fact that perceptions are not reducible to any ‘thing’, precisely because of our skill in manipulating our sensory ‘equipment’. We forget that our vision (as an example) is the product of implicit learned knowhow of how to, amongst other things, regulate the amount of light that enters our eyes, how to stretch or squeeze our lenses, how our head and eye movements impact upon what we can see and how to distinguish between the important (read: goal critical) and unimportant elements of our whole visual fields. We can even experience a breakdown in our abilities to manipulate our sensory equipment in the same way as we can when manipulating tools—it seems unlikely that there is anybody unfamiliar with the struggle to groggily focus their eyes when woken abruptly. Similarly, take a child to a hall of mirrors

and one can observe how they struggle to reconcile their movements with those of their reflections. Such instances reinforce the claim that to perceive is the skilful manipulation of our sensory equipment, thereby making it clear that there is nothing in the world we can point to and say “that is a perception”. Perceptions are not things. They are instances of human action.

4.3 OF COLOURED OBJECTS

If we are to demonstrate that inversion is philosophically unproblematic, we need to turn our eye to a theory of colour. If we are to shift our paradigm away from Cartesianism its replacement must engage with all the topics that it engages—one of these is colour. So, for the sake of the completeness of our alternative paradigm, we must articulate a theory of colour that is suitably sympathetic towards it. It is important though, before we articulate this alternative theory of colour, that we understand where it sits in relation to the theories of colour forged under the hegemony of the Cartesian Paradigm.

Our first traditional colour theory is Subjectivism; a theory that works closely with the Cartesian distinction between exterior and interior. The best Subjectivist account of colour is articulated by John Locke. As we have explored in the opening chapter of this work, Locke thinks of colour as one of an object’s secondary properties. For an object to possess a colour, to Locke, is for it to possess a particular corpuscular arrangement which has the power to prompt ideas of colour inside our interior mental realms (2.8.8). It is important to highlight that because the coloured experience is only present in our mental realms, our experiences of colour do not reveal the true nature of the objects of perception in respect of colour. Quite simply, secondary qualities do not resemble the objects of the world (2.8.15).

Instead of perceiving the reality of colour—i.e., a specific corpuscular arrangement—we experience a sensation of the colour that the specific corpuscular arrangement has the power to prompt within us. This entails that colours are not properly instantiated in a way that is consistent with the experience of them, instead they exist only as the power of appropriately configured material to prompt coloured sensations within us—meaning Locke’s theory of colour is overtly Subjectivist (Smart, 1961). This means that the blueness of the clear summer sky is only a property of the sky in the sense that it is materially configured in such a way that it prompts a ‘blue’ experience within us (Hardin, 1988. p.59). If, somehow, we were able to pierce the veil of perception, we would not see a blue entity but rather a complex colourless collection of corpuscular matter. Blue, as we know it, only exists as a ‘blue’ internal experience. This theory of colour runs into considerable problems. This is primarily because it severs our link to the world in a deeply profound manner—a veil of perception is drawn over the world and we become lodged in a world of ideas that necessarily misleads us regarding the true nature of the world—we see the world as coloured, but if colours only exist as configurations of material it follows that we never see things how they truly are. This is a consequence that lends itself well to the particularly noxious varieties of scepticism.

The Subjectivist ‘colours as powers’ theory, of the kind espoused by Locke, can be contrasted with the Objectivist theory of colour. The Subjectivist position holds that phenomenal colours only exist in the observers of the world, never to be physically instantiated in a way sympathetic to our experiences of them; the colours of worldly objects can therefore be thought of as a property that becomes instantiated when a particular relation between the objects of the world and their observers holds. Those sympathetic to Objectivist conceptions of colours deny this. Colour to the Objectivists, is

not a property instantiated when a relation between object and observer is of a certain kind, but instead a property of the worldly objects alone (Smart, 1961); colours under this doctrine are “quite independent from human or other sentient beings” (Hardin, 1988. p.59). Just as the size of an object is due to its physical properties, the colour of an object is also a physical property (or a collection of properties) possessed by the object. The most likely candidate for this property is *Surface Spectral Reflectance* (herein, SSR)—i.e., an object’s tendency to reliably reflect a proportion of light at the wavelengths associated with the visible spectrum (Byrne and Hilbert, 2003). For instance, two objects of identical colour would also have an identical SSR. In addition, if we were to take three objects that are resemble each other—perhaps forget-me-nots, bluebells and cornflowers—they resemble each other by the virtue of the similarity of their respective SSRs. This theory, because of its instance that colour is mind-independent, benefits from the ability to neatly explain the phenomena of colour constancy—if colours are naught more than a disposition to reflect a specific proportion of light at the different visible-spectrum wavelengths, then this disposition does not alter in different perceptual circumstances (Noë, 2004. p.151). If a ripe strawberry is disposed to reflect ‘red-wavelength’ light in the midday sun, it does not suddenly become disposed to reflect ‘green-wavelength’ light when illuminated by candlelight. Indeed, this initially seems to make the problem of inversion wholly non-existent (thus eradicating the need to move away from Cartesiansism to dissolve the problem)—if colours are properties of objects, independent from observers, then there is simply no room for inversion to occur; phenomenal experiences do not factor into colours under the Objectivist doctrine so there is simply nothing there to be inverted.

Things are not so straight forward though; Objectivism runs into considerable problems. The first of these is directly concerned with Objectivism’s Phenomenal Eliminativism. If

we are to argue that ‘red’ is nothing but some tendency to reflect certain wavelengths of light with certain intensities, it follows that we are “[grounding] the *objectivity* of colour at the cost of the *phenomenality* of colour” (ibid.). To argue that colours are objective properties of worldly objects is to misunderstand the manner in which we know and understand colours. Imagine you have a yellow ball before yourself. How is it that you come to know that the ball before you is yellow? It is erroneous to assert that you know the ball before you is yellow because it has the tendency to reflect light of a particular wavelength with a particular intensity—this is secondary to the true manner in which you know the yellowness of the ball. You know the ball before you is yellow, fundamentally, because it *looks* yellow—any reference to the tendency of its surface to reflect a certain wavelength of light at a certain intensity is an attempt to explain *why* the ball looks yellow to you. The phenomenality of colour is the more fundamental issue; to cut phenomenality—the way colours *look*—out of the equation is unwise precisely because it is the phenomenality of colours which these theories seek to explain. To ignore the *looks* of colours removes the motivations for giving a theory of colour in the first place and as such, any theory of colour that does so is severely weakened. But this is not the only objection that can be levelled at this kind of Objectivism. A similar objection can be made by appealing to the existence of metameric pairs—objects that *look* the same, chromatically speaking, but have the tendency to reflect light of different wavelengths at different intensities. Instances of metamerism demonstrate that two objects, with two different SSRs, can produce identical effects upon the human nervous system; the differences in the SSRs are visually imperceptible (ibid., p.152). This highlights the odd conclusion that must be drawn from the Objectivist theory of colour—if it is true that colour is nothing but a tendency to reflect light of a particular quality, then our colour vision is no reliable guide to colour. There is no way of ensuring that our experiences are

veridical and thus the same scepticism that haunts Cartesianism returns to us here.

Objectivism is still problematic even if we are to take on board the proposal to redefine colours not as singular SSRs, but instead *groupings* or *types* of SSRs, as suggested by Byrne and Hilbert (2003). Under this revision, ‘blue’ objects would belong to one *type* of SSR, ‘red’ objects would belong to another and so on and so forth. Whilst this *might* be enough to solidify the link between colour vision and object colour, it still does little to render Objectivism attractive: our phenomenal experiences of still have primacy, they are the source of our conceptions of colours. If we cut out the phenomenality of colours and claim that ‘redness’ is an object’s possession of a particular type of SSR, then we must ask ourselves where we got the concept of ‘redness’ from in the first place (op. cit., 2004. p.152–153). Any answer that does not appeal to the way colours *look* will have difficulty in asserting its persuasiveness.

Clearly, both Subjectivism and Objectivism encounter problems. Subjectivism lends itself well to the sceptic’s causes and Objectivism excludes the phenomenality of colour from the equation: neither of these consequences are particularly appealing. Therefore, it seems to be a good time to explore an alternative theory of colour—one sympathetic to our emerging paradigm that does not run into the same problems as the theories above.

4.3.1 PHENOMENAL OBJECTIVISM

Let us list the components whose necessity for perception can plausibly be argued for. This will be valuable in order to produce a simple diorama of a perceptual experience—articulating the necessities will help us in our identification of an alternative. Firstly, it is obvious that there must be an agent present to perceive—a perception without a perceiver

is simply nonsensical. Similarly, a perception is not possible if there is nothing there to perceive, so we can add both a perceiver and a ‘something perceived’ to our list. Finally, if there is a perceiver it seems sensible to say that there is a somewhere where the perception is taking place—as Heidegger’s work demonstrated, perceivers are naturally and necessarily worldly. As is clear, these three components resonate well with Merleau-Ponty’s suggestion that “a figure against a background is the most basic sensible given” (1945, p.4). It seems that if we are to provide an account with both explanatory simplicity and completeness on its side, our solution should be forged from these three requirements.

Fortunately, there is a theory of colour that satiates our desideratum: Alva Noë’s *Phenomenal Objectivism*. Phenomenal Objectivism neatly explains the propensity of an object’s appearance to change in different ‘background’ circumstances using only the three ‘variables’ of perception mentioned above. Say we take our white dog for a walk under the orange glow of a sodium streetlamp on a cold December evening—when we glance down at our friend, we cannot deny that he *looks* orange. It would only be in reference to another situation, where our dog was illuminated with the whiter light of day, that we would be able to assert that our pet is white (if we destroyed that frame of reference, we would believe our dog to *be* orange). This is because our pet is as much orange under the light of a street lamp as it is white under the midday sun; our dog *is* orange when under an orange light because the colour of an object is not something that is independent of the way it looks. The colour of an object is nothing more than the way it looks to us (Noë, 2004, p.141).

Grounding a theory of colour in looks seems to be an odd move for a theory of colour to make. Surely, if it is so that the colour of an object is set by the way it appears to us, this

plays straight into the hands of inversion? Whilst it does undoubtedly *seem* this way, it is not so. Phenomenal Objectivism, as its name suggests, also asserts that the colours that we see are objective—i.e., there is nothing beyond phenomenal experiences of colour other than the way they look to us, but there is no real play in the way these objects look—they *have* to look a certain way to *us*. This is ground shared with ‘standard’ Objectivism, although, both theories differ in the way they achieve their objectivity. Whereas ‘standard’ Objectivism derives its objectivity by appealing to physical chromatic properties (such as SSRs), Phenomenal Objectivism argues that this is not the way in which objectivity arises. For the Phenomenal Objectivist, the chromatic appearances of an object are set, not by physical nature of the object itself, but instead by a property that is instantiated when there is a certain kind of relationship that holds *between the object and the background against which it stands* (ibid., p.144). Our dog, he looks orange to us (and therefore *is* orange) *in those particular conditions*—his ‘orangeness’ is instantiated by virtue of the relationship he has with the world around him. Should any of the ‘colour critical conditions’ alter, i.e., if we or the object were to move, there will be ramifications for the colour of the object—should the relationship between the object and the world change, so too will the instantiated colour. It is best therefore to think of colour as existing as a “genuine [feature] of the environment” (ibid., emphasis added). Colours, therefore, have no *physical* instantiation¹¹—it is impossible to hold a colour—but this does not impact upon the objectivity that they draw from their status of ‘environmental features’. The necessary existence of a world in perception guarantees the presence of a relationship between an

¹¹ One may ask how it is possible to perceive something that is not physically instantiated—a relation seems to provide us with nothing to perceive. But it is normal to perceive these kind of ‘relational’ properties—we perceive our houses as bigger than our cars, our coffee as hotter than ice cream and the sun brighter than candlelight. Indeed, it is also possible for us to perceive even ultra-subjective ‘relational’ properties with the entities we are involved with (in the Heideggerian sense)—we recognise our friends within a crowd of people with the same ease as we recognise our coffee mug amongst its brothers. In both cases, we perceive something that is not physically instantiated *in addition to the physically instantiated entities*—the same is possible for colours.

object and its situation: because one cannot remove the objects of perception from their worlds, there is always a set of relational properties present in the world. It is not unfathomable that one of these may be colour.

This seems to have strange repercussions to our standard way of understanding colours. Say for instance, we hold a Union Jack in complete darkness. Our standard way of course of action would be, if asked to describe the colour of the flag in our hand, to reply “red, white and blue”. We would not be incorrect in this reply. But what this reply does though, is violate the phenomenology of our experience. Say we looked down at the flag; we would not experience any colours, only darkness. It follows that in this situation our reply is not grounded in our current experiences, but *past experiences* of the flag, where we have viewed it under typical conditions (typical conditions here, is not meant in a wide sense; what may be typical to one may not be for another—it should be interpreted as nothing beyond “the colour critical conditions X agent spends most of their time under”). Indeed, a very similar process is used to recognise the ‘true’ nature of colours in atypical conditions (as opposed to complete darkness). In much the same way that we can recognise the circularity of a plate even though our experience of may be elliptical, we can also recognise the ‘true’ nature of colours—we can simultaneously perceive the invariant ‘way it is’ and the ‘way we see it’ of a coloured object through a process Noë calls ‘presence in absence’. The same phenomena are also responsible for our ability to know that car is in possession of a front, even when viewing it from the rear. We know it is present because of the typical experiences we have of the car—our perceptions are a hybrid of the ‘way it is’ (typical experiences) and the ‘way it is for me now’ (atypical experiences). There are problems that arise from this—they shall be discussed later.

One of the boons of Phenomenal Objectivism is its ability to provide an account of objectivity that does not fall into the same pitfalls as Objectivism. Not only does it not commit Objectivism's fatal mistake of neglecting the phenomenality of colours, but by not pinning colours directly upon the objects of the world alone, we do not have problems with 'multiple realisation'. If colour was purely due to the object alone, it would follow that the colour of the object would be constant throughout the whole range of colour critical conditions—a strawberry in blue light would as be as red as those glistening under the midday sun. This is clearly in violation of our experiences. Phenomenal Objectivism explains this problem away by making colour not *just* object dependent, but also *environment* dependant—the appearances of objects vary depending on their contexts, just as they do in our experience.

Let us return to the notion of 'presence in absence' and use it to offer an objection to Phenomenal Objectivism. Let us look in particular at an objection raised by Keith Allen (2009). As we have briefly described, there is a parallel drawn by Noë between the way in which we perceive colour and the way in which we perceive shapes—in both cases, the location of the observer impacts upon the quality of the perceptual experience. We see both colours and shapes as they appear from 'over here'—circular plates look elliptical when viewed from an acute angle (Noë, 2004. p.127–128). Recall though, that Noë posits that in both instances we can recognise the true nature of the object of our perception—i.e., how it is in reality—through what he calls 'presence in absence'—the ability to perceive that which is beyond phenomenal appearances (ibid., p.62–63: p.128). This is where the analogy between perceiving shapes and colours begins to break down. One would not deny that there is a legitimate objective character to a shape, and the perception of this invariant 'real' character (alongside the perception of the variant subjective character of a shape) is

by reference to a time where one was in the proper context to perceive it. But this is not so with colours—Noë actively denies that there is more to a colour than how it appears; there are no invariant ‘real’ colours for us to perceive (ibid., p.141). Colours are just looks. This would not be an issue if it were not for the fact that Noë attributes the ‘actual’ colours of worldly objects with an important functional role—it is the “actual colour of [an] object ... which governs or regulates the way [changes in colour] unfold” (ibid., p. 128). It is the “actual colour” of a ripe tomato, that makes it appear red in white light or purple-black in blue light. The tension with claiming that colours are nothing but looks, but that ‘actual’ colours help to inform these looks is clearly problematic.

This incoherence does not mean that we have to abandon the Phenomenal Objectivist position—it remains viable so long as it can be modified. We must borrow a distinction, not made by Noë, but suggested by Allen (2009), between what Allen calls *Non-Perspectival* looks and *Perspectival* looks. *Perspectival* looks (P-looks herein) are the looks of an object that are set by the relationship between the object and the world, or more specifically: the object of perception and the conditions of perception (ibid.). As such these P-looks are properties of the environment *that are only capable of being seen from particular perceptual circumstances*¹². As such, we can think of our dog appearing orange under street-lights, or a strawberry looking purple-black in blue light as examples of P-looks. *Non-Perspectival* looks (NP-looks herein) on the other hand, are the looks of the object which “transcends specific conditions of observation” (ibid., p.666). As such, NP-looks are those where perception does not depend upon the conditions in which they are

¹² To better understand this, it may be valuable to provide examples of similar phenomena. The two keenest example of a perceiver’s location ‘unlocking’ the ability to see the P-looks of an entity, by my estimations, are articulated in the fact that a perceived rainbow is unique to a particular observer and *that particular rainbow* can only be seen from the specific location of the observer, and the fact that one cannot see the objects that inhabit another room in the building from the one in which you stand—if one wants to access those objects, clearly one needs to move to accommodate for it.

being perceived—they are the kind of looks that ‘cut through’ all of the P-looks that arise from changes of perceptual condition, those which somehow persist between variant experiences. It is the NP-looks of an object that are responsible for the ‘regulation’ of the object’s P-looks . This seems to untangle the incoherency of Phenomenal Objectivism: if we think of the NP-looks of an object as their ‘actual colour’ there is little issue with claiming that the ‘actual colour’ of objects play such an important role.

With the objection raised by Allen (2009) defeated we are now in a position where our emerging paradigm is satisfactorily complete. We have not only articulated a theory of worldly involvement that is not in violation of phenomenology, but we have also built upon this to forge a theory of perception and a theory of colour that is sympathetic to this alternative system. The time has come for us to replace not only the paradigm of Cartesianism, but also those theories formed under the shadow of its erroneous view of humanity, which under the guise of explanatory efficacy, lent Cartesianism its legitimacy—Perceptual Atomism and the competing traditional theories of colour.

4.4 PARADIGM SHIFT AND INVERSION

As we have explored previously, traditional theories of perception are unattractive because of the problems they encounter. The traditional atomistic theory of perception suffers from the fact that it posits that our experience is made up of atomistic sensations, a notion that has problems with coherency. Sensations are traditionally thought of as homogenous, and as Merleau-Ponty demonstrates, the perception of homogenous ‘things’ is impossible because of both the figure/background structure of our experiences and the necessary spatiotemporal element to our experiences. To base a theory of perception upon imperceptible entities is clearly absurd, so Merleau-Ponty’s suggestion that the notion of

sensation achieves little beyond the “distort[ion of] the entire analysis of perception” (1945. p.13) becomes eminently persuasive. Similarly, problems also haunt the traditional theories of colour—Subjectivism leads us into a world experienced from behind an impenetrable veil of scepticism and Objectivism completely neglects colour’s most salient characteristic: its phenomenality. The problems encountered by the traditional theories of perception and colours suggest that a shift in paradigm is necessary—a shift that is realised by endorsing that which we have articulated above: Perceptual Holism and a modified version of Phenomenal Objectivism.

The shift away from the traditional Cartesian paradigm, in addition to sidestepping the problems of the above theories, also seems to provide us with a novel solution to our inversion problem—it is not a problem at all. We must not forget that inversion draws its potency from leveraging the inability of the internal mental realm to interact with the external physical realm and vice versa—our new paradigm does not engage with the distinction between inside and outside. And moreover, the distinction is one definitive of the Cartesian Paradigm—the same paradigm that Locke, the first major articulator of the problem of inversion operated within. This means that the problem of inversion is a uniquely Cartesian problem—a relic from an old system. Therefore, to talk of inversion in our new paradigm—the one based upon worldly, active and embodied thinking—is akin to lording the failures of Geocentrism over Copernicus and Galileo. Indeed, it is even possible to go so far as to suggest that if one struck the Cartesian model from history and instead replaced it with the system described above—which does not make Descartes’ mistakes—the problem of inversion would never arise. There is nothing within these alternative methods of understanding perception that lends itself particularly well to

inversion; the radical scepticism that inversion suggests simply does not present itself under this alternative paradigm.

Those sympathetic to the old Cartesian system would likely balk at this notion. They would be quick to argue that the problems of inversion are just as applicable to the alternative system and that it is possible to overlay the problems of Cartesianism onto this replacement paradigm. The alternative paradigm suggests that inversion—the process of receiving qualia from an object at odds with its ‘actual’ colour—is only possible if the background of the object is of a nature sympathetic to the inversion; sameness of background entails the sameness of qualia and any ‘mismatch’ of qualia must be supported by a parallel change in the quality of the perceptual background. The Cartesian would deny this and argue that inversion is possible even in situations where sameness of background is maintained and indeed, they would be correct in asserting this. There may well be inverted agents amongst us. Actual agents with various kinds of colour-blindness do little to dissuade us from believing inversion possible—the idea that an agent might see red where his peers see green is no less plausible than an agent with achromatopsia, unable to see colour at all. But then one must ask what it is that is *interesting* about making such a move? *So what if there are inverted individuals?* We do not trouble ourselves with ‘conventionally’ deviant phenomenal experiences; we do not feel the need to re-evaluate our relationship with the world when we meet someone who wears glasses, or cannot distinguish between red and green, so why should we privilege inversion just because of its extremeness? The Cartesian preoccupation with the problem of inversion is understandable because, should one endorse the Cartesian system, it threatens our entire ability to engage with the world, but our alternative system encounters no such problem. If our engagements with the world are reliant upon some manner of internal representation of the world then it

is clear why inverted experiences (and, by extension, all other kinds of variant phenomenal experiences) present such an issue. If there are ‘hidden’ inverted agents amongst us, it is plausible that our internal understanding of the world is incorrect and this threatens everything; the chance that our inner world is not veridical leaves us lost, paralysed by doubt and unable to either act with agency or to imbue the objects of the world with any meaning. This is not so with our theory because it claims that we are in direct contact with the world—the internal theatre of experience is no longer needed in order for us to operate. We do not need this internal world to act—*we can just act*. We are already ‘out there’ in the world, as is made evident by thinking of perception as a kind of action and colours as a kind of environmental property. It does not matter if an agent is inverted, because the agent is still free to act, to make sense of their world on the basis of what they can *do* with it, rather than what it looks like to them. Should we take this enactive view, then the problem of inversion is not worthy of its name—there is no longer any philosophical benefit to be gained from dwelling upon it. The problem is a problem no longer. Moreover, one must inquire about the motivations of levelling the charge of inversion against this alternative system. Just what does doing so seek to achieve? It surely seeks to hobble this alternative system and make it unattractive, but say this is successful: we would only then have to contend with the problems of the traditional atomistic theory of perception, an equally flawed theory of colour and a supporting paradigm capable of being derailed by the mere threat of deviant coloured experiences. Because of this, it is difficult to argue that superimposing the problems of Cartesianism onto its competitor has any real purpose beyond trying to defend an aging and increasingly incapable system via the misguided application of a dated objection. As such, by both the virtue of the unmotivated nature of these attacks and the fact that inversion does not seem to be worthy of any philosophical engagement, we are understandably justified in our wishes to condemn the problem of

inversion to the annals of history—inversion belongs to Cartesianism so with Cartesianism
it should stay.

CONCLUDING REMARKS

C.1 TWO BRIEF OBJECTIONS

Within this work we have offered an alternative theory of perception and colour and whilst this theory does not fall foul of the same objections as its Cartesian predecessor, this should not be taken as a sign that no objections can be levelled at it—we shall explore two of the more pressing objections imminently.

One possible objection relates to NP-looks. These are those looks, set by the relationship between the object and the world, that are not impacted upon by the perceptual conditions of the observer. NP-Looks are the ‘looks’ that cut through all perceptual experiences of an object—they are how we can recognise the redness of a strawberry, even under atypical conditions. The objection though is one of how we come to recognise the NP-Looks of an object. It would seem that their perspectival brothers have primacy in our phenomenal experiences. Even though we can recognise the redness of a strawberry illuminated by blue light, there is no doubt that the strawberry, in a brute sense, looks to be black. The NP-Looks don’t form part of our visual experiences in this way—they seem to sit beyond that which we can actually see, so questions of how we can come to know them seem to be highlighting a just objection.

This, though, is not so—the objection holds no water. It is not hard to argue that humans are capable of acquiring new perceptual abilities. We can learn to perceive new things. For instance, adept guitar players can tune their guitars with surprising accuracy because they

can perceive that the note they just played on their fifth string is (or is not) an A. To those who do not share such knowledge the sound is meaningless beyond a simple aesthetic value. Similarly, an experienced chef can tell the correct time to add the herbs and spices into a dish from sight alone—they perceive that *now* is the correct time. These kind of perceptions are acquired through a learning process: they are not given but they are earned. We can rebut the objection by arguing that NP-Looks are an example of this kind of ‘earned’ perception—we come to be able to perceive the NP-Looks of an object through the routine observation of the way they cause the objects of the world to alter in colour.

Another possible objection could be that to ascribe to the Modified Phenomenal Objectivist’s position is to also bind oneself into a kind of ‘Projectivism’. It does not seem that the position rules out the possibility that the objects of the world, when taken in isolation, are actually colourless, only gaining their chromatic properties under particular environmental conditions. This would entail that the colours we perceive objects to be may not be representative of their true natures. It is not hard to see why a theory would want to avoid this charge. This objection, though, is based upon flawed premises. The ability to separate an object from its world—the ability to view an object in total isolation—is necessary for the objection to be persuasive. This is not an actuality that can be realised: one can never physically separate an entity from the world completely. As with humans, it is possible only to *change* the relationship an object has with the world, not to destroy the relationship altogether. This objection relies on impossible premises to supply it with its persuasiveness and therefore can be disregarded.

C.2 CONCLUSION

This work has endeavoured to demonstrate the problem of inversion to be unworthy of its status as a philosophical problem. Our work towards this began by examining the first articulation of the problem of inversion, found within the philosophical work of John Locke. The metaphysics in John Locke's *An Essay Concerning Human Understanding* was first explored in order to ground the idea within the appropriate epoch. Locke presents a largely physicalist view of the world—despite espousing Substance Dualism he reserves immaterial matter for God alone (Stuart, 2016. p.73) and thus presents a view largely consistent with the Materialism of contemporary Metaphysics. This physicalist metaphysical frame was maintained throughout the work. Similarly, we used Locke's work on the metaphysics of mind to introduce Physicalism as a theory of mind; our exploration of the various alternative theories of mind led us to concluding that Locke deemed the workings of the material constituents of the world to be ultimately responsible for consciousness (Ayers, 1993. 2, p.148). Attention then turned to what Locke thought consciousness to be—the traditional reflexive view of consciousness usually attributed to Locke was dismissed on the grounds that it brings about an infinite regress. An alternative view, more sympathetic to the phenomenological tradition, which thinks of consciousness as a hybrid of reflexivity and perception (Weinberg, 2008) was instead argued for. With these frames in place, the work introduced the problem of inversion as articulated by Locke.

Locke deemed the possibility of inversion scenarios to be a non-issue, even going so far as to claim that understanding inversion brings no “improvement of our knowledge or conveniency of life ... so we need not trouble ourselves with it” (2.32.15. p.389). The next

section sought to prove this assertion misguided by demonstrating the damage that inversion scenarios cause. Of course though, inversion is of no consequence if it cannot occur. There are Philosophers that would be quick to argue that such scenarios are not feasible, for instance C. L. Hardin (1987) whose claim that inversion scenarios are impossible due to the asymmetries in our phenomenal experiences is explored and contrasted with Levine (1991) who argues that Hardin's thesis crumbles so long as one believes one can separate the chromatic and non-chromatic quale from each other. For those that deny that phenomenal experiences are not atomistic, the feasibility of inversion scenarios—at least on a logical level—is guaranteed by Shoemaker's novel response to inversion deniers: even if our *human* experiences are not invertible due to their asymmetries, this does not mean that we cannot posit an agent with experiences vulnerable to inversion (1982). With the feasibility of inversion guaranteed we moved into a position where we were able to articulate, with proper authority, the problems caused to Functionalism and Representationalism. The theories as articulated by Hilary Putnam (1967) and Michael Tye (1995:2000) were explored and the problem that inversion causes were examined. For Functionalism, inversion demonstrates the theory to be incomplete—we can posit two agents with functional parity that are in different mental states by virtue of their different chromatic experiences (Fodor, 1981) and thus, mentality cannot be properly expressed in functional terms. A similar charge was levelled at Representationalism. As we explored, the presence of an inversion scenario would—under Representationalism—mean that a single worldly object would be accompanied by two different phenomenal experiences (Shoemaker, 1994). This entails two possible scenarios, that phenomenal content is not intentional (therefore illustrating the explanatory insufficiencies of Representationalism) or that phenomenal content *is* intentional, but the objects of the world can be two colours simultaneously. Shoemaker's (1994:2000)

arguments for the latter were shown to be untenable by virtue of their consequences. Should Shoemaker be correct, it would mean that each object of the world was in possession of an infinite amount of properties and in addition, there is no mechanism in Representationalism that would account for why we should perceive one of these properties over the others. Similarly, Tye's objections to inversion were shown to be inconsistent with his own theory, and thus, in the absence of any persuasive rebuttals inversion is given free rein to rend Representationalism as untenable as Functionalism.

Functionalism and Representationalism are both able to be rendered untenable by the threat of inversion scenarios. How can this be so? It was suggested that the efficacy with which inversion renders the theories untenable was not because it attacks each theory in isolation, but instead because it erodes the soft sand on which they are built—an implicit premise has been integrated into both theories and it is that which inversion leverages. This premise is the *The Invertible Metaphysic*, a metaphysical system that relies on three central tenets: the existence of an external world full of objective entities, the existence of a distinct private mental realm and sufficient *distance* between the two to allow doubt to flourish. It was shown how Functionalism and Representationalism can be mapped onto this metaphysic before then exploring the metaphysic more broadly. The metaphysic in question can be traced back to the influential work of Rene Descartes: it is the cogito and its consequences that lends this metaphysic much of its authority. It is through the application of radical doubt that Descartes cleaves our world into two. The ushering in of this dichotomy, though useful in providing science its plausibility in Descartes' era, is not attractive today. The *Invertible Metaphysic* causes us to take an incorrect view of humanity: it encourages us to look upon ourselves not as a *who*, but as a *what*: a move that strips humanity of its most salient characteristics.

The work of Heidegger (1927) was examined in order to re-establish that which was missed out in the traditional conception of humanity: our inviolable link with our spheres of experience (ibid., p.65) and our uniquely human tendency to become *involved* with the objects of the world (ibid., p.54–61 : p.66–72). An account from Husserl (1931) which attempted to explain how involvement was possible under the *Invertible Metaphysic* by appealing to detached observation, was given in an effort to re-establish the dominance of the Cartesian Tradition, but this was shown simply to be playing into Heidegger's hands: the account Husserl gives is an example of one of the kinds of involvement that Heidegger speaks of. The second kind of involvement—one centred not around detached observation but instead around practical meaning giving—was shown to mark the break with the traditional Cartesian paradigm. It was with this exploration into practical, engaged meaning giving that the hegemony of detached observation fell, clearing the ground for a theory of perception sympathetic to this new engaged and worldly way of doing things.

Before this theory of perception, sympathetic to our alternative paradigm, could be articulated with due authority we first had to demonstrate its predecessor to be unattractive. Traditionally, perception was thought to be the process of mentally synthesising isolatable and atomistic internal sensations. These sensations are prompted by worldly stimulus and synthesised internally in such a way that a cohesive idea of the worldly stimulus is formed. This traditional Constructivist approach was shown to be incoherent by Maurice Merleau-Ponty who argued that sensations must be homogenous, but homogenous perceptions are impossible due to their necessary figure/background structure (1945. p.4). Following this an alternative to the traditional approach, sympathetic to the active, worldly paradigm ushered in by Heidegger was given. It was illustrated how the traditional theory of

perception is lacking in necessary complexity—it completely neglects the arena of perception (our world) and thus leaves out the figure/background structure of our perceptions. This is a major failing of the traditional conception of perception because, as explored, the background of a perception has transformative effects upon the quality of perceived objects. Objects change in quality as their colour-critical conditions change (Noë, 2004. p.129–131). Also neglected by the traditional conception of perception is the role that the observer plays in governing his perceptual experience—the way in which our motor capabilities impact our perceptions was explained.

With this new theory of perception set out, the articulation of an appropriate theory of colour was the next objective. The traditional Subjectivist and Objectivist theories of colour were given and dismissed on the grounds of their weaknesses. Subjectivism leads us into a position of inescapable scepticism and Objectivism omits the phenomenality of colours entirely. A third theory, which pays adequate attention to the elements of perception—the perceiver, the object of the perceptions and the world in which the perceptions take place—was articulated. This theory is Alva Noë's Phenomenal Objectivism. Phenomenal Objectivism posits that the colour of an object is not its power to prompt a coloured sensation, nor is it a property possessed by the object in the traditional sense. To Phenomenal Objectivism, colours are simply *looks* that alter when the relationship between the world and the object changes, i.e., when the background of one's perceptions alters (ibid., p.141).

This new theory of colour did not come without its flaws: Allen (2009) highlights the inconsistency of Phenomenal Objectivism: Noë argues that there is nothing more to colours than the way they look, whilst simultaneously arguing that 'actual' colours have a

role in informing the quality of these looks. Such incoherence was solved through making the distinction between *non-perspectival looks* and *perspectival looks*. Those looks that are only capable of being seen from particular perspectival circumstances are *perspectival looks* whereas those which can be seen from all perspectives are *non-perspectival*—if we think of Noë’s ‘actual’ colours as *non-perspectival looks* then the incoherency melts away. With this defence of the modified version of Phenomenal Objectivism shown to be persuasive, it was then noted that we are in a position where we can replace the problematic traditional theories of perception and colour with our own alternatives—Perceptual Holism and the modified version of Phenomenal Objectivism. With this done, we were able to condemn the traditional theories to the past, and with this shift in paradigm we move into a position where Inversion can do no real damage—inversion, under this alternative paradigm, becomes no more philosophically interesting than colour blindness. This is due to the fact that we no longer need to worry about if our internal worlds correspond to the external world, because our theory simply does not engage with this distinction. We have no need for an internal world because we are in direct contact with the ‘external’ world. There is nothing about this alternative system that seems to suggest that the problem of inversion would arise naturally so to apply the Cartesian problem of inversion to a non-Cartesian system of perception does not seem to be anything more than a poorly motivated attempt to sustain the traditional hegemony of the Cartesian paradigm. To speak of inversion under our shifted paradigm is to overlay the problems of the past onto the present: a move that can be dismissed simply because there is not really any justifiable reason to make it.

This work has sought to demonstrate that the problem of inversion is not of any real philosophical significance. It has done so by exploring the problems of the Cartesian

paradigm and articulating an alternative system unable to be derailed by inversion, complete with a complementary theory of perception and colour. With this move away from Cartesianism, inversion loses its potency—inversion belongs to Cartesianism, so inversion is left behind with the shift in paradigm. The exploration of this theory of perception can contribute further to the non-Cartesian system of understanding the mind would be a fruitful area of future research—with our society's growing penchant for technology and innovation, it is imperative that we ensure that our theories of mind do not cling to inaccurate and troublesome relics from the past. Even those who would disagree with the arguments made in this paper or the theory of perception it articulates would do well not to neglect the arena of perception—our world—in their own theories, for to do so is to neglect a crucial factor in determining the quality of our experiences. It is hard to see how any theory of perception that neglects the worldliness of humanity would not suffer for doing so.

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