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Conceptualized direct perception: a hybrid theory of vision

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CONCEPTUALIZED DIRECT PERCEPTION: A HYBRID THEORY OF VISION

A Thesis

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of the Louisiana State University and
Agricultural and Mechanical
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ABSTRACT

I formulate a hybrid theory of perception, one in which the mind's interaction with the world is a more direct affair than many suppose (no perceptual mental representations, no sense data, no Cartesian Theater), but one in which our concepts also play a role. My claims have implications for philosophical attempts to understand perception, cognitive science theories of vision, debates over the nature of consciousness, and philosophical debates concerning Artificial Intelligence.

INTRODUCTION

Edmund Husserl and Martin Heidegger both put forth profound – and profoundly different – accounts of human cognition, accounts that called into question deep-seated assumptions of the philosophical tradition. Further, Husserl and Heidegger took important and interesting stands on issues that have tremendous contemporary relevance: Cartesian dualism, the nature of consciousness, mental representation, and the role our concepts play in our perceptual experience. There is a fundamental antagonism between the views of these two thinkers, and parallels to this antagonism constantly arise in contemporary debates in the philosophy of mind, philosophy of perception, and cognitive science.

This thesis – which consists of six chapters – attempts: (1) to describe the views of – and antagonism between – Husserl and Heidegger as regards several issues of contemporary relevance (such as the nature of consciousness and perception), (2) to show how analogues to this antagonism appear in contemporary debates surrounding the nature of vision and J. J. Gibson’s theory of direct perception in particular (Gibson’s view has several interesting similarities with Heidegger’s perspective), (3) to argue that the current debate surrounding the conceptualization of perceptual experience may be capable of settling several issues between Husserl and Heidegger (and Gibson and his critics), and finally, (4) to propose a possible reconciliation of sorts between the two broad perspectives delineated in this thesis. Specifically, I argue for a conceptual – yet direct – perception, one in which our interaction with the world is a more basic affair than many hold it to be (no mental representations, no Cartesian Theater, no sense data), but one in

which our concepts are implicated. My view has implications for several issues, including dualism, mental representations, and the nature of perception in general.

In chapter one, I offer a brief overview of Husserl's project, focusing upon what some commentators (Dreyfus (1982), Keller (1999)) refer to as his 'methodological solipsistic perspective' (i.e. Husserl's desire to focus upon a pure and self-sufficient consciousness, initially leaving questions concerning the existence of external objects, other minds, etc. aside), before going on to discuss in some detail Husserl's account of perception, which anticipated a modern debate in an interesting way. Then, I offer a broad overview of Heidegger's critique of Husserl's phenomenology, with a special emphasis on the Heideggerian notions of Being-in-the-World and instrumentality (or equipment). I also glean – from his scattered comments on the subject – Heidegger's view of perception, which is of course drastically different from Husserl's. Finally, I briefly discuss the work of H. Dreyfus (1972, 92) as it relates to two central issues: (1) mental representations and (2) the 'Cartesian Theater' (Dennett's (1991) term).

In chapter two, I explore a recent manifestation of the antagonism between Husserl and Heidegger in cognitive science: the debate surrounding Gibson's Direct Perception theory (Gibson 1950; 1979). There are important differences between Heidegger and Gibson, differences which are illuminating in their own right (and will be discussed); nevertheless, there are undeniable affinities between the perspectives of the two thinkers. Both argue for a direct interaction with the world (more accurately, both question the dualistic division between mind and world, at least at the most 'basic' level of investigation), both reject mental representations, and there is a striking similarity between Heidegger's notion of 'instrumentality' and Gibson's notion of 'affordances.'

There are also differences between Husserl and Gibson's critics (Fodor, Pylyshyn, Ullman); yet, Gibson's critics put forth criticisms of Gibson that Husserl would have appreciated (for example, Fodor and Pylyshyn (1981) charge that on Gibson's view, intentionality would be lost).

In chapter three, I discuss a current debate centering on the interaction between our conceptual apparatus or framework and perceptual experience: can perception proceed without concepts, or is perception necessarily a conceptual affair? I hold that the outcome of this debate has important implications for the debates discussed in the previous two chapters. If so, then this contemporary debate surrounding perception may have tremendous importance, as the debates in chapters one and two deal with some of the most important issues in philosophy and cognitive science: dualism, mental representations, consciousness, the nature of perception and so on. Then, in an attempt to develop the problematic in a little more detail, I argue that one can find good arguments for both sides in these debates, which perhaps suggests that the true view is a synthesis of the two views, one capable of keeping what is desirable in both views while simultaneously evading the criticisms each view directs at the other.

In chapter four, I offer such a synthesis. Specifically, I formulate and argue for a view that combines a basic, unmediated interaction with the world with the notion that this interaction is guided by our concepts (in a manner too complex to discuss here), i.e. I argue for a 'conceptualized direct perception.'

In chapter five, I expand upon the claims of chapter four by explaining the various ways in which perception can be conceptual. I also discuss a philosophical ally of my view: J. McDowell. This chapter demonstrates that my view, insofar as it is similar to

McDowell's, has a certain amount of cash value, as it can solve a perplexing difficulty that arises from Sellars' critique of the Myth of the Given.

In chapter six, I return to the two thinkers with which I began: Husserl and Heidegger. Specifically, I briefly show that the synthesis offered in chapter four would do damage to the perspectives of both thinkers. Finally, I conclude by summarizing my main claims.

CHAPTER 1. HUSSERL AND HEIDEGGER ON PERCEPTION

Here, I compare and contrast the perspectives of Husserl and Heidegger. After discussing Husserl's 'methodological solipsistic perspective' (Dreyfus 1982, Keller 1999), I discuss his account of perception. Then, I discuss Heidegger's critique of Husserl, before briefly discussing Heidegger's rejection of mental representations (and M. Merleau-Ponty's rejection of the Cartesian Theater) via appeal to the work of H. Dreyfus (1972; 92).

1.1 HUSSERL

1.1.1 HUSSERL'S METHODOLOGICAL SOLIPSISM

The subject matter of phenomenology was to be, at least at the initial stages of inquiry, a pure and self-sufficient consciousness; 'phenomenological psychology is meant to make the life of the psyche, that is, of consciousness, taken in its pure...essential structures [perception, memory, imagination etc], the universal and consistent theme of investigation' (Kockelmans 1994, p. 120) (see Husserl 1925). To delimit the proper sphere of phenomenological inquiry, all questions concerning 'the ultimate referent of expressions and mental acts' (Keller 1999, p.40), i.e. the non-psychical physical world, must be set aside. Or, to achieve a pure consciousness that can serve as the object of phenomenological inquiry, we 'must put between brackets as non-psychical the general thesis of our natural attitude, according to which the real world about me is at all times known as a fact-world that has its being out there' (Kockelmans 1994, p.120). In short, we must suspend or place in brackets the 'natural attitude' (i.e. the assumption that there is an external world out there that actually exists etc) if we are to obtain a pure

consciousness that can serve as the object of phenomenological inquiry. The act though which a pure consciousness is obtained is known as the ‘phenomenological reduction.’

After the phenomenological reduction is performed, consciousness is still defined by its intentional nature, i.e. consciousness is still a consciousness of something, but now, this something is ‘not to be taken as a being in the real world but exclusively as that which is intended by consciousness’ (Kockelmans 1994, p. 121). That is, we are no longer concerned with objects in the world, but rather, in how those objects are presented to us in consciousness. The various structures of consciousness are, as alluded to above, thought to be acts that give (and completely determine) the object that is intended to. I now turn my attention to Husserl’s account of one of these structures: perception.

1.1.2 HUSSERL’S ACCOUNT OF PERCEPTION

Husserl developed a rather complex and detailed account of perception, some key terms of which include: ‘authentic appearance,’ ‘intuitive givenness,’ and ‘signitive representation.’ I now define these terms.

Husserl held that a perceptual object is given as a series of mutually consistent one-sided perspectives; Husserl’s ‘first and most important observation concerns the circumstance that spatial objects are never fully given in intuition with respect to all of their sides and characteristics,’ rather, ‘only certain sides or aspects come to be seen in the visual perception of a thing’ while other aspects ‘fall entirely outside of the field of vision’ (Bernet, Kern and Marbach 1993). This fact was a source of puzzlement to Husserl, and motivated much of what he said about perception, for the following reason: even though we only see a partial, one-sided perspective of an object, it is to the entire object, and not a mere one-sided perspective, that we intend. In perception, we somehow

jump from a one-sided perspective of an object to the entire object as regards intentionality. The burning question now becomes: ‘how, then, is the absence of that which I cannot actually see nevertheless present in my seeing?’ (Bernet, Kern and Marbach, 1993).

Husserl’s term for when a visual object is given or seen as a one-sided perspective is ‘authentic appearance.’ An intentional act of perception that gives an authentic appearance is said to be an intentional act insofar ‘as and to the extent that this act is interwoven with corresponding sensational data’ (Bernet, Kern and Marbach 1993). ‘Inauthentic appearance’ is that part of an intentional object that lacks corresponding sensational data. For example, authentic appearance is a one-sided perspective of a table (here, sense data is present), while inauthentic appearance is the rest of the table that is not given as sense data (or one-sided perspective) but is intended to nevertheless. Inauthentic appearance is the gap, so to speak, between authentic appearance and the entire intentional object.

Authentic appearance is said to be one mode of ‘intuitive givenness,’ i.e. a one-sided table perspective is given in the ‘intuition.’ Authentic appearance ‘is to be distinguished on the one hand from other modes of intuitive givenness in which the object is not given itself but is rather given by means of an image;’ further, authentic appearance is also distinct ‘from modes of givenness in which the object as such is given not in the intuition but merely by means of a (conventional) sign representing the object’ (Bernet, Kern and Marbach 1993).

This unintuitive givenness of an object by means of a sign is ‘signitive representation.’ Husserl ‘does not regard the signs of a linguistic expression for their

own sake but understands them as signitive representatives' of objects (Bernet, Kern and Marbach 1993). Husserl posits a 'semantic intention' whereby an intentional act relates a sign to the signified, an act that infuses the sign with a specific content. This process is 'accidental' in that I could have looked at a different object of the same type, while authentic appearance is never accidental (as authentic appearance gives 'the object itself, inasmuch as and to the extent that it is intuitively given') (Bernet, Kern and Marbach 1993).

With all of these terms now defined, we can return to Husserl's initial puzzle: how can we intend to an entire object when only a part of the object is given in authentic appearance? Husserl gives the following answer: 'a full act of perception or the full appearance of a thing, that is, the unity of authentic appearance and inauthentic appearance' is a 'sum of diverse forms of representation, or it is a "mixed" form of representation, at once intuitive and signitive' (Bernet, Kern and Marbach 1993). We can intend to an entire object – although only a one-sided perspective of the object is given as authentic appearance – because the entire intentional object (given in a full act of perception) is an amalgam of the one-sided perspective and signitive representation. A visual object as perspective helps imbue a sign with a specific (yet accidental) content, while the sign in turn 'fills in' the rest of the object (i.e. that part of the object not given as sense data). In short, 'signitive representation brings to givenness the sides of a thing which are not intuitively given in perception' (Bernet, Kern and Marbach 1993). What Husserl is in effect saying is that a full act of perception is a conceptual act in a sense, because the sign or concept is what makes the intentional object whole. (See also

Dreyfus (1982); where Dreyfus speaks of Husserl's 'conceptualized' account of perception.)

To summarize: we have now been introduced to several important aspects of Husserl's thought, all of which will play an important role throughout the remainder of this thesis: (1) Husserl embraced 'methodological solipsism' (the belief that consciousness can be studied apart from the world), (2) Husserl, like many before and after, believed in sense data, and (3) Husserl believed that perception was inherently a conceptual activity.

1.2 HEIDEGGER

1.2.1 HEIDEGGER'S CRITIQUE OF HUSSERL: BEING-IN-THE-WORLD AND EQUIPMENT

First, before I discuss Heidegger's critique of Husserl, I discuss his critique of Cartesian dualism, a view that Husserl himself had a profoundly complex and frequently changing relationship to (one that is too complex to discuss here; see Husserl (1960, 1970), see also Langrebe (1970)). While Cartesian dualism – understood here as the view that posits a self-conscious subject standing over against an objective reality – served as the spine of modern philosophy, Heidegger held that dualism wasn't the sole, or even the most fundamental, account of human existence or cognition. As an alternative, Heidegger posited the notion of Being-in-the-World, a view of human existence in which the subject and object of the old view are intertwined to such a degree that it is no longer possible to differentiate the two, or even to say that there are in fact two divergent entities in the first place. The conscious, reflective subject of dualism is replaced with what Heidegger terms 'Dasein,' a word that means everyday human existence in colloquial German

(Dreyfus 1991, p.13) and is to be understood as being more basic than mental states or anything mentalistic in general (Dreyfus 1991, p.13). Heidegger (1962, p.297) writes:

Self and world belong together in the single entity Dasein. Self and world are not two entities, like subject and object...but self and world are the basic determination of Dasein itself in the unity of the structure of Being-in-the-World.

Dasein is also a drastic departure from Husserlian ‘consciousness.’ First and foremost, Husserl’s self-sufficient consciousness (or any notion of consciousness whatsoever), and the refusal to acknowledge the non-psychical physical world (at the initial stages of phenomenological inquiry), are rejected; Dasein is not comprehensible or possible apart from the world. That is, Heidegger rejected ‘methodological solipsism.’

Further, the type of intentionality that characterizes Dasein is drastically different than Husserlian intentionality. Dasein, at the level of Being-in-the-World, does direct itself at objects through what Heidegger called ‘comportment,’ but comportment is not Husserlian intentionality insofar as it is attributed to Dasein and not consciousness, and is not associated with anything mentalistic in general (Dreyfus 1991, p. 51).

The notion of Being-in-the-World can most readily be explicated through appeal to Heidegger’s notion of ‘equipment.’ At the level of Being-in-the-World, at the level of Dasein’s everyday coping with the world (as opposed to the Cartesian subject’s detached theoretical attitude), Dasein is directly involved with or immersed in the world. While coping with the environment (which we are directed at through comportment), Dasein is often directly and unreflectively engaged in some task or practical activity. While engaged in such activity, Dasein encounters beings that can be utilized to complete the task that Dasein is currently up to; these beings are termed ‘equipment.’ Equipment is defined – or reveals itself to us – only insofar as it can be put to immediate unreflective

use by Dasein; a piece of equipment is said to be a ‘something-in-order-to-x,’ where x is a given task. In sum, Dasein – at the level of practical activity – is directly immersed in a world of objects that reveal themselves to Dasein only insofar as they can be put to immediate unreflective use to complete the practical task that Dasein is currently engaged in; here, there is nothing that can be said to resemble the detached, reflective, Cartesian subject (i.e. here, there is no dualism). (See Heidegger 1962, pgs. 164 and 293.)

To continue, it makes no sense to speak of a single piece of equipment; rather, a piece of equipment always fits into a larger nexus of equipment. In short,

‘Equipment – in accordance with its equipmentality – always is in terms of it belonging to other equipment: inkstand, pen, ink, paper, blotting pad, table, lamp, furniture, windows, doors, room’ (Heidegger 1962, 97).

As a concrete demonstration of Dasein utilizing equipment, Heidegger gives the famous example of a carpenter hammering nails. When a skilled carpenter is actively engaged in the task of hammering nails, the carpenter doesn’t consciously or self-consciously stand over against the hammer and nails etc. as a disinterested subject (or as a mentalistic entity), reflecting on each stage of the task or on what to do next; rather, the carpenter unreflectively utilizes the hammer (or the ‘in-order-to-drive-the-nail’) as a piece of equipment to complete the task Dasein is currently up to. Not only is there not a detached Cartesian subject here, we also don’t see a Husserlian consciousness here, as Dasein is not a mentalistic entity. Further, we don’t see Husserlian intentionality insofar as (1) it is Dasein that is directed (through comportment) at the task, and (2) Dasein is utilizing a mere piece of equipment (an ‘in-order-to-drive-the-nail’) as opposed to a full fledged object seen through the guise of a concept (‘hammer’).

Now, imagine that something goes wrong with the task; perhaps the hammer breaks, or the hammer is too heavy, etc. At this point of malfunction or breakdown, the carpenter may find herself consciously reflecting upon the situation; that is, a disturbance or jolt in the normal flow of practical activity may result in the emergence of a subject consciously reflecting upon the world in a theoretical manner. In short, when a problem arises, a reasoning subject emerges – one capable of dealing with the problem. Here we see an essential point: Heidegger didn't outlaw dualism or theoretical cognition *per se*; rather, he delineated a more basic sphere of practical activity (the 'basicity' of which will be explored below) where dualism didn't apply, but could arise through a malfunction of some sort.

1.2.2 HEIDEGGER ON PERCEPTION

There is one issue that needs to be addressed, as it will play a crucial role later on: what role does perception play in Dasein's active – practical (i.e. non-theoretical) – engagement with the world? Heidegger is quite clear that theoretical perception – that is, a perceptual experience in which a disinterested yet self-conscious subject stands over against an objective world, or a perceptual experience reminiscent of the Husserlian account where our concepts are involved, etc. – is not present in our unreflective coping with the world. For Heidegger, 'just as action absorbed in the world does not involve an experience of acting, a mental state self-referentially causing bodily movement, so, perception doesn't involve a visual experience: I am simply fascinated by and drawn into the spectacle of the world' (Dreyfus 1991, p.58). That is, perception, too – as it exists in our skillful, unreflective coping with the world – is not something that we consciously experience or reflect upon; rather, we simply perceive the world unreflectively.

Now, it seems that while perception for Heidegger (during practical activity) is not a self-conscious or conceptual activity, it is present in *some* sense, in the sense that we at least have to open our eyes when coping with the world (so we can in fact become ‘fascinated by and drawn into’ the world (Dreyfus 1991)).

To approach this from another angle: imagine a skilled and normally sighted carpenter trying to actively cope with the everyday world with her eyes closed. It seems that the carpenter’s normal, unreflective immersion in the task at hand would be constantly interrupted, as she would constantly be tripping over things, losing things, etc. The carpenter’s day would be one constant malfunction, so, the carpenter would almost be habitually thrown into the theoretical attitude. That is, while absorbed skillful coping may not in fact require a reflective or theoretical attitude or subject (as Heidegger asserts), it seems that it does require that Dasein at least open its eyes while completing the task it is currently up to. A lot will hinge on this point later on.

1.2.3 THE EMERGENCE OF TWO PERSPECTIVES

We now have two sharply contrasting accounts of cognition (and perception in particular): (1) we have Husserl’s phenomenology, which sought to study a self-sufficient consciousness (at least at the initial stages of investigation), where perception, for example, was a rather highbrow affair where our concepts played a role, and (2) we have Heidegger’s perspective, which held that Husserl’s account of cognition was only viable at the level of theory, as there was a more basic, more primary account of human cognition, one that focused on the level of unreflective practical activity. At the level of practical activity, concepts played no role: perception was merely an unreflective

openness to the world. We've also seen how Heidegger's account was also a critique of Cartesian dualism.

Now, I've remarked several times that Heidegger's sphere of practical activity is more basic than – or prior to – theoretical cognition in some sense, but is this claim justified? As Dreyfus (1991, p.85) points out, Heidegger makes no direct or explicit claim that practical activity is prior to theoretical cognition; however, there are two points that Heidegger might make to argue for this claim. First, it may be the case, or it is possible *in principle*, that Dasein could always remain actively involved with the world. That is, there is nothing in principle that necessitates the emergence of a conscious, reflective subject; perhaps there is a utopia where nothing ever malfunctions (Dreyfus 1991, p.85)? Second, it seems that 'in order to act deliberately we must orient ourselves in a familiar world,' so, 'all thematic intentionality must take place on a background of transparent coping,' i.e. as Husserlian intentionality requires a background of practical familiarity, it follows that practical familiarity is prior to Husserlian intentionality (Dreyfus 1991, p.85).

Finally, in the interest of clarity, it is important to note that while practical activity may have some sense of priority over theoretical cognition, in the sense that perhaps practical activity can exist without theoretical cognition but not vice versa, Heidegger does not believe that theoretical activity can be completely reduced to practical activity. The two spheres of cognition are, and must remain, distinct. Heidegger's true aim was to demonstrate, contrary to post-Cartesian philosophy, 'that neither practical activity nor contemplative knowing can be understood as a relation between a self-sufficient mind and an independent world' (Dreyfus 1991, p.49).

1.3 DREYFUS

H. Dreyfus, arguing from a perspective that is heavily influenced by continental thinkers, has been a persistent critic of (Symbolic) Artificial Intelligence and Cognitive Science. Dreyfus feels that many of the traditional philosophical assumptions that Heidegger (and M. Merleau-Ponty) overthrew are alive and well, and causing confusion and stagnation, in A.I. and Cognitive Science. I now discuss two of Dreyfus' most important critiques in detail: (1) his critique of mental representations (a discussion that also allows me to discuss a further aspect of Heidegger's critique of the tradition, his rejection of mental representation), and (2) his critique of the Cartesian Theater.

1.3.1 DREYFUS' CRITIQUE OF MENTAL REPRESENTATIONS AND THE CARTESIAN THEATER

In 'What Computers Can't Do (a Critique of Artificial Reason),' H. Dreyfus (1972, 92) launched an attack on what J. Haugeland has called GOFAI (Good Old Fashioned A.I.), that is, the attempt to model intelligence by using rules to manipulate symbolic representations of the world. Dreyfus (1992) states:

My work from 1965 on can be seen in retrospect as a repeatedly revised attempt to justify my intuition, based on my study of Martin Heidegger, Maurice Merleau-Ponty, and the latter Wittgenstein, that the GOFAI research program would eventually fail.

The A.I. community's reception of Dreyfus' work has changed somewhat over time; discussing the work done at the MIT A.I. Lab, T. Winograd (1989) relates that for 20 years, those at the MIT Lab were 'overtly hostile to recognizing the implications of what he (Dreyfus) said,' but more recently, 'some of the work being done at that laboratory seems to have been effected by Heidegger and Dreyfus.'

There are several facets to Dreyfus' critique of GOFAI – for example, an emphasis on the need for a holistic treatment of knowledge and facts, an emphasis on the importance of our bodies to our everyday activities – but a main pillar of his critique is his Heideggerian inspired attack on mental representations. The thought is that we rarely (if ever) use mental representations to cope with the world, so why should A.I. be based upon them?

Dreyfus (1992) traces the germination of the mental representationalist view back to rationalists such as Descartes and Leibniz, who 'thought of the mind as defined by its capacity to form representations of all domains of activity.' Further, 'these representations were taken to be theories of the domains in question, the idea being that representing the fixed context-free features of a domain and the principles governing their interaction explains the domain's intelligibility' (Dreyfus 1992). Dreyfus (1992) holds that, 'on this view, all that we know – even our general know-how for getting around in the world and coping with things and people – must be mirrored in the mind in propositional form,' and 'underlying everyday understanding is a system of implicit beliefs.' 'Common sense' comes to be seen as being derived from a 'vast database of knowledge,' a view that manifests itself in the work of D. Lenant, for instance, who is attempting to build a vast database of everyday facts with the hope that the database can be used to generate intelligence in a machine (Dreyfus 1992). In sum, Dreyfus argues that this view is an inadequate account of human cognition, and he implicates this inadequacy in the failure or stagnation of GOFAI, which was largely based on this view.

The positive view that Dreyfus puts forth is a Heideggerian inspired account of how our intelligent behavior arises, an account that forsakes mental representations.

Dreyfus' discussion of 'interactionist A.I.' – one of the 'Heideggerian inspired' approaches to A.I. mentioned above, and a form of A.I. that Dreyfus favors over GOFAI, displays many aspects of the view of intelligence that Dreyfus advocates. Two innovators in the field of interactionist A.I. are Agre and Chapman; both 'question the need for an internal symbolic model of the world that represents the context-free features of the skill domain' (Dreyfus 1992). In a move Heidegger would approve of (see above), Agre and Chapman 'note that in our everyday coping we experience ourselves not as subjects with mental representations over against objects with fixed properties, but rather as absorbed in our current situation, responding directly to its demands.' In short,

'interactive A.I. takes seriously the view [Dreyfus] attributed to Heidegger in ['What Computers Can't Do'] – that there is usually no need for a representation of the world in our minds since the best way to find out the current state of affairs is to look at the world as we experience it' (Dreyfus 1992).

A further aspect of interactionist A.I. that Dreyfus approves of concerns the adoption of his and S. Dreyfus' thesis (in 'Mind Over Machine') that 'behavior can be purposive without the agent having in mind a goal or purpose' (Dreyfus 1992). Agre and Chapman argue that complex behavior can arise without the need for 'a complex control structure to decide for you what to do' (Agre and Chapman).

In criticizing the notion of a central structure in the human mind (that consciously works toward the achievement of a goal), Dreyfus (1998) is influenced by M. Merleau-Ponty, an influence developed in articles such as 'Intelligence Without Representation.' Here, Dreyfus explains the acquisition of a skill, breaking the process down into several stages (novice, advanced beginner, competence, proficient, and expertise). The beginner is given rules, 'like a computer program,' but as we progress through the stages towards

expertise, rules and plans (and representations) become less important as the performer executes the task in a more efficient, more intuitive, and less self-conscious manner (Dreyfus 1998). Dreyfus states, ‘Merleau-Ponty points out that an action can conform to conditions of satisfaction without the agent having these conditions in mind as a goal,’ and ‘Merleau-Ponty goes on to claim that this non-representational form of activity is a more basic kind of intentionality, missed by the reconstructions of what he calls “objective thought,”’ where ‘objective thought’ is ‘one’s standing over against an independent object and then finding out about it’ (Dreyfus 1998).

To continue, ‘according to Merleau-Ponty, in absorbed skillful coping, I don’t need a representation of my goal,’ instead, ‘acting is experienced as a study flow of skillful response to one’s sense of the situation’ (Dreyfus 1998). This ‘sense of the situation’ is a Gestalt-like sense of the overall circumstances of the situation. Dreyfus (1998) gives the example of a tennis player:

when things are going well, and one is absorbed in the game, what one experiences is more like one’s arm going up and down and its being drawn to the appropriate position, the racket forming an optimal angle with the court – an angle we need not even be aware of – all this so as to complete the gestalt made up of the court, one’s opponent, and the oncoming ball.

Indeed, this situation is so complex it doesn’t seem to be something ‘one *could* represent’ (Dreyfus 1998). In short, ‘whether a system of motor or perceptual powers, our body is not an object for an “I Think,” it is a grouping of lived through meanings which moves towards its equilibrium’ (Dreyfus 1998).

There seems to be an interesting connection between the two ideas Dreyfus is criticizing: a central ‘I Think,’ in order to perform its function, would seem to need a representation of the world. If a central ‘I Think’ is to delegate responsibility, and send

orders to the *entire* body (such as ‘move arm up to a 45 degree angle to hit tennis ball’), then it seems there must be a representation of the *entire* situation to which the central ‘I think’ can appeal (so it knows what angle the arm in fact needs to be moved to). I will return to these issues in more detail below when I argue that the notion of sense data, a central ‘I Think’ (or a ‘Cartesian Theater’), and mental representations all go hand in hand.

1.4 SUMMARY

To summarize the main ideas of this chapter: we’ve met several aspects of Husserl’s thought, including (1) his emphasis on consciousness, (2) his methodological solipsism, (3) his belief in sense data, and (4) his belief that perception is conceptual. We’ve also met Heidegger’s critique of Husserl: Dasein cannot be studied apart from the world, and is not a mentalistic entity. Concepts have no role in perception (at least prior to the emergence of theoretical cognition).

Further, we’ve seen how Heidegger criticized two important aspects of the philosophical tradition: (1) Cartesian dualism and (2) mental representations. Finally, we’ve seen how Dreyfus, influenced by Heidegger and Merleau-Ponty, has criticized (Symbolic) Artificial Intelligence for adhering to positions that, according to him, Heidegger and Merleau-Ponty have already shown to be deficient.

CHAPTER 2. VISION

Now that I've introduced the broad perspectives of Husserl and Heidegger, and some points of antagonism between them, I turn to a recent debate that has affinities between the antagonism between Husserl and Heidegger: the debate over J. J. Gibson's (1950, 1979) theory of direct perception. First, I introduce Gibson's theory via comparison with Heidegger. While Gibson was not influenced by Heidegger (or vice versa), and while there are several important differences between the two thinkers (some of which will be discussed), there are some striking similarities between the two thinkers. I then discuss two lines of criticism directed at Gibson's project, one by Ullman (1980) and the other by Fodor and Pylyshyn (1981).

2.1 GIBSON'S THEORY OF DIRECT PERCEPTION AND HEIDEGGER

In 1950, James J. Gibson published *The Perception of the Visual World*, a radical and controversial book that helped inaugurate the research program of 'direct perception.' Gibson held that 'organisms are so constituted, and live in a world so constituted, that they will readily gain the information they need to survive and thrive' (Gardner, 1985: all quotations from pgs. 308-22). Perception needs no recourse to inferential steps (conscious or unconscious), intervening variables or associations (Zawidizki). Perception needs no recourse to mental processes or operations, or models or interpretive schema. That is, in the attempt to understand vision, there is no need to posit the very notions that lie at the foundation of modern cognitive science (and, as we saw above, Symbolic A.I.).

Struck by the surprising amount of information that is 'available to the visual sense alone, Gibson arrived at extreme skepticism about the whole computational approach' in modern psychology and cognitive science (Gardner 1985). Gibson

‘objected to the notion of mental representation, mental operation, the *processing* (as opposed to the ‘direct pick-up’) of information’ and other commonplace notions in cognitive science. Gibson held that the external environment ‘provides an active organism with a continuous and stable flow of information to which it can respond’ – the so-called ‘invariance of perception’ (Gardner 1985). In short, contrary to mainstream cognitive science, Gibson argued that a cognitive agent was directly immersed in a world that contained relevant information in raw form; an organism navigating through its environment needs no higher-level mental computation, inferences, operations, or representations. Needless to say, Gibson did not believe that perception was a conceptual activity.

Perhaps already one is beginning to see a *vague* similarity between the perspectives of Heidegger and Gibson? Two important similarities that are already apparent are: (1) both reject mental representations, and (2) both reject the notion that perception is a ‘high-level’ mental activity, in which, say, our conceptual framework or apparatus plays a role.

However, there are more profound, and less strained similarities. Perhaps the most profound is a deep mistrust of dualism? E. Reed (1988, p.48) remarks, ‘Gibson’s entire career was a surprisingly self-conscious attempt to overcome’ dualism, whether a dualism between subject and object, or private versus public reality. Of course, many have criticized dualism; what is striking about the cases of Heidegger and Gibson is that the specific nature of their attacks on dualism, and the specific picture they both attempt to replace dualism with, are of a profoundly similar character.

Central to Gibson's attempt to overcome the dualism prevalent in mid-20th century perceptual psychology was his notion of – and emphasis on – activity. Traditional perceptual psychology accepted 'the traditional distinction between meaningless stimuli and meaningful perceptions and representations' (Reed 1988, p.184), i.e. perceptual psychology adhered to the following theoretical picture: a subject passively receives meaningless sensations and then confers meaning on an otherwise chaotic world by constructing meaningful representations out of these sensations. Gibson, realizing that this traditional picture inevitably leads to subjectivism (Reed 1988, p.184) insofar as the subject-object dichotomy is already embedded in it, replaced it with the notion that perception is an activity. Specifically, Gibson called perception an 'exploratory activity:'

Perception is active, not passive. It is exploratory, not merely receptive.
(Gibson, 1958, p.43)

By emphasizing the fact that our perception of the world is an activity on our part, rather than a passive receptivity to sensation, Gibson believed he was overcoming the dualism hopelessly enshrined in the traditional view. Information is embedded in the environment, and the perceiver is an active participant in perceptual experience insofar as the perceiver actively seeks out this information; gone is the passive perceiver, or the detached Cartesian perceiver of the world. In short,

Gibson 'came to consider perception an activity of motivated individuals, not the result of physical causes impinging on bodies in which minds are trapped.' (Reed 1988, p. 195)

So, above we saw that Heidegger and Gibson both rejected mental representation and a conceptualized perception. Now, we see that not only did both reject dualism, but both did so utilizing a similar strategy: both emphasized the notion of activity. Heidegger

emphasized the fact that in practical activity, the detached Cartesian subject doesn't exist, while Gibson also rejected dualism by emphasizing activity; this time, the detached Cartesian subject was rejected for an entity actively engaged in the search for information. Both entities, Dasein and Gibson's perceiver, are motivated (through comportment or through the search for information), yet neither is a mentalistic entity.

Now, the precise pieces of information that we pick up in the activity of perception are termed 'affordances' by Gibson (1979). Things have 'affordances' insofar as they can be unreflectively utilized for various purposes:

Affordances are potentialities for action inherent in object or scene, the activities that can take place when an organism of a certain sort encounters an entity of a certain sort. (Gardner 1985).

If an object is knee high, fairly resistant to deformation, with a sufficiently large surface, then it affords sitting. (Reed 1988, p.293)

Since these affordances are perceived and utilized unreflectively, Gibson's notion of affordance 'permitted a (simplistic) analysis of an organism's effectiveness within its environment,' one that did not need recourse to 'beliefs, attitudes, or mental effort' (Gardner 1985), i.e. mentalistic entities.

Vitality, the notion of affordance also played a key role in Gibson's attempt to overcome dualism. Gibson (1979, p. 129) states:

An affordance cuts across the dichotomy of subjective-objective, and helps us to understand its inadequacies. It is equally a fact of the environment and a fact of behavior. It is both physical and psychological, yet neither.

One can't locate an affordance outside or inside, in the world or in the mind, as it undercuts these divisions insofar as it depends upon a symbiosis of subject and object. We can eat an apple, and an apple affords eating.

So, here we see further parallels between Gibson and Heidegger. Gibson's notion of affordances has affinities with Heidegger's notion of equipment: both entities only reveal themselves to Dasein or Gibson's perceiver insofar as they can be unreflectively utilized to complete a task, and both notions undercut the subject-object dichotomy.

It is interesting that two profound thinkers, operating in very different contexts, independently formulated two views that reject dualism in a similar manner. However, there are differences between the two thinkers, some of which I now discuss.

2.2 DIFFERENCES BETWEEN HEIDEGGER AND GIBSON

Perhaps the most important difference between Gibson and Heidegger is their relationship to science. Heidegger deems science a derivative means of studying *beings*, while he was concerned with the more originary question of *being*. Heidegger (1962) writes:

The question of being aims therefore at ascertaining the a priori conditions not only for the possibility of the sciences which examine beings as beings of such and such a type, and, in doing so, already operate with an understanding of being...'

In other words, the question of being that Heidegger is interested in is prior to the beings with which science deals with, as science has already implicitly assumed a stance on the question of being even as it sets out to study beings. Gibson, of course, was a scientist, and while he traveled far, he didn't travel to such lengths to evade dualism.

Another key difference is the circumstance that Heidegger made room for the Cartesian subject (i.e. when malfunction or breakdown occurs). There is no attempt in Gibson to make room for the detached perceiver of perceptual psychology who may in fact utilize mental representations, because such a perceiver simply didn't exist for Gibson. In short, Heidegger, insofar as he can also explain and account for the very

phenomenon he is trying to surpass, seems to offer an account with more explanatory power.

Further, Heidegger's notion of equipment is far more complex than Gibson's notion of affordances. For Heidegger, equipment is always embedded in an equipmental nexus, where items of equipment stand in various relations to one another (such as the relationship between pen and paper). Gibson's notion of affordance seems more simplistic, and is generally formulated in terms of a single object with a given affordance. There is also the question of animals and whether or not they utilize equipment. Gibson's affordances were not specific to human beings, i.e. snails could utilize a leaf with a given affordance, yet, can a snail utilize a piece of equipment? In short, while there are undeniable affinities between the two thinkers, it must be remembered that there are important differences as well (it would be an interesting project to see if one account could be used to clarify and extend the other, etc, but such an effort is beyond the scope of this thesis).

2.3 CRITICISMS OF GIBSON FROM THE COGNITIVE SCIENCE ESTABLISHMENT

Gibson's radical account of perception was, not surprisingly, vigorously criticized by the Cognitive Science establishment. Here, I briefly recount two such criticisms: (1) Ullman's (1980) and (2) Fodor and Pylyshyn's (1981).

Ullman (1980) argues – contra Gibson – that since 'computational and psychological studies have amply shown that the perception of objects can be broken down into simpler units and into more elementary operations,' rather than positing a completely direct perception, it is more reasonable and accurate to 'posit a continuum of perceptual mechanisms ranging from direct to indirect' (Gardner 1985). While some

aspects of perception, such as those in which we detect the texture of objects, do seem to be direct, other aspects, such as the perception of motion, seem to be more indirect, a result of complex mental operations. Object recognition, for example, seems to involve numerous operations, even to the point that prior knowledge and beliefs are involved (Ullman 1980; Gardner 1985).

Fodor and Pylyshyn (1981) criticize Gibson's notion of affordances, and in doing so, criticize his entire project. Gardner (1985) summarizes their criticism in the following manner:

The concept of affordance allows Gibson to explain how organisms know what to do with or how to respond to what they perceive, [however] Fodor and Pylyshyn argue that the properties of affordances are unconstrained – that anything can be an affordance.

Since affordances are unconstrained, and since anything can be an affordance, then the very notion of an affordance is empty (i.e. the notion is a useless theoretical entity).

Fodor states:

The category of affordance seems to me to be a pure cheat; an attempt to have all the good out of intentionality without paying any of the price.

In short, Fodor and Pylyshyn hold that on Gibson's scheme, intentionality itself seems in peril.

The core of the problem with Gibson's notion of affordance that Fodor and Pylyshyn (1981) bring to the fore has already been alluded to: they are unconstrained. Without a 'meaning interface' between agent and world, without an agent wielding semantics, without some mechanism that can sort through the flood of affordances assaulting the senses, we would blindly react to stimuli at random. We might sit on a hot stove if it is knee high. Further, how would we know what to pay attention to in the first

place? Without semantics, i.e. without knowing what the objects in the world are, then how do we know that one object is more important relative to another? We may stare at the wallpaper while the room is on fire. Essentially, Fodor and Pylyshyn (1981) argue that a meaning interface of some sort, i.e. a positing of a detached subject making inferences about the environment by manipulating mental representations, is the ‘price’ of intentionality. It is very easy to reject mental representationalism, for example, but it is very hard to explain non-random, intelligent and purposive behavior once one has done so; Fodor and Pylyshyn (1981) feel that Gibson failed.

It should be noted that adherents of Gibson’s direct perception theory have responded, in turn, to these criticisms. Turvey and Shaw (1981), for instance, tried to defend Gibson from Fodor and Pylyshyn’s attack (for a discussion of a number of these defenses, see Gardner 1985).

CHAPTER 3. IS PERCEPTUAL EXPERIENCE NECESSARILY CONCEPTUAL?

At this point, we've met a number of thinkers (Husserl, Heidegger, Dreyfus, Gibson, Fodor and Pylyshyn, Ullman, etc.) who have taken stands on several important issues: dualism, mental representations, the need (or lack thereof) for meaning interfaces with the world, the Cartesian Theater, and the nature of perception in general. While there are important differences between each of these thinkers, it can be said that they roughly fall into two broad groups as regards their stands on the issues mentioned above.

On one side, we have Heidegger, Gibson and Dreyfus. All three reject mental representations. All three challenge dualism (whether it be in philosophy, science, or artificial intelligence). Further, all three hold that one needn't appeal to our concepts or conceptual abilities to explain how we cope with the everyday world.

On the other side, we have Husserl, Fodor, Pylyshyn and Ullman. Ullman, Fodor, and Pylyshyn hold that – contra Gibson – mental processes and operations play a role in making our perceptual experience what it is. Husserl would agree that our concepts play a role in perceptual experience.

Now, I examine a recent (and ongoing) philosophical debate concerning the relationship between our conceptual apparatus and our perceptual experience that can – once it is decided – decide many of these issues in favor of one side or the other. I then briefly point out that one can find good arguments for both sides.

3.1 THE DEBATE

There are a number of ongoing debates in the contemporary philosophy of mind and philosophy of perception regarding the status of – and interaction between – perception, representation and conceptualization. Open questions include: what constitutes a

representational system? Is perceptual experience representational? Is perceptual experience necessarily conceptual? Can perceptual experience be representational but not conceptual? In this chapter, I focus on one of these debates: is perceptual experience conceptual? After introducing the debate, I argue that if it could be settled, many of the issues discussed in the first two chapters of this thesis could be settled.

C. Peacocke (1983, 86, 89) has been a staunch proponent of the view that perceptual experience is decidedly non-conceptual. Peacocke argues that while perceptual experience is ‘representational,’ perceptual experience ‘is a form of representation that proceeds without concepts’ (Clark 1994). Central to Peacocke’s argument is the realization that perceptual experience is generally ‘finer-grained’ than our concepts; ‘for example, no description can capture all of the particular details you might see in a wood table,’ i.e. ‘one lacks the concepts to describe the particular shapes and relations of grain line and burls’ (Clark 1994). Since perceptual experience can outstrip our conceptual framework, since a perceptual experience can contain ineffable elements, then necessarily, perceptual experience represents the non-conceptual, i.e. perceptual experience is non-conceptual.

T. Crane (1992) also argues that perceptual experience is non-conceptual. In ‘The Non-Conceptual Content of Experience,’ Crane – expanding on an idea of Frege’s ‘that a system of representation employs concepts if and only if it is composed of constituents that play a role in *inferences*’ (Clark 1994) – states ‘there is no such thing as inferences between perceptions.’ Since perceptual experience isn’t inferential, and since the ability to draw inferences is an essential aspect of the conceptual, perceptual experience is non-

conceptual. (On Crane's (1992) account, perceptual experience can become conceptualized later, but it isn't necessarily or inherently conceptual.)

Husserl – as we've already seen (part one) – offered an argument for the opposing side, i.e. for the claim that perceptual experience is necessarily conceptual, but he did so in an interesting manner. Husserl argued that a full act of perception consisted of perception augmented by concepts. Again, this was the only way Husserl could account for the leap (in intentionality) from a one-sided perspective of an object to the entire object.

Two recent thinkers who have argued that perceptual experience is conceptual are Carruthers (2001) and Putnam (1999). Carruthers points out that we often find ourselves surrounded by familiar objects ('cars', 'trees', etc.); that is, we often find ourselves surrounded by a world that is conceptually defined. Putnam (1999) states that 'it seems' to him that '*many* of our (perceptual) experiences do have the property of presupposing conceptual capacities on our part.' Here, we see arguments that signitive representation is a part of – is in or explicitly guides – authentic appearance. In short, concepts or our conceptual capacities are a component part of perception; concepts are an integral part of – and can't be divorced from – perceptual experience. (We will meet further arguments to the effect that perception is necessarily conceptual in chapters five and six.)

3.2 THE IMPORTANCE OF THE DEBATE

The debate surrounding the conceptualization of perceptual data has tremendous bearing on the debates discussed in chapters one and two; in short, if the former debate could be settled, the latter debates could be settled.

Recall the argument (chapter one) that in order for Dasein to be actively engaged with its environment, Dasein must at least open its eyes. A normally sighted carpenter trying to go about her everyday activities with her eyes closed would not have much success. She would constantly be losing things or tripping over things, that is – as her day would be one constant malfunction, she would be continually thrown into theoretical cognition, constantly finding herself having to reflect on her situation. Now, if perceptual experience is necessarily conceptualized, that is, if, as soon as we open our eyes, our concepts or conceptual framework is present, and if in fact the carpenter must at least open her eyes during practical activity, then the carpenter would be operating with her concepts even at the level of practical activity. If perceptual experience is necessarily conceptualized, then our interaction with the world, even while engaged in practical activity, would be such that our concepts were present. Or, as soon as we open our eyes, Husserlian intentionality would be present, i.e. the carpenter would not interact with a mere item of equipment, with an ‘in-order-to-drive-the-nail,’ but rather with a full fledged concept, with a ‘hammer.’ (I’m in effect claiming that Heidegger’s (1962) notion of ‘umsich’ is impossible.) As Fodor and Pylyshyn hold, perceptual data would be inevitably semantic. *There would simply be no room for Heidegger’s notion of equipment, and, Gibson’s direct pickup of knowledge would be a conceptual act.* This is all to say that if perceptual data is necessarily conceptualized, then it seems this can count as evidence *for* Husserl (and Fodor and Pylyshyn) and evidence *against* Heidegger (and Dreyfus and Gibson), at least as regards the issues at hand.

Now, assume that perceptual experience is inherently non-conceptual. Objects wouldn’t appear to us as theoretical (Husserlian) concepts, i.e. a hammer wouldn’t

necessarily appear to us as a ‘hammer’ (as perception can proceed without concepts); rather, perceptual experience, at least while engaged in practical activity, would be a more basic, more Heideggerian affair. Perception would be a simple, non-conceptual openness to the world, and Fodor and Pylyshyn’s critique of Gibson would lose its bite (as perception would not be inevitably semantic).

Finally, before I leave this debate for the time being, I reiterate that it is still open.

3.3 SOME ARGUMENTS FOR BOTH SIDES

In an effort to develop the problematic of this thesis in a little more detail, but primarily in order to motivate the reconciliation of the two perspectives offered in the following chapter, I briefly point out that good arguments can be found for both sides. That is, since both sides make solid claims, perhaps the accurate perspective lies in a synthesis of the two views, one that can keep what is desirable in both views but can also evade the criticisms each view directs at the other?

We’ve already seen (chapter two) that Ullman (1980) establishes the fact that perception can’t be absolutely direct in the sense that Gibson argued for; mental processes and operations are needed for our perceptual experience to be what it is. For example, when one’s visual systems are damaged, one’s visual experience of the world is altered. This is a brute, scientifically established fact, one that would be hard to argue against. We’ve also seen the strong argument from Fodor and Pylyshyn (1981) that without positing a meaning interface between agent and world, it is extremely difficult to account for intelligent (i.e. purposive, non-random) interaction with the world. We need a meaning interface because without it – *we* would suffer from the Frame Problem; like Dennett’s (1984) robot, we would not be inclined to focus on the fact that there is a bomb

in the room. We need to think ‘bomb’ before we know that the bomb is something to be avoided.

The other perspective has much in its favor as well. Gibson – like Ullman – was a scientist, an ‘extremely shrewd researcher’ (Gardner 1985), and he was able to account for *certain* aspects of perception in a convincing manner. Heidegger’s account of the relationship between practical activity and theoretical cognition seems to have a strong intuitive and phenomenological appeal; it seems that we do become lost in the world while engaged in a practical activity at which we are adept. Dreyfus’ critique of mental representations has similar appeal; often, we don’t utilize mental representations (at least consciously) while coping with the world.

The Heidegger/Dreyfus/Gibson camp is further strengthened through an appeal to H. Simon’s notion of ‘explanation by simulation.’ ‘Explanation by simulation’ is ‘a mode of psychological theorizing that has greatly facilitated, and will continue to facilitate, the accumulation of knowledge and theory in psychology’ (Simon 1991). Widely accepted, the central idea behind ‘explanation by simulation’ is that one can ‘construct computer programs that can be given complex cognitive tasks, identical to those given to human subjects, and that will predict the temporal path of human behavior on those tasks (Newell and Simon 1972)’ (Simon 1991). Cognitive psychologists construct models – such as Newell’s SOAR or Rummelhart and McClelland’s (1986) PDP model – that can also be used to explain and predict how humans perform cognitive tasks (Simon 1991).

‘Such models enable psychology to organize large bodies of data around the mechanisms that produced them; and the availability and relevance of these large bodies of data provide powerful means to test the adequacy of the models’ (Simon 1991).

In short, ‘theories can be stated’ and tested ‘as computer programs’ (Simon 1991); if a given machine can capture, mimic or recreate the performance of human subjects in performing a given cognitive task, then this can count as evidence for the adequacy of the cognitive theory the machine is based on.

Given the fact that Symbolic Artificial Intelligence became more or less stagnant in the 1980s, so much so that many fled to alternative models such as connectionism, then, with the notion of explanation by simulation in mind, we can conclude that several aspects of the GOFAI research program were flawed, i.e. it seems that GOFAI’s failure supports Dreyfus’ claims.

We’ve also seen some philosophical arguments for and against a conceptualized perceptual experience. The fact that good arguments can be found for both sides suggests that perhaps a synthesis is in order? In the following chapter, I attempt to formulate one possible synthesis: a ‘conceptualized direct perception.’

CHAPTER 4. CONCEPTUALIZED DIRECT PERCEPTION

I began by delineating two profound yet widely divergent accounts of cognition, consciousness, and perception: Husserl's and Heidegger's. Husserl put forth a more theoretical or highbrow account of cognition, one that emphasized the importance of – and independence of – consciousness; further, our conceptual framework played a key role in perception and intentionality. Heidegger held that there was a more originary, more basic interaction with the world: we are directly immersed in a world where objects reveal themselves to us not as concepts but as items of equipment, defined only in so far as they can be put to practical use by Dasein. Here, there is no detached Cartesian subject, no dualism, and no 'mentalist' Husserlian consciousness. I argued that the antagonism between the two thinkers finds an analogue in recent debates centering on the nature of vision and on Gibson's theory of direct perception in particular. I also argued that a contemporary debate in the philosophy of perception may be capable of settling several of these issues: if perceptual experience is necessarily conceptual, then it appears Husserl may have been right on several issues, if not, then Heidegger's view seems the more accurate. Finally, I held that good arguments can be found for both sides, a claim that provides motivation for this chapter, in which I formulate a synthesis between the two views. Specifically, I argue for a conceptualized direct perception, i.e. our interaction with the world is a more basic, more Heideggerian one, than many suppose, but this interaction is one guided by our conceptual apparatus. As I show, this view is capable of keeping much of what is attractive from both views, while also meeting the criticisms each view directs at the other.

4.1 A CONCEPTUALIZED DIRECT PERCEPTION: THE BROAD PROBLEMATIC

Here, before formulating my view in earnest, I pause to clearly and succinctly state the problematic that my view seeks to escape from. We've been introduced to a certain tension, a dynamic, that exists in philosophy, cognitive science, and A.I.: the tension between those who hold that our interaction with the world is direct and unmediated by the mind (or our higher-level faculties) and those who hold that the mind plays a key role in our interaction with the world (by constructing perceptual experience for us, by imbuing perceptual experience with concepts, etc).

The view that I formulate below is driven by two principle beliefs about this dynamic. First, many of the concepts dear to those who feel the mind constructs experience are dead or dying, a situation I discuss at length in regards to sense data, mental representations, and the Cartesian Theater. It is this concern that inspires the 'direct' in 'conceptualized direct perception.'

Second, as alluded to above, it is immensely difficult to account for purposive, intelligent behavior in the absence of the mind's influence. In other words, while concern one seems to push us forcibly to a direct view, there are strong reasons for wanting to retreat to an indirect view insofar as it permits our concepts to play a role in perception. It is this concern that inspires the 'conceptual' in 'conceptualized direct perception.'

4.2 THREE BAD IDEAS

In this subsection, I discuss three ideas: (1) sense data, (2) mental representation, and (3) the Cartesian Theater. These ideas have a number of things in common, including: (1) they can all be seen as belonging firmly in the camp of those who hold that perceptual experience (and our interaction with the world) is necessarily constructed by (or mediated

by) the mind, (2) all three have been vigorously criticized in the last 50 years, and (3) a conceptualized direct perception would eschew all three. Further, as will become apparent, all three ideas are interlocked, as one of the ideas frequently needs (or assumes) another. In short, all three may very well rise and fall together.

4.2.1 SENSE DATA

Sense data theorists claimed the following:

We never see or otherwise perceive (or 'sense'), or anyhow we never directly perceive or sense, material objects (or material things), but only sense data (or our own ideas, impressions, *sensa*, sense-perceptions, percepts, &c). (Austin, 1964, p.2)

Sense data views occupy a prominent place in the philosophical tradition; for example, the problems surrounding sense data 'were recognized by the Greek skeptics and were perhaps the most significant common focus of the British empiricists Locke, Berkeley and Hume' (deVries and Triplett 2000, p.2) (of course, the most prominent problem with sense data views is that, if we are one step removed from reality, then how do we know reality is there in the first place?). Perhaps one can say that sense data views picked up even more steam with Kant; if our minds in fact construct our visual experience, then it seems raw materials are needed for this construction, i.e. sense data. Further, 'sense-datum theories were probably the most prominent and influential theories of perception in the Anglo-American philosophical world during the first half of the 20th century;' this can be seen in the writings of B. Russell (1926) and G.E. Moore (1953; 65) (deVries and Triplett 2000, p.1). We've also seen (chapter one) that Husserl posited the existence of sense data in his theory of perception.

However, a number of devastating criticisms of sense-datum views began to emerge, starting with Heidegger and then continuing, in Anglo-American philosophy in

the 1940s and 50s, with Wittgenstein (1958), Ryle (1949), Sellars (1956) and Austin (1962) (deVries and Triplett 2000). As a result of this onslaught, current ‘conventional wisdom among philosophers at the present time is that the credibility of sense-datum theories has been destroyed beyond hope of redemption’ (deVries and Triplett 2000).

Of course, there were several seemingly good arguments for the existence of sense data. I now briefly rehearse four of these arguments: (1) Russell’s argument, (2) the argument from illusion, (3) the argument from physics, and (4) the argument from different minds. In 5.2.1.3, after I have begun to sketch my view, we’ll see that none of these arguments hold up.

Russell’s argument is the following: presumably, while actual objects are ‘stable’ in that they don’t constantly change their properties when an observer changes her perspective, the object, as it appears to an observer, constantly changes. The way a table appears to us changes as we walk around the table, but it doesn’t seem the actual table is changing with the change in appearance. So, the way the table appears to us can’t be the way the table actually is, i.e. the appearance of the table and the table itself are two different things. It follows that in perception, we interact with sense data and not with actual objects.

The argument from illusion claims that sometimes (dreams, hallucinations, illusions) our perception deceives us, i.e. the way things appear to us is not the way things actually are. But, these illusory perceptual experiences are qualitatively indistinguishable from veridical perceptual experiences. So, even when perception is veridical, we can’t be seeing actual objects but only appearances, i.e. appearances constructed from sense data.

The argument from physics holds that the world physics describes is very different from the world we experience, so we can't experience the world physics describes, i.e. we interact with mere appearances.

The argument from different minds holds that animals perceive the world in a radically different fashion than we do (a bee, for instance, sees multiple yet identical images, while a bat perceives through sonar). So, who is to say which world (i.e. the world we experience or the world an animal experiences) is the right one? It must be that we all see appearances.

4.2.1.1 AN UNRESOLVED TENSION

Sense data views are more or less extinct, so the reader may be wondering why I'm discussing them at all? I discuss them to point out a very perplexing tension that exists in the wake of the rejection of sense data views, a tension I now describe.

Many in philosophy and cognitive science still adhere to the broadly Kantian notion that the mind shapes our perceptual experience. If not for the specific workings of the mind, our perceptual experience would be different, or perhaps not even possible. Recall Ullman's (1980) criticism of Gibson: cognitive science has firmly established that mental processes and operations shape our perceptual experience. Ullman's view is representative of the broadly Kantian bent of cognitive science orthodoxy.

But, while many still operate within the broadly Kantian framework, few believe in sense data. This is perplexing for the following reason: sense data were always supposed to be the raw materials that the mind constructed perceptual experience with. So, the mind constructs perceptual experience, yet we no longer have access to the

supposed raw materials of this construction. This is akin to trying to build a log cabin without any logs, and is perplexing to say the least.

4.2.1.2 HOW PERCEPTION CAN BE DIRECT *AND* SHAPED BY THE MIND

The tension I point to can be easily unraveled, however.

One can simply acknowledge the fact that mental processes and operations are present, and do shape the specific character of our perception, while adding the additional proviso that these processes are merely shaping the way that we see the world directly (direct in the sense that perceptual experience is not a mental construction). That is, one can acknowledge the fact that mental operations lead to – and are needed for – our normal perceptual experience without having to retreat back to sense data, as one can simply hold that mental processes are an aspect of – or are a part of the process of – our direct interaction with the world; mental processes are simply the means through which we see directly. Vitaly, there is no need to posit an additional interface. The fact that mental processes are implicated in how we see does not mean that we are interacting with a picture of, and not *the*, world; the fact that mental processes are determining the way the computer screen in front of me appears does not mean that I'm looking at a second computer screen, or a picture of a computer screen. Think of looking at a stick underwater; the fact that the water is shaping the way the stick appears does not imply that you're looking at a second stick, or a perceptual picture of a stick.

When I say that mental processes merely shape the way we see directly, I'm sidestepping the tension outlined above. I mean to imply that the fact that mental processes shape our visual experience does not necessarily imply that our visual experience is not direct, or is one step removed from reality, or is constructed from sense

data, as one can simply hold that mental processes shape the manner in which we see directly. In short, one can allow for the fact that mental processes shape our vision without retreating back to sense data by simply holding that mental processes merely mediate a direct interaction with the world; *mental operations shape the character of a direct interaction with the world (i.e. they shape the way the world appears to us), and do not lead to the construction of a second, 'perceptual,' reality.*

4.2.1.3 THE POSITIVE ARGUMENTS FOR SENSE DATA REFUTED

I now show that my view, as it is formulated to this point, can disarm the positive arguments for sense data (5.2.1).

Russell's argument doesn't hold up to scrutiny. Mental operations lead to our direct interaction with the world. The mental operations that shape our perception are such that we don't receive full knowledge of an object at a given time, i.e. we can only interact with a portion of an object. But the fact that we can only interact with a portion of an object doesn't entail that we are not *directly* interacting with that part of the object that we do interact with.

The argument from illusion also fails. Mental operations shape the character of our direct interaction with world. There is nothing to preclude these mental operations from malfunctioning (say, from the ingestion of a hallucinatory drug), in which case our direct interaction with the world will be altered and less effective, i.e. we will hallucinate. The fact that mental operations can malfunction doesn't imply that we indirectly interact with the world, but only that our direct interaction with the world is not always perfect.

The argument from physics is also inadequate. Mental processes shape a direct interaction with the world, and further, the character of these mental processes will

determine the way the world appears to us. Our mental processes are such that we see macroscopic as opposed to microscopic objects; this doesn't entail that we see macroscopic objects indirectly, but only that we don't see microscopic objects. Perhaps a Martian's mental operations are such that she directly interacts with the atomic realm?

The argument from different minds collapses as well. Mental operations shape the character of a direct interaction with the world. Our mental operations and a bat's mental operations are drastically different, so we would expect that the character of our direct interaction with the world and the character of a bat's direct interaction with the world would drastically differ. Further, this difference in mental operations leads to us being responsive to different aspects of the world than a bat (we don't locate things through sonar, a dog doesn't see color); the fact that we are responsive to different aspects of the world than animals doesn't imply that we are indirectly interacting with that part of the world that we are responsive to.

4.2.2 MENTAL REPRESENTATIONS AND PURPOSIVE BEHAVIOR

Now, I expand my view, and discuss what it implies about mental representations.

Above, in rejecting sense data, I argued that mental operations merely shape the way we see the world directly, i.e. we see the world, not a facsimile of the world.

In this rejection of sense data, there is an implicit rejection of the notion that *perceptual experience* is a mental representation. First, sense data, which are now gone, were supposed to be the raw materials from which perceptual mental representations were constructed; it follows that perceptual mental representations do not exist. Second, holding that we interact with the *world* (obviously) implies that we do not interact with a perceptual mental representation.

Now, it is important not to equivocate on ‘mental representation.’ At least two distinct types of mental representations can be posited: (1) we can hold that *perceptual experience* is representational, and (2) we can discuss purely *conceptual* representations of the world. We can say that the perceptual object in front of me, a computer screen, is actually a representation of the real computer screen in the world; I have rejected this claim. Or, we can say that while I’m looking at the actual computer screen in the world, there is a different type of representation at work in my experience, a conceptual representation (so while I’m looking at the actual computer in the world, I’m also representing the computer in a conceptual sense, i.e. I am also thinking ‘computer’). I have not rejected the second claim.

As we saw in chapter two, part of the motivation for positing meaning interfaces (or conceptual representations of the world) between agent and world is the immense difficulty one has in explaining how an agent effectively interacts with the world in the absence of such interfaces. Recall Fodor and Pylyshyn’s (1981) argument that Gibson’s affordances would be unconstrained in the absence of a meaning interface. We would put items to extremely bizarre use; we would sit on *anything* knee-high, for example. Further, there is the danger that without knowing what a given affordance is (in a semantic sense), we will not know whether or not we should pay attention to it in the first place: we would react to stimuli at random without any feel for the relative importance of the different stimuli. We would stand in the crosswalk staring at a tree as a bus raced towards us. In short, the very phenomena of selective attention and of intelligent, purposive action seem in peril in the absence of a conceptual interface with the world.

Further, recall the argument above that mental operations merely shape our direct interaction with the world: here, we have a direct interaction with the world (no sense data, no perceptual mental representations) that is shaped by mental processes as well. Now, just as one can grant the fact that our ability to perceive in the manner that we do depends upon certain mental processes and still hold a direct conception of agent/world interaction, one can hold that the agent/world interaction is direct yet conceptually ‘mediated.’ That is, just as some mental processes may be implicated in how I perceive motion directly, other mental processes – processes that deal with our conceptual apparatus or framework – may also be implicated in determining how we directly perceive the world. While one process may determine how we directly see motion, another process – one concerned with our conceptual apparatus – may determine or shape our perceptual experience insofar as it helps determine what we pay attention to, and how we react to what we see.

In short, when the situation is conceived of in this manner, one can do away with sense data and perceptual mental representations, while still meeting concerns over (1) the fact that mental processes shape how we see and (2) the fact that it seems we need a meaning interface for purposive, non-random interaction with our environment. In short, mental processes, some of which deal with our concepts, determine how we see things directly.

4.2.3 THE CARTESIAN THEATER

Now that I’ve discussed sense data and mental representations, I turn to a third idea: the Cartesian Theater. First, I discuss in more detail, exactly what the Cartesian Theater view is, before briefly discussing D. Dennett’s (1991) critique of – and alternative to –

the Cartesian Theater. Then, I argue that sense data, mental representations, and the Cartesian Theater are interrelated in such a manner that if one falls, the others fall. This claim is significant, as while sense data views are extinct, the other two ideas, despite facing harsh criticisms as of late, are not. Finally, I discuss the relationship between Dreyfus' critique of the Cartesian Theater and Dennett's.

4.2.3.1 DENNETT'S CRITIQUE OF THE CARTEISAN THEATER

Throughout, I've alluded several times to the notion of a 'Cartesian Theater,' equating the Cartesian Theater to a central subject or 'I think' that guides action. I now improve upon this definition, and briefly explain Dennett's alternative picture.

Essentially, 'the Cartesian Theater is a metaphorical picture of how conscious experience must sit in the brain' (Dennett 1991, p. 107). This picture posits a single, central point where consciousness occurs, a 'center...where 'it all comes together'' (Dennett 1991, p. 39). The Cartesian Theater would be the 'Oval Office,' or the central 'Headquarters' of the brain, the 'boundary' or 'finish line' where otherwise unconscious information enters conscious awareness. This 'inner sanctum' would act as a sort of CPU, a focal point that guides the action of all the other parts of the body by sending out orders. In short, the Cartesian Theater is where information or input from the world comes so as to be examined by a central 'I think,' who then sends out orders or output to the rest of the body based on the information.

Descartes, the first 'Cartesian Theater' theorist (hence the name of the view), infamously held that the pineal gland was most likely the location of the Cartesian Theater. While we chuckle today at Descartes' suggestion, other areas of the brain have more recently been pegged as the location of the Theater: including 'the anterior

cingulate, the reticular formation, [and] various places in the frontal lobes' (Dennett 1991, p. 107).

To demonstrate that he is not attacking a straw man, or beating a dead horse, when attacking the Cartesian Theater, Dennett (1991) points to numerous cognitive scientists and neuroscientists who face problems because of an adherence to – or assumption of – the 'Cartesian Theater' picture of the mind. For example, Dennett cites the much discussed work of Libet (on the problem of backwards referral in time), and Levelt's (1989) work on speech production.

Dennett's alternative to the Cartesian Theater is his 'Multiple Drafts' model of consciousness. In Dennett's model, the notion that there is a central place where all information is presented in a single narrative to a central 'I think' is abandoned (Dennett 1991, p. 113). Rather, the content of consciousness is distributed throughout the brain, and doesn't need to all be brought together in a single point. There is no such thing as a single narrative that is consciousness; instead, the contents of consciousness undergo continual revision or editing (or move through 'multiple drafts').

4.2.3.2 ON THE RELATIONSHIP BETWEEN SENSE DATA, PERCEPTUAL MENTAL REPRESENTATIONS, AND THE CARTESIAN THEATER

Now, I remark on the relationship between the three central ideas discussed in this chapter.

The relationship between the three ideas can be clearly illustrated by taking the metaphor of a Cartesian Theater literally: think of (perceptual) mental representations as the movies shown on the Cartesian Theater movie screen, think of sense data as the raw materials with which the images on the movie screen (i.e. representations) are constructed (say, the beams of light coming from the projector), while the Cartesian Theater is the

entire room, including the movie screen and the spectator (or central 'I Think') watching the film.

I, along with everyone else, have rejected the notion of sense data, which amounts to a rejection of perceptual mental representations. Now, we see that the rejection of sense data and perceptual mental representations amounts to a rejection of the Cartesian Theater (as a possible model that can explain our perceptual experience): there is no longer any movie been shown, so there is no longer any need for the Cartesian Theater itself. In short, sense data, perceptual mental representations, and the Cartesian Theater rise and fall together; since the idea of sense data has been widely rejected, the other two ideas (at least in the context of a discussion of perception) should be rejected as well.

To clarify: the notion that there is a central headquarters in the brain implies that there is a single, unified representation of the world. If the agent in the headquarters is to send out orders to all parts of the body, and if this central headquarters is the *only* place that sends out such orders, then the central headquarters needs to be appraised of the overall circumstances in which the body is placed; the headquarters must know what the arms need to do, what the legs need to do and so on. But, for the central headquarters to know all of this, it must be that a single, unified representation of the world is offered for the headquarter's perusal. In short, the notion of a central 'I think' seems to entail the notion of a single representation. But this representation, as a result of the rejection of sense data, can't possibly be a perceptual representation, as perception is not representational. Therefore, as regards perception, the central 'I think' is no longer possible.

It may be that there is a central *conceptual* representation of the world that can keep the central ‘I Think’ informed of the overall circumstances of a situation, but this central representation can’t be a perceptual representation (as they do not exist). So, as regards perception at least, the Cartesian Theater seems a poor model of cognition.

4.2.3.3 DREYFUS AND DENNETT

I briefly pause to point out an interesting consequence of the rejection of the Cartesian Theater.

In chapter one, I discussed Dreyfus’ contention that action can be purposive without a central agent having a goal in mind. If the rejection of the Cartesian Theater is correct, then Dreyfus’ contention is correct as well. Obviously, if there is no central headquarters or central agent in the first place, then there can be no way that the non-existent agent has a goal in mind (as a non-existent agent can’t have anything in mind). Or, one can’t hold that a prerequisite of goal-oriented activity is the presence of a central agent who has the goal in mind if there is no central agent.

The notion of a central agent who guides activity is a hallmark of GOFAI; this, taken with the consideration above, suggests that Dennett’s work undermines GOFAI (perhaps surprisingly).

4.3 SUMMARY

To briefly summarize the claims of this chapter: I pointed out a tension that exists in the widespread rejection of sense data. Many still adhere to the broadly Kantian view that the mind constructs perceptual experience, but without sense data, this view seems puzzling (given that sense data were supposed to be the raw materials of this construction). I then resolved this tension by pointing out that perhaps the mind merely

shapes how we see the world directly. Now, one can respect the intuition that mental operations are needed for our normal perceptual experience while also adhering to the rejection of sense data. Further, not only are mental processes implicated in how we see the world directly, but some these processes are involved with our conceptual apparatus; now, one can not only reject sense data and hold that mental processes shape perception, one can also account for the presence of concepts (and hence for our intelligent interaction with the world) from within a direct view. In short, the claim that our concepts guide perception is consistent with a direct perception view, when circumstances are conceived in the manner I have described.

I also argued that the rejection of sense data entails a rejection of mental representations, which in turn entails a rejection of the Cartesian Theater as a model for perceptual experience. Sense data were the materials out of which perceptual mental representations were constructed, and without perceptual representations of the world, a Cartesian Theater is not a possible model for perception. If there is a Cartesian Theater, it must operate with conceptual representations of the world, but the fact that the Cartesian Theater can't account for perception suggests that it is a poor model of cognition as a whole (as perception is an important aspect of cognition).

CHAPTER 5. IS THE WORLD ITSELF CONCEPTUAL?

In this chapter, I expand, clarify, and justify the claims of the previous chapter. In section 5.1, I criticize the arguments of those who hold, against the claims of the previous chapter, that perception is not conceptual. This criticism leads to the formulation of a new claim: perhaps perception is inevitably conceptual because at least some aspects of our concepts are in the world, and hence perceived with the world, in a sense described below. This claim can answer the ('Dreyfusian') question: why, if perception is conceptual, do we often not consciously reflect upon our concepts when engaged with the world? This claim can also be seen as an expansion of the claims in the previous chapter, as it is an attempt to describe one way (though not the only way) in which perception may be conceptual. In section 5.2, I discuss a philosophical ally of my view: J. McDowell (1994). I point out that the claims of section 5.1 overlap with McDowell's, so a conceptualized direct perception (where perception is conceptual in the sense described in 5.1 and 5.2) would also be able to avoid a perplexing philosophical difficulty that McDowell delineates. In 5.3, I discuss a different type of perceptual experience not discussed thus far: those experiences where we have both perception and a conscious, conceptual reflection upon the perceptual experience. In 5.4, I point to evidence from cognitive science to support my views. In 5.5, I summarize the claims of chapters 4 and 5, offering a synoptic view of my entire hybrid theory of perception.

5.1 AGAINST PEACOCKE AND CRANE

My view, a 'conceptualized direct perception,' is beginning to take shape. Now, I pause to criticize the arguments to the effect that perception cannot be a conceptual affair

(chapter three). This discussion also allows me to explain one specific way in which perception may be conceptual.

Recall Peacocke's argument (chapter three) against viewing perceptual experience as a conceptual affair: there are aspects of our perceptual experience that can't be captured in language or with our concepts, therefore, perceptual experience is non-conceptual. I won't dispute that there are non-conceptual aspects of our perceptual experience, but conceding this does not imply that perceptual experience is completely or absolutely devoid of conceptual content. Concepts can still be implicated in our perceptual experience even though they can't completely capture or subsume perceptual experience.

Further, the fact that there are non-conceptual elements in perception seems arbitrary or accidental. We may lack the concepts to describe the shapes of the wood grains on a table, but there doesn't seem to be anything preventing us (*in principle*) from creating and using concepts to describe these shapes. Perhaps Martians have an extremely developed vocabulary when it comes to shapes, in which case the shapes of the wood grains would not be beyond the reach of a Martian's conceptual apparatus? In short, Peacocke's argument seems to turn on a circumstance that could be otherwise.

Likewise, Crane's point that we don't make inferences in perceptual experience (in the sense that we don't infer one perceptual experience from another) doesn't necessarily imply that perceptual experience is conceptually innocent. Our conceptual apparatus may play a role in our perceptual experience even though it may not play a role in the movement from one perceptual experience to the next. Perhaps our concepts help define what we pay attention to in a given perceptual experience, or perhaps we make

inferences in – or behind – our perceptual experiences? In other words, maybe I infer that there is a ‘car’ in front of me, even though this inference doesn’t play a role in ensuring the car’s continued presence in my next visual experience. Or perhaps I simply see a ‘car’ non-inferentially, i.e. I simply see a ‘car’ (a car under its conceptual aspect) without inferring that the object is a ‘car.’

Peacocke argues for the non-conceptualized nature of perceptual experience by appealing to the fine-grained nature of perceptual experience. However, this argument can be turned on its head, i.e. one can argue from the fine-grained nature of perceptual experience to the opposite conclusion: perceptual experience is necessarily conceptual. The fact that perception outstrips our concepts only implies that perception contains not only our concepts but additional information as well, and not that perception doesn’t contain concepts at all. While my concepts may not be able to completely capture or describe perceptual experience, it seems impossible to deny that aspects of my concepts are included in perceptual experience. When I look at a tree, I *see* aspects of my tree concept: I see leaves, bark, green, limbs, etc. Granted, I don’t see every aspect of my tree concept, I don’t see photosynthesis, or carbon dioxide turning to oxygen, but it seems undeniable that when I look at a tree, I see some – or even many – aspects of my tree concept. In short, in a sense, when I look at a tree, I’m looking at aspects of my ‘tree’ concept as aspects of my ‘tree’ concept (leaves etc) are embedded in the visual experience of a tree.

H. Dreyfus (chapter one) – while arguing against mental representations (in either a perceptual or conceptual sense) – certainly makes some points that seem intuitively correct. Often, when coping with our environment, we don’t need recourse to conceptual

mental representations. For example, when I walk around my apartment, I do so without the aid of a little mental picture of my apartment's floor plan, and I don't need to think 'door' to walk through one. But one can plausibly argue that the reason we don't need conscious recourse to our conceptual apparatus or to conceptual mental representations while coping with our environment is because aspects of our concepts are embedded in – and so are directly perceived in – our perceptual experience of the environment (in the sense of the tree example above). In perceptual experience, a concept doesn't have to be explicitly called to mind because it already is called to mind insofar as it is embedded to a degree in a direct perception of our environment (to the degree that aspects of the concept are embedded in the environment). That is, we directly interact with our concepts because they are embedded in the world. Perhaps the visual experience of an object can 'stand-in' for the concept, so to speak? So, I don't have to explicitly think 'tree' because I'm looking at one; I don't have to manipulate a mental picture of my apartment to move through it, as I'm in it. Here, (1) we would have a perceptual experience that is necessarily conceptualized because our perceptual experience necessarily contains our concepts, and (2) perceptual experience is conceptualized in such a manner that we don't need conscious access to our concepts.

To clarify, when I say that looking at a tree can be 'just as good' as thinking 'tree,' I mean to imply that the visual experience of a tree and the concept 'tree' are interchangeable in a sense. For example, it may be that visual appearances of objects can play a role in inferences. So, just as I can infer the proposition 'there is bark' from the proposition 'there is a tree present,' I may be able to infer the proposition 'there is bark'

from the visual appearance of a tree, i.e. visual objects may play a role in inferences (as they are interchangeable with our concepts in a sense).

The view espoused here can be summarized in the following manner: we are in direct interaction with a world that is conceptually defined insofar as our mental processes (some of which deal with our conceptual framework) shape the way we directly perceive the world. Further, I don't need to consciously reflect on these concepts, or have them explicitly in mind, insofar as they are present visually, i.e. I don't need to think 'tree' because I'm looking at one. This circumstance can explain why we don't consciously utilize our conceptual capacities while coping with the world, and may also account for the so-called 'semantic transparency' of phenomenal experience? Further, there are very profound philosophical reasons for believing this view accurate, as we'll now see.

5.2 JOHN MCDOWELL'S *MIND AND WORLD*

J. McDowell's (1994) *Mind and World* is a complicated work, heavily influenced by difficult thinkers such as Kant (or more precisely, P. F. Strawson's (1966) Kant), D. Davidson (1984, 86), and Sellars (1956), so the short treatment it will receive here can't possibly do justice to the work as a whole. However, McDowell's (1994) work is extremely relevant to the view formulated in chapter five, so a brief discussion of McDowell is warranted, if not demanded.

The easiest way to approach McDowell's (1994) view is through Kant (1929). In the first critique, Kant distinguished between (1) the intuition, where via our receptivity, we are able to intake bits of experience (structured by the mind through the a priori forms of time and space), and (2) the understanding, the realm of the conceptual. For Kant, the

intuition and the understanding could not stand apart, i.e. ‘thoughts without content are empty, intuitions without concepts are blind.’ An empirical judgment consists of (1) concepts (the understanding) and (2) an experiential intake (the intuition); if not for concepts, there would be no judgment, and if not for experience, there would be nothing to judge.

The understanding was said to be ‘spontaneous,’ a word which suggests that the realm of concepts is the realm of freedom, or is at least defined by freedom. It isn’t exactly clear why the realm of concepts is thought to be the realm of freedom, but ‘a schematic...answer is that the topography of the conceptual sphere is constituted by rational relations’ (McDowell 1994). The realm of concepts is the realm of justifications, of normativity, i.e. ‘is at least part of what Sellars calls “the space of reasons,”’ while we have no freedom as regards the bits of experiential intake filtered through the intuition (the world is what it is, so to speak). There is nothing normative about the brute impingement of experience upon our senses.

But, once we recognize that the conceptual sphere is free to an extent, a possible problem arises:

The more we play up the connection between reason and freedom, the more we risk losing our grip on how exercises of concepts constitute warranted judgments about the world. (McDowell 1994, p. 5).

Kant’s notion of the intuition could provide a check on the freedom of the understanding: the thought was that experience must impinge upon the conceptual realm from the outside, so as (1) to provide a check on the freedom of the understanding (I can’t make wild claims such as ‘pigs fly’ because the pigs that I see in the world don’t) and (2) to enable experience ‘to be a source of knowledge.’ Without this external check upon the

free understanding, the conceptual realm would ‘degenerate into moves in a self-contained game;’ the conceptual realm would be severed from the world, which would make it impossible for the world to serve as a source of knowledge.

But, as a result of Sellars’ critique of the Myth of the Given, the traditional Kantian picture breaks down. Sellars’ rejection of the Given amounted to a rejection of the idea that bits of experience can serve as justification for propositions: a proposition can only justify and be justified by other propositions. In other words, ‘when we reject the Myth of the Given, we reject the idea that tracing back the ground for a judgment can terminate in pointing to a bare presence’ (McDowell 1994, p. 39). So, if one follows Sellars, then the old scheme becomes impossible: experience can’t serve as a check on the freedom of the conceptual (as the conceptual is severed from experience), and experience can’t serve as justification for empirical judgments (as only a further judgment can justify a judgment). In Kantian terms, the intuition can no longer fulfill its designated role, in which case the danger discussed above is actualized, i.e. the conceptual sphere becomes a self-enclosed system that never encounters any ‘friction’ from experience. In turn, it seems that the very notion of empirical knowledge is in peril, as what can justify an empirical proposition if not experience? In short, taking Sellars’ critique of the Myth of the Given as a premise, we wind up with D. Davidson’s ‘coherentism’ as a conclusion. McDowell holds that this is unacceptable.

So, McDowell’s central concern is clear: as a result of the loss of the Given, it seems the conceptual is severed from experience, which seems to threaten the very notion of empirical knowledge. McDowell’s solution to this dilemma is radical: McDowell

takes issue with the dualistic division between the conceptual and experience, holding that experience should be thought of as being conceptual.

McDowell reasons as follows: the old picture, which had experience impinging upon the conceptual realm from the outside (so as to serve as a justification for the conceptual (or empirical propositions)), is no longer open to us. So, one possible solution is to hold that the experience that impinges upon us is already conceptual, or can exert a ‘rational,’ as opposed to merely ‘causal,’ influence on our thought (p. 34). In other words, the boundary between experience and the conceptual is broken down by holding that experience itself is conceptual, a move that would solve McDowell’s central problem: if experience is conceptual, then it can play a role in justifying empirical judgments and so on.

But, while we now have a solution to the difficulty McDowell points to, there is a further difficulty: how do we make sense of the solution? That is, what precisely does the claim that experience is conceptual mean? What does it mean to say that experience can exert a ‘rational’ influence on our thought?

These questions can be clarified via appeal to my example of a tree (from chapter five): looking at a tree can be just as good as thinking ‘tree.’ On the old view, the visual experience of a tree could serve as evidence for the proposition, ‘there is a tree nearby,’ where the proposition is understood as being a radically different type of entity than the visual experience. But there is another option: one can deny that experience is radically different from the conceptual, i.e. experience is conceptual. So, rather than saying that the visual experience of a tree can act as evidence for the proposition ‘there is a tree present,’ one can hold that the visual experience of a tree and the proposition ‘there is a

tree present' are two sides of the same coin, i.e. are interchangeable. Just as I can infer the proposition 'there is bark' from the proposition 'there is a tree present,' I can infer the proposition 'there is bark' from the visual appearance of a tree. That is, the visual experience of a tree, just like a proposition, can play a rational role in thought (in the sense that it can play a role in the logical space of reasons). When one claims that experience is conceptual or has conceptual content, the content is 'things are thus-and-so' (McDowell 1994), whatever 'thus-and-so' happens to be (i.e. whatever specific experience we are talking about).

So, we see that there are profound philosophical reasons for suspecting that experience is conceptual.

5.3 PERCEPTION WITH BOTH A VISUAL OBJECT AND CONCEPTS

Another circumstance that might (and frequently does) arise, another type of perceptual experience, is that we have a perceptual experience with conceptual content in the sense that we both (1) look at a tree and (2) consciously think 'tree.' The principle claim I make as regards this circumstance is the following: when we do have both consciously held concepts and perceptual experience, we directly perceive the concept in or with the object itself. That is, when we see an object, cognition does not proceed in such a manner that we have to read a concept into the object; rather, we think the concept with the object.

While arguing for his version of direct realism, Putnam (1999), in connection with Wittgenstein's 'seeing as, duck/rabbit picture, problematic,' makes an important point about mental images (and presumably perceptual objects as well). When we form a mental image of a deer grazing on the meadow, the image isn't such that an interpretation

has to be read into it; rather, we perceive the sense or meaning of the image in the image itself. A particular shape and color and so on are seen as a 'deer,' the meaning is intrinsic to the image. As Putnam points out, Wittgenstein (1958) argued for the same thesis, which again, presumably carries over to perceptual objects as well. (See Mulhall (1990) for an interesting treatment of this issue, one that also centers on Heidegger's work; in effect, Mulhall argues that we see things under a 'continuous aspect perception,' i.e. we always see things under the guise of our concepts.) In short, perception is not like model theory (we don't have to sort through various 'conceptual models' of a perceptual experience, as the model is the experience).

The fact that I argued that aspects of our concepts are embedded in the environment would seem to necessitate my stance on this issue. For example, say that we see a deer in a field. On my view, aspects of our 'deer' concept are embedded in the visual experience (we see antlers, and antlers are a part of our 'deer' concept). It would seem to be inconsistent to make this claim and then hold that we don't think our concepts (when we are consciously aware of them) in or with the visual object, as I would be claiming that (1) concepts are necessarily in experience (as aspects of our concepts are embedded in experience) and (2) concepts aren't necessarily in experience (in the sense that we don't think the concept associated with a visual object with the visual object itself).

I argued that we can either consciously reflect on the concepts that are always already in experience or not. Now, I pause to discuss an interesting possibility; namely, it may be possible to recreate Heidegger's famous carpenter example from within the perspective of my view.

It seems plausible to hold that, when we lack conscious awareness of the concepts operating in perception, we have a circumstance where a conscious, reflective subject is not needed; we simply have a cognitive agent in direct, unreflective interaction with a meaningful world. Here, there is no need for (conceptual) mental representations, for example. Further, when we do have conscious use of (conceptual) mental representations, where we have a cognitive agent that is consciously and reflectively thinking about her perceptual experience through the guise of her concepts, it seems we do have a reflective subject (note that the notion of a reflective agent and the notion of a unified agent are two different things, i.e. this claim is not contradictory with the claims of the last section). Further, it seems plausible to hold that perhaps a disturbance or malfunction of some sort, a situation in which the world is operating in an unexpected manner given our concepts, leads to the emergence of consciously manipulated (conceptual) mental representations, and hence to a reflective subject.

Or, to appeal to Heidegger's carpenter example: when the carpenter is unreflectively engaged in the task of hammering nails, the carpenter is not a reflective subject. The carpenter doesn't have to think 'hammer' because she is using one. Now, perhaps some malfunction occurs. The carpenter then reflects consciously on the situation, i.e. the carpenter both sees a hammer and consciously thinks 'hammer.' In short, one can reformulate Heidegger's critique of dualism from within the novel account (but in such a manner that the carpenter is unconsciously utilizing an object (that is standing in for a concept), rather than with a mere item of equipment).

5.4 EVIDENCE FROM COGNITIVE SCIENCE AND NEUROSCIENCE

The claim that we directly perceive the meaning of a perceptual object in the object itself (when both concept and visual object is present), and the claim that we don't have to explicitly think a concept when the visual object that corresponds to the concept is present – suggests that there is an intimate relationship between perceptual experience and our conceptual or linguistic capacities. In other words, if our linguistic or conceptual centers are (neurologically) intertwined with the processes that shape our direct perception, then it seems more plausible to claim that we perceive the sense of a perceptual object with the object, or that we don't have to think a concept because it is present visually (i.e. the visual object can play a role in inferences).

There is a certain amount of scientific evidence that speaks to this intimate relationship between perception and the conceptual. Gasser and Colunga (1997) offer evidence that points to a relationship between the particular language that we speak and the manner in which we perceive the world. Experiments demonstrate that English and Chinese speakers, for example, perceive the world in a different manner (they pay attention to different objects and so on). Experiments on bilinguals reveal the same circumstance. One possible explanation for this fact is that a language may tie its speakers to particular contexts. In short, in Gasser and Colunga's (1997) work, we see evidence for the claim that there is an intimate link between perception and our conceptual abilities, and hence, evidence for several of the key claims of this thesis.

Also relevant here is the suspicion of many cognitive scientists that there is a profound and complex relationship between language and perception (see Miller and Johnson-Laird 1976, for example). It is entirely plausible that before we get to a full-

fledged visual experience, various mental processes and operations that deal with our conceptual apparatus play a role.

5.5 SUMMARY

The claims of this chapter and the previous chapter have gotten quite complex; I pause to offer a brief summary, or a synoptic view, of this chapter's claims.

I formulated a view that I dubbed 'conceptualized direct perception.' Perception is direct (i.e. non-representational): sense data, (perceptual) mental representations, and the Cartesian Theater, which all rise and fall together, are rejected in favor of direct realism. We see the world, not a picture or facsimile of the world (why represent a tree perceptually when there are trees in the world?).

Mental processes shape the way we see the world directly, that is, the fact that mental processes shape our perceptual experience does not imply that our perceptual experience is indirect, or is one step removed from the world. So, we can reject sense data (etc) while still respecting the fact that mental processes shape the character of our perceptual experience.

Further, just as some mental processes shape the way we perceive motion, for example, other mental processes, processes concerned with our conceptual apparatus, also shape the way we directly perceive the world (these processes guide selective attention, for example). It seems the arguments to the effect that perception is non-conceptual do not stand up to scrutiny, and now, we can acknowledge the need for a meaning interface with the world (so as to explain intelligent behavior) while remaining in a direct perception framework.

The world is conceptual in the sense that aspects of our concepts are embedded in the world. Looking at a tree can be just as good as thinking ‘tree.’ (In the next chapter, we see that there are profound philosophical reasons for believing this to be the case.) So, for example, we can infer the proposition ‘there is bark’ from the visual appearance of a tree, just as we can infer the proposition ‘there is bark’ from the proposition ‘there is a tree.’ This view can account for why we don’t seem to need conscious access to our concepts while coping with the world (why think ‘tree’ when you’re looking at one?).

But, a common type of perceptual experience is one in which we have both the conscious use of concepts and the visual object, i.e. we both think ‘tree’ and look at a tree. When this happens, we directly perceive the meaning or concept of the tree directly in or with the visual tree itself. Perhaps a conscious use of concepts emerges in situations of malfunction (i.e. one can recreate Heidegger’s famous carpenter example from within the framework of my view)? Cognitive science suggests that there is a close relationship between perception and the conceptual, as one would expect on my view.

To clarify my view with a concrete example: imagine that you are crossing the street as a car approaches. First, you are looking at the car in the world, not a picture of the car. You focus on the car, and not, say, on a bird flying overhead, because the car is more salient, and our concepts guide perception (i.e. give rise to intelligent behavior). But, you don’t need to consciously think ‘car’ because you are looking at one. Now, there is something wrong: the car is moving faster than you expected. You infer ‘I should walk faster’ directly from the visual experience, i.e. (1) you infer a proposition from a visual object (as the proposition ‘that car is moving too fast’ and the visual appearance of a speeding car are interchangeable), and (2) a disturbance or surprise leads

to the emergence of conceptual representations in conscious awareness. You quickly walk to the other side of the street. This easy flow between perception and the conceptual seems to be phenomenologically plausible, i.e. seems to accurately describe our experience of coping with the world.

Finally, allow me to note that a conceptual direct perception would be a sort of hybrid or mixture of Husserlian intentionality (or an intentionality where the intentional object is defined under the guise of a full fledged concept) and Heidegger's Being-in-the-World. That is, we would have Heidegger's direct immersion in the world, but this immersion would be one defined by Husserlian intentionality insofar as Dasein is immersed in a world conceptually defined.

CHAPTER 6. HUSSERL AND HEIDEGGER REVISITED

I've argued for a 'conceptualized direct perception,' for a fusing of Being-in-the-World with Husserlian conceptual intentionality. Of course, this synthesis contains aspects that both Husserl and Heidegger would find unappealing, to say the least. Here, returning to the two figures with which this paper began, I briefly mention several of the most glaring problems.

With the synthesis' emphasis on the world ('we directly interact with a world that is conceptually defined' etc), the world crashes through Husserl's brackets, so to speak. That is, to clarify, any attempt to bracket out questions concerning the existence of the external world in the initial stages of investigation, so that one can conduct an investigation of a pure and self-sufficient consciousness, is abandoned. In other words, the 'phenomenological reduction' is ignored. In more modern terms, 'methodological solipsism' is abandoned. Further, Husserl's account of perception was altered: for example, contra Husserl, we encounter signitive representation in authentic appearance.

There are aspects of the novel view that Heidegger would dislike as well. As Husserlian (conceptual or semantic) intentionality is now present at the most primary level of interaction with the world, there is no immediately evident place for Heidegger's notion of equipment. Heidegger's notion of equipment played a key role in several aspects of Heidegger's thought: in his departure from dualism and Husserl, in the ontic-ontological distinction, his account of art and truth, his ideas on technology and so on. It isn't clear (to me, at least) what effect this rejection of Heidegger's notion of equipment would have on Heidegger's corpus as a whole, but it seems the effect would be significant.

In short, in attempting to reconcile two such broadly opposed viewpoints, I have not surprisingly created a view that neither side would find satisfying. Of course, this circumstance says nothing to the truth of my view.

6.1 CONCLUDING REMARKS

E. Husserl and M. Heidegger both put forth profound accounts of human cognition, accounts that took radical stands on important issues such as dualism, mental representationalism, the nature of perception, and consciousness. There is a fundamental antagonism between the two views, an antagonism that reemerges in recent debates surrounding J. J. Gibson's theory of direct perception, a theory that has a certain affinity with Heidegger's perspective. There is a connection between this debate and the current debate centering on the interaction between perceptual experience and our conceptual framework: if perceptual experience is necessarily conceptualized, then this can count as evidence for Husserl's view (and provides Gibson's critics with further ammunition), while if perception can proceed without concepts, then the gap where we have perception but not concepts would be the space in which Heidegger's notion of instrumentality (and Gibson's notion of affordance) would operate (key to this claim was the perhaps controversial claim that in order for Dasein to engage in practical activity, Dasein must at least open its eyes). Arguments can be formulated for and against both sides, so perhaps a synthesis is in order?

I formulated and argued for one possible synthesis: a conceptualized direct perception, where our interaction with the world is a more basic, more Heideggerian (and Gibsonian) affair, but one in which our concepts are implicated. While this perspective would not be pleasing to either Husserl or Heidegger, as the phenomenological reduction

is ignored, and there is no immediately evident place for Heidegger's notion of equipment, it would sit well with the work of J. McDowell, who holds that experience is conceptual so as to make empirical judgments possible in the wake of Sellars' critique of the Myth of the Given.

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