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Citation: Slater, Lauren Abigail Grace (2023) Word made flesh: sensory ideas as meanings of bodily signs in Descartes. [Thesis] (Unpublished)

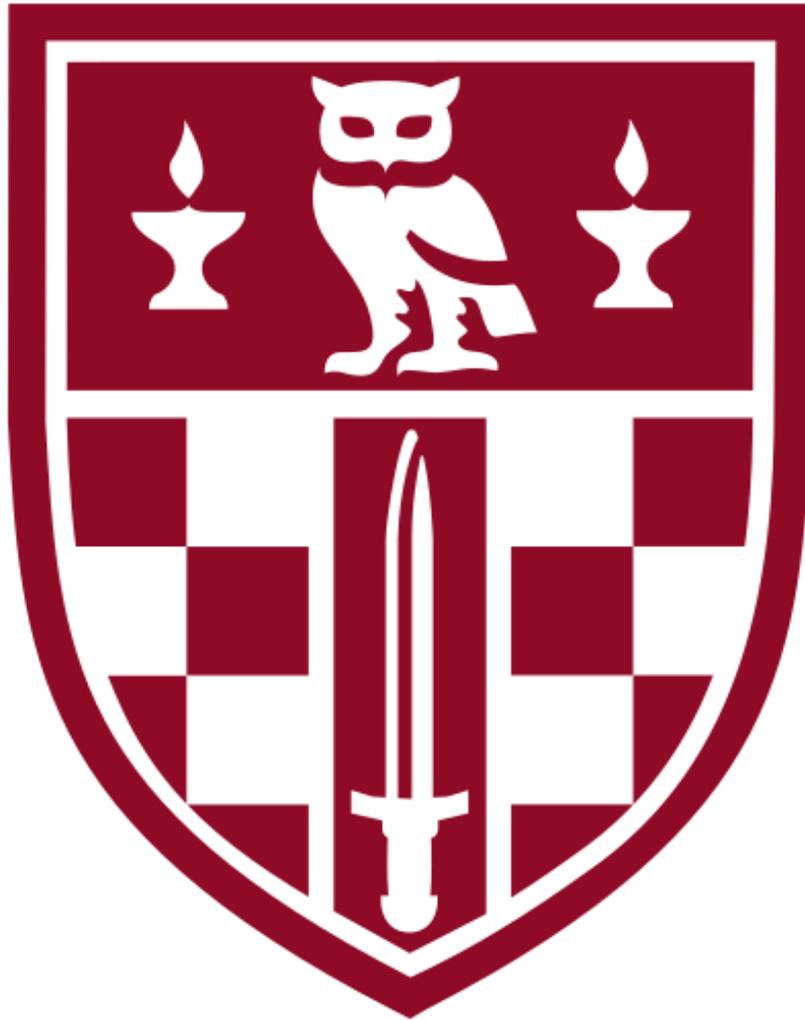
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Word Made Flesh

Sensory Ideas as Meanings of Bodily Signs in Descartes



Lauren Slater

This thesis has been submitted in fulfilment of the requirements
for: PhD Philosophy

Birkbeck, University of London

For my parents, who taught me my first words.

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Abstract

Are we bodies, souls, or both? Each of these metaphysical positions comes with its own distinctive problems. If we're nothing more than material, mechanistic bodies, how can we explain those features of mind that seem irreducible to pure material mechanism? If we're just souls that entertain fleeting ideas, how can we explain the structure of the external world that we seem to share with others? And if we're compounds of souls and bodies, then how can we explain their connection?

I begin this project by looking at the positions of two Early Modern philosophers – Hobbes and Berkeley – each with their very different metaphysical systems. Hobbes is a mechanist materialist, and Berkeley an idealist. I argue that both philosophers make an appeal to language in order to resolve or reinterpret their respective metaphysical problems. My first aim in this thesis is to argue that Descartes fits into this pattern of explanation. He too makes an appeal to language in order to resolve or reinterpret his own distinctive metaphysical problem: the problem of body-mind connection in the case of sensory perception. I argue the appeals of the three philosophers have something in common: they all reap the explanatory benefits of language which exist because language is something that is intimately familiar to us. Their appeals hold explanatory weight at least in part because they are appeals to the familiar.

The second aim in this thesis is to show that Descartes' appeal to language is successful in that it truly illuminates the problem of body-mind connection in sensation. Even though Descartes cannot offer a properly metaphysical explanation of the body-mind relation in sensory perception, that is, an explanation that is grounded in clear and distinct ideas (the kind of answer that might have been satisfying to Princess Elisabeth), he offers us, through the analogy with language, a genuinely useful way to understand two of the key aspects of the body-mind problem in the case of sensory perception. Descartes' language analogy, I will argue, illuminates both the issue of body-mind causation and the issue of the representationality of sensory ideas and brain states.

Abbreviations of Works by Descartes

Editions and abbreviations are the following:

AT The original language text of the writings of Descartes is the Adam and Tannery edition. It is abbreviated ‘AT’, followed by the volume number and the page number.

CSM The English translations of the writings of Descartes is the Cottingham, Stoothoff, and Murdoch edition (1993). It is abbreviated ‘CSM’, followed by the volume number and the page number.

S For the Correspondence between Descartes and Elizabeth of Bohemia, reference is to L. Shapiro’s translation (2007). It is abbreviated ‘S’, followed by the page number.

CSMK For the rest of Descartes’ correspondence, the reference is to the Cottingham, Stoothoff, Murdoch, and Kenny edition. It is abbreviated ‘CSMK’, followed by the volume number and the page number.

Introduction

Are we bodies, souls, or both? Each of these metaphysical positions comes with its own distinctive problems. If we're nothing more than material, mechanistic bodies, how can we explain those features of mind that seem irreducible to pure material mechanism? If we're just souls that entertain fleeting ideas, how can we explain the structure of the external world that we seem to share with others? And if we're compounds of souls and bodies, then how can we explain their connection?

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Chapter One concerns Hobbes' appeal to language to address his distinctive metaphysical problem. In essence, his problem is to explain how voluntary and abstract thought arises in mechanistic, material human bodies. For Hobbes, the 'natural mind' (that is, the prelinguistic mind) is purely passive and particularistic. Ideas arise when material objects impact upon our sense organs and create motions in the material of our bodies and brains. According to Hobbes, ideas, as material images in our brains, come to us without our *voluntarily* bringing them to mind. Rather, they come about as a result of the objects that impact the sense organs at that particular time. This means that minds in this natural state cannot summon ideas voluntarily. Natural minds are also not capable of abstract thinking. This is because each idea that a natural mind entertains is of a particular object or situation, since one can only have sensory impressions of (that is, see/smell/etc.) particular objects and situations.

So, how can Hobbes, without straying outside his materialist metaphysics, explain how the human mind thinks abstractly and voluntarily? It is here that Hobbes appeals to language. When humans learn to speak and write, they engage in a *voluntary* activity. They are no longer bound to passively follow a string of passing impressions, but can use words to actively summon ideas to mind and communicate ideas to others. Voluntary thinking, according to Hobbes, is just actively using words to direct one's thoughts. Further, with the invention of language, humans can use one word to stand for many particular ideas, thus giving them the ability to escape the prison of the particular. With words, humans gain the ability to conceive of the same thing under different aspects and this, in turn, allows them to be able to refer to those aspects in their own right. Language, then, for Hobbes, is crucial in the explanation of voluntary and abstract thought.

In order to explain these peculiarly human powers of mind, Hobbes needs to find something in the all-material universe that can be abstract or universal and desire-motivated. Words fit the bill (at least, on the face of it). For Hobbes, words are material, sensible things: they are marks on the page when we write them, or sounds in the air when we say them, and patterns of movement in the body/brain when we 'internally' say them. They also can be universal – as Hobbes says, there is “nothing in the world universal but names”.¹ Additionally, they are things that we bring about voluntarily. Hobbes provides an answer to his metaphysical problem by shifting the focus onto a part of reality (language) that seems on the one hand to be material and on the other active and universal.

In the last part of Chapter One, I suggest that, even though Hobbes' solution to this problem is unsatisfying in many ways, his answer does still hold explanatory weight. Hobbes leaves important questions unanswered, but he does give a materialist explanation of the powers of the human mind by pointing to a part of material reality (language) that has a *spiritual character*, even if he cannot completely explain why it has this character. The appeal to language, I argue, is a special kind of explanation, since it is an appeal to something that we are intimately familiar with, and yet something that we are not inclined to analyse in scientific terms. As we advance through this project, I will argue that both Berkeley and Descartes appeal to the familiarity of language, and that this is an important part of their explanations of their own metaphysical problems.

In Chapter Two, I look at Berkeley's metaphysical problem. In brief, his problem is as follows. Berkeley's ontology consists of passing ideas and perceiving minds. Ideas are pure sensations, and they are constantly being replaced by new ones. These ideas are meant to be the building blocks of our reality. But what is responsible for the *building* of these blocks? How is it that sensations consistently occur together, so as to imply the existence of a single object with multiple qualities? And why do we seem to perceive causal regularities in nature? This is to ask: how does the perceived world get its structure? And what is the nature of that structure?

Berkeley's answer to this problem is that the structure of the perceived world is a *linguistic* or *grammatical* structure. Since for Berkeley, visual perceptions are terms of a divine language (the language of nature) instituted by God (the Author of nature), the syntax and grammar of that

¹ Thomas Hobbes, *Leviathan: With Selected Variants from the Latin Edition of 1668*, ed. Edwin Curley, Underlined, Notations edition (Indianapolis: Hackett Publishing Co, Inc, 1994).p. 17.

language is what accounts for the structure of the perceived world. The grammatical rules of the language of nature govern our ideas so that they occur in regular patterns (e.g., the visual idea of fire is always followed by the visual idea of smoke) and occur together in combinations (e.g., the visual ideas of greenness and roundness are combined with the tactile idea of smoothness and the gustatory idea of tartness – and we come to recognise this as an object – ‘apple’).

I argue that Berkeley’s appeal to language is, overall, a more successful attempt to solve his metaphysical problem than Hobbes’. Berkeley presents a consistent account and doesn’t seem to leave questions unanswered, as Hobbes’ account does. Nevertheless, like Hobbes, I argue that Berkeley too makes use of the intimate familiarity of language in his explanation. He can effectively describe the world of visual perceptions and its structure in linguistic terms in part because we are so familiar with language and how it works: we inhabit language in much the same way as we inhabit the world of perceptions. The structure of the perceived world, Berkeley tells us, is just like the structure of words and sentences in our languages (that we are so familiar with, and so understand easily and naturally). Thus, Berkeley uses our familiarity with language to make something that seems very complex (and, indeed, is very complex) – the structure of reality – easier to grasp.

In Chapter Three, I begin building my case for the importance of language in Descartes’ account of sensation. To do this, I first need to look at another kind of account that has been attributed to him (notably, by Berkeley): a geometric account of visual sensation. This is the view that certain visual perceptions are the result of calculations of the angles of the optic axes. I question whether geometry and linguisticity ought to be set as alternatives to each other, and I conclude that Descartes’ account is ‘geometric’ in only two respects. First, geometrical properties can be understood as properly belonging to external objects, but this understanding is intellectual, not sensory. Second, Descartes’ *physiological* account of sensation can be described in geometrical terms, but his *psychological* account of sensation cannot. Having looked at where geometry applies in Descartes’ account, I move on to discuss what is meant by a ‘linguistic’ account of sensation. I conclude that Descartes’ account is, in fact, strikingly similar to Berkeley’s linguistic account in several important respects. I believe that it is possible for Descartes’ account of sensation to be described as geometric or linguistic, depending on which parts of the account one is considering. I conclude that Descartes’ psychological account of sensation is linguistic in that sensory ideas should be understood as the meanings of bodily signs. This central claim will be developed later in Chapters five, six and seven.

In Chapter Four, I explore Descartes’ view on language. We must try to understand his theoretical understanding of language before it can be properly applied to the sensory perception case. Descartes doesn’t make many overt remarks about language and how it works, but one of the places he is most explicit about language is during a correspondence with an anonymous author (who is most likely to be Hobbes). During this exchange, it comes to light that Descartes holds an ideational theory of meaning, whereby the meanings of words are understood to be ideas in the mind. Since Descartes doesn’t provide a complete theory of language, I look at several other later Cartesian thinkers who do provide more detailed accounts; Meyer, De Raey, and Arnauld and Nicole. I conclude that it is most reasonable to hold that Descartes had an ideational theory of meaning in mind when he referred to language. In the following Chapters, this theory will be

applied when thinking about the language analogy that Descartes uses in his descriptions of sensory perception.

In Chapter Five, I consider Descartes' distinctive metaphysical problem and I suggest that he makes an appeal to language in order to address this problem. So, what is Descartes' metaphysical problem? Descartes describes mind and body as two distinct substances with distinct natures. When we add to this his apparent commitment to a principle of causal likeness, which says that efficient causation involves something being transferred from cause to effect, we arrive at the problem: how can we say that these two dissimilar substances, body and mind, causally interact with each other? Specifically in this Chapter, I'll ask: how can states of the body be said to *cause* ideas in the mind, as seems to happen in sensory perception?

First, I consider the responses that Descartes gives to Elisabeth and Gassendi when they put their iterations of this problem to him. To both Elisabeth and Gassendi, Descartes explains that a properly philosophical or metaphysical understanding (an understanding grounded in clear and distinct ideas) of the relation between the mind and the body cannot be reached.² Instead, he suggests that they aim for an understanding that is different in kind from the metaphysical understanding they have of body-body relations: a practical or sensory understanding, grounded in our experience.³ The knowledge of the relation and interaction between the mind and the body, Descartes tells us, is in the domain of the senses.

Although he can therefore offer no metaphysical explanation, Descartes does offer the language analogy (which he makes in many of his works), through which our practical understanding of the union can be improved. In the next part of Chapter Five, I apply the Cartesian theory of language to sensory perception. I suggest, in line with Descartes' language analogy, that the body's relationship to the mind in sensory perception should be thought of as the same kind of relationship as the one that exists between words and meanings. In summary, I suggest that it's helpful to understand the Cartesian human being as a linguistic system, wherein the body (specifically the brain) makes signs or 'words' that correspond to and stimulate ideas or 'meanings' in the mind.

I argue that we can use the analogy with language to gain a practical understanding of the relation between the body and mind, although we should not use it to try and gain a properly metaphysical understanding. Again, I suggest that, like Hobbes and Berkeley, Descartes makes the appeal to language because language is something that is intimately familiar to us. Descartes uses our familiarity with language to make something that is difficult or impossible to grasp (the relation between two distinct substances) into something recognisable. The analogy with language, I argue, illuminates aspects of the process of sensory perception that seem the most mysterious. These are:

² Descartes might use the term 'philosophical understanding' rather than 'metaphysical understanding'. I have mostly used the term 'metaphysical understanding' in this thesis, but I take these to be the same: understanding grounded in clear and distinct ideas. Douglas uses 'philosophical' in this sense. See: Alexander Douglas, 'Descartes and the Impossibility of a Philosophy of Action', in *Descartes and Cartesianism: Essays in Honour of Desmond Clarke*, ed. Catherine Wilson and Stephen Gaukroger (Oxford: Oxford University Press, 2017). p.149.

³ I use the term 'practical' in contrast to 'theoretical' – I mean an understanding rooted in our experience, rather than in the intellect.

the problem of body-mind causation and the problem of sensory representation. I look at each of these in turn in Chapters six and seven.

Chapter Six concerns the problem of body-mind causation in sensory perception for Descartes. I argue that the linguistic interpretation of the Cartesian human being helps to reconcile a passage from the Sixth Meditation, wherein Descartes tells us that our sensory ideas have to come from things outside of us, with a passage in the *Comments on a Certain Broadsheet*, wherein Descartes tells us that all of our sensory ideas are innate. If we understand the causal relationship between the patterns of nerves in the brain and our sensory ideas as akin to that between words and meanings, we can make sense of this apparent discrepancy by appealing to a particular kind of causation: occasional causation. I suggest that the language analogy gives us a practical way of understanding the occasional-causal process that leads to the stimulation of sensory ideas.

Finally, in Chapter Seven, I argue that the linguistic interpretation means that we can make sense of the idea that our sensory ideas and states of the brain represent objects and features of the external world. Since Descartes tells us that sensory ideas are not efficiently caused (as in, brought into existence) by external things, and since they do not resemble those things, it's hard to account for how they can successfully represent those things – as most accounts of representation rely on causation, resemblance, or a combination of the two. Again, the linguistic interpretation provides an answer here. In essence, I argue that bodily signs, sensory meanings, and external objects are bound by conventional relations, just like those of a language, which are underpinned by God.

In this thesis, my aim is not to argue for the success of the explanations advanced by Hobbes or by Berkeley. I do think that each of their appeals to language holds some explanatory value, and I argue for this, but it is not my aim to strongly defend their accounts. However, it *is* my aim to defend the explanatory power of Descartes' account. In chapters five to seven, I argue that Descartes' language analogy presents an illuminating solution to the body-mind problem in the case of sensation in that it gives us exactly the kind of understand of body-mind relations that Descartes thinks it is possible to have: an understanding rooted in our experience.

Nevertheless, in including the accounts of Hobbes and Berkeley, I hope to prompt reflection on why Early Modern thinkers appeal to language in order to address metaphysical problems. I suggest that these appeals hold explanatory value at least in part because they are appeals to the familiar and the experienced. I think all three philosophers I consider here manage to relate something very puzzling (the powers of thought, the structure of reality, and the connection between the body and the soul) to language, which is something intimately familiar to us. They do this without having to scrutinise exactly how language works: we gain explanatory insight from the comparison because we already have a practical understanding of how language works. The explanations they provide are not metaphysical or scientific explanations. To put it in Cartesian terms, these explanations are not reducible to clear and distinct ideas. But I suggest that this does not mean they are not valuable explanations in their own right.

Chapter One

Hobbes on Language and the Transformation of the Mechanistic Mind

“He gave them speech, and they became souls.”

Alfred North Whitehead

The first two chapters of this thesis are devoted to the philosophies of Hobbes and Berkeley. I spend time looking at these two philosophers with the intention of showing that, for both of them, language plays a crucial role in the solution of their distinctive metaphysical problems. As stated, my ultimate aim in this project is to show that Descartes also fits into this pattern of explanation by making a similar appeal to language to resolve or reinterpret one of his distinctive metaphysical problems: the problem of body-mind relations in the case of sensation. I propose that, well before the ‘linguistic turn’ of twentieth-century philosophy, theories of language play a much more important role in solving metaphysical problems in the Early Modern period than is often recognised.

We begin with Hobbes (1588-1679). In this first chapter, I’ll show that an appeal to language helps to solve a metaphysical problem for Hobbes. So, what is Hobbes’ problem? As a materialist, he believed that everything in the world is material in nature, including minds and ideas.¹ Thinking, according to Hobbes, is a material and mechanical process.² The problem Hobbes faces is this: how can a mind, in all its complexity and flexibility, arise out of pure material mechanism? In answer to this, Hobbes appeals to language. Whilst he thought that it was possible to explain some aspects of the mind, like the capacity for passive sensation, in terms of bare material mechanism, it becomes problematic to try and explain how material, mechanistic minds could be capable of abstract and active thought. It is not until the invention of language, he thinks, that the mind transforms from the purely passive animal mind into a mechanism capable of active and abstract thought; a mind that is recognisable as the *human* mind.

¹ See: Hobbes, *Leviathan*. *Leviathan*. p.459.

² In Chapter Seven of ‘Human Nature’, Hobbes clarifies his mechanistic view, writing that “conceptions and apparitions are nothing really but motion in some internal substance of the head” (Thomas Hobbes, *The English Works of Thomas Hobbes Volume 4*, ed. William Nassau Molesworth (Kessinger Publishing, 2010), 31.) This mechanist materialist position stands in contrast to materialist but non-mechanist positions, such as Cavendish’s position (see: Stewart Duncan, ‘Minds Everywhere: Margaret Cavendish’s Anti-Mechanist Materialism’, *Unpublished*, 2014, <https://philarchive.org/archive/DUNMEM>).

I do not intend to show here that Hobbes *successfully* solves his metaphysical problem in a philosophically robust way. Rather, I suggest that Hobbes appeals to language because it is a part of reality that *seems* to be both material *and* abstract (even if, on closer inspection, it is hard to make sense of this). Whilst Hobbes leaves many philosophical questions unanswered (for one, it is not clear *how* language can be both material and abstract), I argue that his appeal to language does still hold explanatory power, since it is an appeal to something intimately familiar to us. I think that his account reveals the type of explanatory role that language plays: it is an appeal to the familiar.

1. The Mechanistic Universe

I'll begin with a brief description of Hobbes' materialist worldview. Hobbes believed that "the world [...] (that is, the whole mass of all things that are) is corporeal (that is to say, body) and hath the dimensions of magnitude (namely, length, breadth, and depth)." Later in this same passage, he clarifies: "that which is not body is no part of the universe. And because the universe is all, that which is no part of it is nothing (and consequently, nowhere)."³ For Hobbes, then, if something exists then it is material, extended body.

In contrast to many thinkers before him and, indeed, during his time, Hobbes did not believe in the existence of an immaterial soul, or even an immaterial component of the soul. In light of the quotations above, it won't surprise you that he asserts that terms like "incorporeal substance" are contradictory and therefore meaningless or nonsensical. It is not unreasonable to assume that he is thinking in part about Descartes' *Meditations* in the following passage:

But the abuse consists in this, that when some men see that the increases and decreases of quantity, heat, and other accidents can be considered, that is, submitted to reasons, as we say, without consideration of bodies or their subjects (which is called "abstraction" or "existence apart from them"), they talk about accidents as if they could be separated from every body. The gross errors of certain metaphysicians take their origin from this; for from the fact that it is possible to consider thinking without considering body, they infer that there is no need for a thinking body; and from the fact that it is possible to consider quantity without considering body, they also think that quantity can exist without body and body without quantity, so that a quantitative body is made only after quantity has been added to a body. These meaningless vocal sounds, "abstract substances," "separated essence," and other similar ones, spring from the same fountain.⁴

This passage contains one of Hobbes' key arguments against soul-believers such as Descartes.⁵ Just because one can consider 'thinking' apart from 'body' does not mean that thinking can *exist* without body (Hobbes neglects to examine Descartes' clarity and distinctness constraint in this argument!). The problem, Hobbes thinks, begins with abstraction. It is a mistake to abstract, using our words, some accident away from its subject and then suppose that accident can *exist* without that subject to inhere in. Even though we can talk about accidents apart from bodies – for

³ Hobbes, *Leviathan*. p.459.

⁴ Thomas Hobbes, *The English Works of Thomas Hobbes of Malmesbury: Volume 1* (London: Adamant Media Corporation, 2004). *De Corpore*. p.33.

⁵ Hobbes also had Aristotle in mind as a target for this criticism. See: Hobbes. *Leviathan*. p.459-460.

example, when we use the word ‘heat’ – we should not assume from this that heat, which is just some way that a body can be, can exist apart from a body.

For Hobbes, the mind, like everything else, is material. It is a complex configuration of matter and the intricate motions of that matter account for our mental capacities like sensation, imagination, and so on.⁶ The question that Hobbes recognises, and that still preoccupies materialist philosophers today, is how the mind that is familiar to us – the multifarious mind that can reason, desire, create, and abstract – can result from these bare material mechanisms.

The first aspect of the problem that I’ll consider here can be outlined as follows: material things are all concrete and particular, but thoughts are sometimes abstract and universal. So, how can we say that these thoughts are material? Or, how can a material thing that is particular, like a particular pattern of movement in the brain, represent something universal, like ‘man’ or ‘triangle’?

One of the upshots of including an immaterial soul or mind in your ontology is that it allows for a relatively straightforward explanation of universal and abstract concepts. Descartes, for example, describes “the things we call universals” as simply “mode[s] of thinking”.⁷ Descartes can explain universals with ease: “universals arise solely from the fact that we use one and the same idea for thinking of all individual things which are similar to each other”.⁸ According to Descartes, we can have an idea in the mind, say the ‘triangle’ idea, which we can then apply to any particular triangle we might see. Since our ideas are not material, this means that they need not be *concrete* and *particular* and this, crucially, is why Descartes can appeal to such a simple explanation. Our ‘triangle’ idea need not be of a scalene triangle, or a triangle with all sides equal to five centimetres: there need be nothing particular about it. For Descartes, the idea can be thought of as simply the meaning of the word “triangle”, and since that word can be used to correctly name all particular triangles, so too can the idea be used to think about all triangles (or, at least, all the things they have in common).⁹

In contrast to an immaterial idea, a material thing – be it a rock, a chair, or a motion in the brain – will *always* be particular. Any idea (impression in the brain) of a triangle that Hobbes has will be either of a scalene or isosceles triangle. So, Hobbes paints himself into a particular and concrete corner. Material things are all concrete and particular, but thoughts seem to be, at least sometimes, abstract and universal. So how can these thoughts be material? In order to try and solve this, Hobbes needs to find something in the all-material universe that can be abstract and universal which he can use to explain what these thoughts are. As we’ll see, he finds *words*.

⁶ As Petit notes, Hobbes does not seem to be interested in the question of consciousness – the question of ‘what it is like’ to sense, imagine, and so on. See: Philip Pettit, *Made with Words: Hobbes on Language, Mind, and Politics* (Princeton, NJ: Princeton University Press, 2009). Ch.1, footnote 4 (p.156).

⁷ René Descartes, *The Philosophical Writings of Descartes: Volumes 1 & 2* trans. John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge Cambridgeshire ; New York: Cambridge University Press, 1985). *Principles*. CSM I 58, AT VIIIA 27.

⁸ *Principles*. CSM I 59, AT VIIIA 27.

⁹ Famously, Berkeley argues against the existence of general ideas. This will be explored in the next Chapter (Chapter Two). Descartes held: “whenever I express something in words, and understand what I am saying, this very fact makes it certain that there is within me an idea of what is signified by the words in question” (AT VII, 160, CSM II, 113). Descartes’ views on language and ideas will be explored in Chapter Four.

Another aspect of the human mind that proves difficult to explain as a strict materialist is its voluntary activity. As will become clear in the next section, Hobbes' takes the pre-linguistic 'natural' mind to be entirely passive: objects 'press' upon the sense organs to create representations in the material body. However, the mind of a human being is not (or, at least, seems not to be) entirely passive. Human beings seem to be capable of thinking of things voluntarily, even without those things being immediately present to (or pressing on) the sense organs. Hobbes proposes that words are the solution here too.

Before we get to Hobbes' proposed solutions, I'll first consider in a bit more detail what Pettit calls "the natural mind" in Hobbes; a term used to describe the pre-linguistic mind that encompasses all those capacities that we share with non-human animals, like passive sense and limited memory. Then, I'll consider Hobbes' remarks on language and the transformative effects that it has on the natural mind to turn it into the distinctively human mind: a mind capable of active and general thought. I conclude that language plays an indispensable role in Hobbes' explanation of the activity of the human mind and its capacity to entertain general concepts. Without language, Hobbes cannot explain the capacities of the human mind whilst maintaining his materialist metaphysics.

2. The Natural Mind and its Transformation

In *Leviathan, Elements of Law* and *De Corpore*, Hobbes presents a picture of the mind that we have in common with the animals: a mind capable of passive sensation and imagination. Here, I'll give a brief overview of his account before examining his claim, which Pettit describes as "the most startling and original claim that he makes in the whole of his philosophy", that language moves our minds beyond their natural state.¹⁰

2.1 Sensing and Imagining

For Hobbes, a thought or idea is "a representation or appearance" of an object.¹¹ Objects impact, or "presseth", upon our sense organs, creating motions which "by mediation of the nerves and other strings and membranes of the body" reach our brains and hearts.¹² This is the causal process that leads to our sensory experience: "to the eye, in a *light* or *colour figured*; to the ear, in a *sound*; to the nostril, in an *odour*; to the tongue and palate, in a *savour*; and to the rest of the body, in *heat, cold, hardness, softness*, and such other qualities as we discern by *feeling*."¹³ These sensations, according to Hobbes, are nothing but the diverse motions in the body that occur when the sensory

¹⁰ Pettit, *Made with Words*. 2009. p. 25.

¹¹ Hobbes, *Leviathan*, p.6.

¹² Ibid.

¹³ Ibid. p. 6-7.

organs are impacted upon by external objects. Hobbes, following a traditional Scholastic interpretation, uses the term 'idea' to refer to an image in the imagination or a 'phantasm'.¹⁴

Hobbes describes the imagination as "decaying sense".¹⁵ After an object is removed, say from one's line of vision, a visual appearance or representation of the object may remain, albeit murkier than it was before. He writes: "For after the object is removed, or the eye shut, we still retain an image of the thing seen, though more obscure than when we see it."¹⁶ For Hobbes, imagination and memory "are but one thing".¹⁷ They are the motions that remain in the body following the initial impact upon the sense organs by some external object. These motions gradually weaken as they are hindered by other motions set up by other objects impacting upon the sense organs (as we see or hear other things).

For Hobbes then, ideas or thoughts are entirely material. They are motions in our bodies and brains following the impact of external objects on our sense organs. Hobbes is able to explain the processes of passive sensation and imagination exclusively in material terms. Sensory ideas are "pressed" into natural minds and perhaps retained for a while, or associated with different previous impressions, but that's about it. The pre-linguistic man is carried, as Sorell puts it, by "a constantly flowing stream of consciousness" – and he is without a paddle.¹⁸

2.2 Passivity and Particularity

As I've mentioned, there are two important limits on the natural mind for Hobbes. The first is that natural minds are entirely passive.¹⁹ The ideas that creatures with natural minds have at a given moment come about as a result of the objects that impact their bodies at that time. This means that natural minds cannot summon ideas voluntarily. At this moment, I have the ideas of my computer screen, the sound of my fingers tapping on the keys, and the smell of my cup of coffee next to me. I am not actively trying to bring these ideas to mind. Rather, I am having these ideas because these objects (my computer, my coffee, etc.) are impacting upon my sense organs and bringing them about. The smell of my coffee might, without my willing it, draw up an associated memory, like Proust with his madeleine. But I am still passive in relation to all these

¹⁴ See: Thomas Hobbes, *Elements of Philosophy, the First Section Concerning Body [De Corpore]*, (Early English Books Online) (London: R. & W. Leybourn, 1656). 4.XXV.2, 291-2.

¹⁵ Hobbes, *Leviathan*. p. 8.

¹⁶ Ibid.

¹⁷ Ibid. p.9.

¹⁸ Tom Sorell, *Hobbes*, 1st edition (London: Routledge, 2008). p.38.

¹⁹ Note that the difference between human and animal minds is not that the former are capable of voluntariness in action while the latter are not. Animals, like humans, are capable of action (without impediment) that results from a desire or passion, which is all voluntariness seems to be for Hobbes. As Pink notes, for Hobbes: "liberty is no more peculiar to rational humans than is this passive voluntariness – which can be found as much in animal action as in human." (Thomas Pink, *Hobbes*, in: Timothy O'Connor and Constantine Sandis, eds., *A Companion to the Philosophy of Action*, 1st edition (Chichester, West Sussex, United Kingdom ; Malden, MA: John Wiley & Sons, 2012). p.478). The point is rather that animals are not capable of using marks for remembrance, and therefore cannot use these marks to bring about a thought or conception. [See: *Elements of Law*, Ch.5. Thomas Hobbes, *Human Nature and De Corpore Politico*, ed. J C A Gaskin, Oxford Classics (Oxford: Oxford University Press, 1994).]. It is this peculiar kind of voluntariness and reasoning that language affords to human beings.

experiences in that I am not choosing to have them. For Hobbes, when minds are in this natural state, all experience is like this.²⁰

However, with the use of words or ‘marks’ – my own mental discourse or inner conversation – I am able to pose questions to myself, bring up thoughts of Hobbes and his writings, and record them on paper for you to read and respond to (kindly, I hope). I do this without these things being immediately present to my senses, and I also do this without being passively swept along by an unordered train of associations – as Hobbes describes the state of the natural mind: “one conception followeth not another, according to our election, and the need we have of them, but as it chanceth us to hear or see such things as shall bring them to our mind.”²¹ He adds that this experience of passive association is shared with the “brute beasts” and that it is not until we acquire the use of language that we develop “above the nature of beasts”. Man develops beyond the animals by setting up “visible or other sensible mark[s], the which when he seeth again, may bring to his mind the thought he had when he set it up.”²²

Hobbes describes a ‘mark’ as follows: “A mark therefore is a *sensible object* which a man erecteth *voluntarily to himself*, to the end to remember thereby somewhat past, when the same object is presented to his sense again.”²³ Note that Hobbes describes the erecting of marks as something that humans do *voluntarily*.²⁴ We bring these marks to mind willingly, without anything necessarily impressing on our sense organs. It is also important to notice that marks are described as *sensible objects*. Hobbes understands language, just like everything else, as something entirely sensible and material. Words are physical entities in so far as they are marks on a page when we write them, vibrations in the air when we speak them, or movements in the body/brain when we internally ‘speak’ them.

Again, in chapter four of the *Leviathan*, Hobbes explains that the use of language gives us the ability to register “the consequences of our thoughts, which being apt to slip out of our memory and put us to a new labour, may again be recalled by such words as they were marked by.”²⁵ So, “the first use of names is to serve for *marks* or *notes* of remembrance.”²⁶ However, words do not only serve as marks, they also serve as *signs* – “signs of our conceptions”.²⁷ Words are signs only

²⁰ Hobbes notes that minds, even in their natural state, are capable of *limited* rationality. Natural minds may passively associate ideas to generate trains of thought directed towards some end. These are usually prompted by a desire or a fear. He writes that the impressions of things that we desire or fear are “strong and permanent” – enough to prompt us to think of how to bring them about or how to avoid them. (Hobbes. *Leviathan* p.13.) These thoughts about how to seek/avoid what we desire/fear may come to mind through association, but this will only happen if we have had the right experience, since nothing can be in the mind that we have not previously experienced through the senses. It is important to Hobbes that we do not think of this process as an *activity* of the mind. Rather, it is a passive association of ideas, ultimately prompted by something external, and any rationality that emerges is natural and not voluntarily directed.

²¹ Hobbes. *Elements of Law*. p.34.

²² Ibid. p.35.

²³ Ibid. (My emphasis.).

²⁴ See also: “Speech or language is the connexion of names *constituted by the will of men* to stand for the series of conceptions of the things about which we think.” (*De Homine*, in: Thomas Hobbes, *Man and Citizen*, ed. Bernard Gert (Indianapolis: Hackett, 1991). p.37).

²⁵ Hobbes. *Leviathan*. p. 16.

²⁶ Ibid.

²⁷ Hobbes. *De Corpore*. p. 17.

when they are used as tools of interpersonal communication.²⁸ Hobbes uses the term ‘name’ to capture this dual use of words: “A name is a word taken at pleasure to serve for a mark, which may raise in our mind a thought like to some that we had before, and which being pronounced to others, may be to them a sign of what thought the speaker had, or had not before in his mind.”²⁹

When we communicate with others, we engage in a voluntary activity.³⁰ When we use words as marks, so Hobbes thinks, it is like we are speaking with ourselves – which is just as voluntary as speaking with another person. As Pettit puts it: “I can also ask myself questions, invite myself to ponder the answers, and take up that invitation in an intentional effort to deal with the questions. And doing this, plausibly, is precisely what *active thinking* requires.”³¹ Voluntary thinking then, for Hobbes, is actively using these marks to direct our thoughts. Before the use of these marks, the mind is bound to follow the successions of thoughts that occur after objects impact on the sense organs. After these marks are put into use, the transformed mind has some power to direct itself. It is no longer simply swept along with the associated thoughts that occur when this thing or that thing impacts upon the body.

As numerous scholars have described, Hobbes thinks that language furnishes the mind with the power to actively *reason*, rather than just passively follow a string of associated ideas. As Pink summarises: “reason involves something importantly extra-mental – not a further part of the mind, but the use of a tool, language [...] Human reasoning is simply a form of thinking that uses and is concerned with language.”³² Words allow us to order, direct, combine and dissect our ideas. For Hobbes, reasoning is nothing but “adding and subtracting” names, which we can do *voluntarily*, in contrast to the animals.³³

²⁸ Ibid. p. 14.

²⁹ Ibid. p. 16.

³⁰ There’s a worry here. Hobbes, as a materialist, is committed to causal determinism (see Hobbes 1656, 302). He thinks that freedom to determine oneself is nonsensical: “And if a man determine himself, the question will still remain what determined him to determine himself in that manner” (Thomas Hobbes and John Bramhall, *Hobbes and Bramhall on Liberty and Necessity*, ed. Vere Chappell, (Cambridge: Cambridge University Press, 1999). p.72). So, how can anything be truly voluntary at all? A voluntary action should be understood, according to Hobbes, as an action preceded by a desire. A man is at liberty to perform that action if there is nothing stopping him. Since the use of words, whether for internal or external discourse, is preceded by a desire (to communicate/recall/discover a truth/etc.), it is a voluntary activity. And, since we come to think with words, we can say that the thinking itself becomes voluntary. For more on Hobbes’ theory of action, see Pink (2012). For more on active thought with words, see Pettit (2008).

³¹ Pettit, *Made with Words*. p. 38. My emphasis.

³² Pink (2012) p.476. Also see Bertman: Language is so central to Hobbes’ understanding of reason that, in his early writings, he believed that without words reason was impossible. (Martin A. Bertman, ‘Hobbes on Language and Reality’, *Revue Internationale de Philosophie* 32, no. 126 (4) (1978): 536–50. p.537).

³³ See Hobbes: “Out of all which we may define, (that is to say determine,) what that is, which is meant by this word Reason, when we reckon it amongst the Faculties of the mind. For REASON, in this sense, is nothing but Reckoning (that is, Adding and Subtracting) of the Consequences of general names agreed upon, for the marking and signifying of our thoughts; I say marking them, when we reckon by ourselves; and signifying, when we demonstrate, or approve our reckonings to other men.” (Hobbes, *Leviathan*. p.22-23)
See also: “For besides Sense, and Thoughts, and the Trayne of thoughts, the mind of man has no other motion; though by the help of Speech, and Method, and the same Facultyes may be improved to such a height, as to distinguish men from all other living Creatures.” (Hobbes, *Leviathan*. p. 23.)

The second important aspect of the natural mind is that it is entirely particularistic. In the *Elements of Law*, Hobbes tells us that “experience concludeth nothing universally”.³⁴ He gives an example in *De Corpore*:

For example, if any man, by considering a triangle set before him, should find that all its angles together taken are equal to two right angles, and that by thinking of the same tacitly, without any use of words either understood or expressed; and it should happen afterwards that another triangle, unlike the former, or the same in a different situation, should be offered to his consideration, he would not know readily whether the same property were in this last or no, but would be forced, as often as a different triangle were brought before him (and the difference of triangles is infinite) to begin his contemplation anew; *which he would have no need to do if he had the use of names*, for every universal name denotes the conceptions we have of infinite singular things.³⁵

Before developing the use of words, people will see and represent only particular situations and objects. They will not be able to hold to general claims or entertain universals. As Pettit puts it, they are “prisoners of the imagined particular.”³⁶ In the example Hobbes gives, the man without language can recognise the particular triangle and notice what is true of it, but he is unable to classify it, or apply what he discovers to any other triangle. In order to make classifications, he would need a name under which to classify it. This is especially important to Hobbes, since making classifications is a crucial part of science. “Universal names” as Sorell puts it “are the items of scientific vocabulary [...]” and “[o]nly the linguistically competent man, and one possessed of universal names, is a potential scientist.”³⁷

Although, for Hobbes, it remains true that we can only have ideas of particular things, with words we are able to represent general features to ourselves and others, and group particulars together according to those features. Hobbes writes that there is “nothing in the world universal but names, for the things named are every one of them individual and singular”.³⁸ We are unable to have general *ideas*, for example, an idea of *man* in general, but we can have the word, ‘man’, which denotes several of our ideas (i.e. our ideas of particular men – John, Peter, and so on). We are able, after acquiring words, to understand that the word ‘man’ applies equally to John *and* Peter. Thus, we recognise that there is some general feature (or set of features) that they have in common that is expressed in the word ‘man’.

Hobbes thinks that the move from the particularistic to the general is made possible because with words we can signify *different* conceptions of the *same* object. Hobbes writes that, with words, we are able “to think not only of the thing, but also by turns to remember the divers names, which for divers considerations, thereof are applied to the same”.³⁹ So, we gain the ability to conceive of the same thing under different aspects. This, in turn, makes us able to refer to those aspects in their own right.

³⁴ Hobbes, *Human Nature and De Corpore Politico*. p.33.

³⁵ Thomas Hobbes, *The English Works of Thomas Hobbes of Malmesbury: Volume 4* (Adamant Media Corporation, 2004), 79–80. My emphasis.

³⁶ Pettit, *Made with Words*. p.24.

³⁷ Sorell, *Hobbes*. p.39-40

³⁸ Hobbes, *Leviathan*. p. 17.

³⁹ Hobbes, *De Corpore*. p. 50.

Hobbes gives the following example of this:

For example, in the conception of *man* [...] First, he is conceived to be something that has extension, which is marked by the word *body*. *Body*, therefore, is a *simple name*, being put for that first single conception; afterwards, upon the sight of such and such a motion, another conception arises, for which he is called an *animated body*; and this I here call a *compounded name*, as I do also the name *animal*, which is equivalent to an *animated body*. And in the same manner, an *animated rational body*, as also a *man*, which is equivalent to it, is a more compounded name.⁴⁰

Now, we might object that this account is circular. If we are unable to conceive of general aspects before the invention of language, then how can we learn to use general terms to denote those general aspects? Don't we need to be able to recognise the general aspects that we then go on to name?

Pettit notes this objection and offers an answer that he thinks can be excavated from what Hobbes says. His answer, in essence, is that, prior to the invention of words, we recognise the general aspects of things only subliminally. Thus, we can still make sense of the idea that words give us the capacity for general thought, since any recognition of general aspects prior to the invention of words went entirely unnoticed.⁴¹

I don't aim to determine whether or not this response successfully answers to the circularity objection because it is not my intention to demonstrate that Hobbes *successfully* solves all of his problems by appealing to language. It is only my intention to show that Hobbes uses language to fill (successfully or unsuccessfully) his explanatory gaps.

Of course, there are many further objections that one might put to Hobbes. For example, how is it that limited natural minds come to invent language in the first place? And why is it that other animals have not invented language and escaped the limits on their own mental capacities? On these points, Hobbes doesn't provide very satisfying answers. In *Leviathan*, Hobbes' answer seems to be that God was responsible for language in the first instance: "The first author of speech was God himself" who instructed Adam to name the animals.⁴² However, in *De Homine*, Hobbes says that "names have arisen from human convention" and by their "own will".⁴³ If humans developed language themselves, this is because their natural curiosity is more forceful than the animals': "man leaveth all community with beasts at the faculty of imposing names; so also doth he surmount their nature at this passion of curiosity."⁴⁴

Daniel Tammet writes that: "The dumb presence of objects is a silence that prods human beings into speech."⁴⁵ Perhaps that's a good way to capture Hobbes' story of the invention of

⁴⁰ Hobbes. Computation or Logic. *English Works*. Vol. 1. p.24.

⁴¹ Pettit, *Made with Words*. p.33-34.

⁴² Hobbes, *Leviathan*. p.16.

⁴³ Hobbes, *De Homine*. p.38.

⁴⁴ Hobbes, *The Elements of Law*. p.57.

⁴⁵ Daniel Tammet, *Every Word Is a Bird We Teach to Sing: Encounters with the Mysteries and Meanings of Language*, Reprint edition (Little, Brown Spark, 2018). p.253.

language. Yet, the origin story (whatever we make of it) does not interest me as much as his use of language as an explanatory tool. Why does Hobbes' think that language can explain these distinctively human aspects of mind?

We started with the following problems: material things are all concrete and particular, but thoughts are sometimes abstract and universal. So how can these thoughts be material? In addition, ideas (impressions in the body/brain) are the result of an object's physical interaction with the sense organs, but sometimes we think voluntarily without direct sense organ stimulation – so how do these thoughts come about? Hobbes needs to find something in the all-material universe that can, at least sometimes, be abstract, universal and desire-motivated, which we can use to explain these distinctively human powers of thought.

Words fit the bill (at least, on the face of it). Hobbes can describe words in material terms – they are “sensible things” – marks on a page, sounds in the air, or patterns of movement in the body/brain.⁴⁶ They are also universal things - “nothing in the world universal but names”.⁴⁷ And they are things that we bring to mind “voluntarily”.⁴⁸ Hobbes manages to shift the focus onto a part of reality (language) that seems on the one hand to be material and on the other active and universal.

Upon reflection, this view is vulnerable to questioning. For one thing, if words are understood as *purely* material things, then aren't they all concrete and particular too? If I write the word 'triangle' twice, each of those page marks is particular – so how can we agree with Hobbes that the name 'triangle' is universal? We would have to ask him “which 'triangle' is universal?”⁴⁹ To use a *single* word, we would have to be like the wise men in *Gulliver's Travels*, except we wouldn't be carrying around objects in our packs in order to make conversation but bits of paper with words written on them – the written words would be as particular as the objects they name!⁵⁰

We could say something here about how words come to mean what they mean for Hobbes (and a little more will be said about this in Chapter Four), but my interest here is not to try and iron out the details of Hobbes' proposed solution.⁵¹ Instead, I'm interested in reflecting on why Hobbes thinks the answers lie in the invention of language. The answer, so I'd like to propose, is

⁴⁶ Hobbes, *De Corpore*. p.14.

⁴⁷ Hobbes, *Leviathan*. p. 17.

⁴⁸ Hobbes, *Elements of Law*. p.35.

⁴⁹ Typically, we might think that words have the capacity to capture universal concepts because they correspond to a universal idea. This is an option available to Descartes, who believes there can be such a thing as universal ideas. Of course, for Hobbes, all ideas are particular, so this option isn't available to him. Recall the circularity objection explained above.

⁵⁰ Jonathan Swift, *Gulliver's Travels*. <http://www.literaturepage.com/read/gulliverstravels-154.html> [Accessed: 15.08.2022].

⁵¹ Krook distinguishes two language theories in Hobbes' philosophy. The first she calls the 'psycho-physiological' theory (the theory of language [sounds in the air or marks on paper] as a system of mnemonic marks and tools for communication). This is the theory that I have focussed on in this chapter. The second is the theory of language as a *discourse*. Meaning and truth are properties of language in this sense. (Dorothea Krook, 'Thomas Hobbes's Doctrine of Meaning and Truth', *Philosophy* 31, no. 116 (1956): 3–22. p.4-5). I think she is right to separate these theories and suggest that they be kept apart in discussion. I have done just that here – which is why I have not made it my business to comment on Hobbes' theory of meaning.

that language is a very special and slippery bit of reality – a part of reality that *seems*, when you're 'in it', to be abstract, universal, active, and material all at once.

3. Language: An Appeal to the Familiar

In this thesis, my aim is to bring to light this pattern of explanation that, I argue, multiple Early Modern philosophers fit into. Hobbes, Berkeley, and Descartes – each with their wildly different ontologies – all try to shed light on metaphysical problems by bringing language into their explanations. For Hobbes, as we've seen, he appeals to language because it is the only part of *material* reality that can conceivably be *active*, *abstract*, and *universal*.

I suggest here that we find it quite easy to accept that language is active, abstract, and universal in part because these qualities of language are so familiar to us. I think that this is one reason why Hobbes' explanation (lacking though it is) seems like it might work. We have all *experienced* using words at will to talk about things in general, and we can accept that language is a part of material reality – who would deny that sounds or marks are material things? Further, this is something that we directly experience basically all the time. We are so familiar with it that we rarely stop to think critically about how language can be, at the same time, material and abstract.

I pointed out several problems with Hobbes' view in the preceding section which might lead us to conclude that Hobbes doesn't actually *solve* any of his problems by appealing to language. Many questions remain unanswered. *How*, exactly, does the invention of language endow the mind an active power? How can a concrete and particular thing (like a written or spoken word) also be a universal thing – or, alternatively, what makes a variety of particular marks or sounds count as *one* word? How can we learn to use words to name things that we don't have ideas of? Arguably, Hobbes still doesn't have a philosophically robust explanation for the human mind's capacities on his strict materialist worldview. Does this mean, then, that this appeal to language tells us nothing?

I suggest that it does not tell us *nothing*. It is an explanation of a sort. There are different kinds of explanations that we can give: some are robust, metaphysical or scientific explanations, while others aim to shed light by drawing our attention to something that we already understand well. I suggest that Hobbes is trying to draw our attention to something that we already have an intimate familiarity with, and that this is partly why his explanation seems like it might work. Sorell describes Hobbes' explanation as an invocation of the “unanalyzed power of written and spoken things”.⁵² I'd like to spend the last part of this Chapter reflecting on this appeal to the 'unanalyzed'.

Hobbes does not have to analyse the powers of language in order to generate his explanation. His explanation seems to work because we are already familiar with the powers of language. In *The Language Instinct*, Steven Pinker writes that language and the powers it affords us “comes so naturally that we are apt to forget what a miracle it is.”⁵³ Insofar as miracles are

⁵² Sorell, *Hobbes*. p.38.

⁵³ Steven Pinker, *The Language Instinct: How the Mind Creates Language*, 1st edition (London: Penguin, 2015). p.13.

unanalyzable, I suggest that Hobbes' appeal to language is an appeal to a kind of miracle – although different, perhaps, from our usual conception of a miracle.

Jesus performed a miracle when he walked on the water.⁵⁴ His disciples were awed when they saw him walking out to the boat. But we are not awed each time we speak or listen because we are, as Pinker says, apt to *forget* how miraculous language is. It is as if we are walking on water *all the time*, and we are so used to it that we don't even notice what we are walking on. If we were to ever stop to think about it, we'd surely ask 'how is this happening?!' – and we wouldn't be able to give a very good answer. Human beings inhabit language. It is so familiar that it becomes invisible, but that does not make it less mysterious.

This is why an appeal to language is a special kind of explanation. It is an appeal to something that we are intimately familiar with, and, yet something that might be hard to completely explain when we think about it critically and philosophically (especially, I think, if we are materialists). Language, as sounds and marks, is the part of material reality that is the closest to the spiritual: it seems to slip imperceptibly between the material and immaterial. Particular bits of matter somehow come to express universal concepts, and thinking animals somehow escape their bondage to the concrete and immediate. Even though this is somewhat 'miraculous' or difficult to analyse, we have all *experienced* using words voluntarily and generally. I think that this is why Hobbes' explanation seems like it works.

Hobbes gives us an attempt at a materialist explanation of the powers of the human mind by pointing to a part of material reality that has this spiritual character, even if he cannot completely explain *why* it has this character. Hobbes is not the only philosopher to pick up on just how special a capacity language is. Many other philosophers recognise the capacity for language as the feature that distinguishes human beings from non-human animals. Descartes, for example, maintains that immaterial souls are responsible for man's unique capacity for language, but, as mentioned above, Hobbes does not believe in the existence of immaterial souls. As a materialist, Hobbes must see language as a physical phenomenon – which, of course, it is, at least in certain respects. Descartes, on the other hand, sees language as a physical manifestation of an immaterial mental activity (thinking). As we'll see, Descartes also has a mystery to explain – the connection between the material and immaterial. In Chapter Five, I will argue that Descartes appeals to language to try and shed light on this mystery, just as Hobbes has done with respect to his own mystery. In the Chapter that will follow now, I will argue that Berkeley does the same.

4. Conclusion

Here, I have looked at Hobbes' materialist view of the human mind. Hobbes makes an appeal to language in order to account for the unique capacities of the human mind that are difficult to account for on a strict materialist picture: its capacities for active and general thought.

⁵⁴ Matthew 14:22-31. Various, *HOLY BIBLE: King James Version* (Collins, 2011).

He can preserve his commitment to materialism, since he thinks about language as a physical phenomenon, whilst also seeming to account for the complex mental capacities that human beings have. I note that Hobbes leaves many philosophical questions unanswered, but that his sort of explanation does not tell us nothing. His account draws our attention to something that is so familiar, we believe we already understand it and how it works.

Chapter Two

Berkeley and the Linguistic Structure of Sensible Reality

“The structure of language determines not only thought, but reality itself”

Noam Chomsky

This chapter is concerned with the philosophy of George Berkeley (1685-1753). Language is at the centre of Berkeley’s philosophy: he is interested in questions concerning the way that people use and abuse natural languages, as well as the structure and nature of languages generally. Here, I’ll argue that Berkeley, like Hobbes, appeals to language to help him solve a problem generated by his metaphysical position.

Put simply, the problem is as follows. Berkeley’s ontology is slim: it consists only of passing ideas and perceiving minds.¹ Ideas are pure sensations, and they are constantly being replaced by new ones. Berkeley describes ideas as “fleeting” and “variable”.² These ideas are meant to be the building blocks of our reality – the world that we perceive – but what is responsible for the *building* of these blocks? How is it that sensations constantly occur together (e.g., the visual sensation of water and the tactile sensations of coldness and wetness)? And why do we perceive causal regularities in nature (e.g., why is our visual sensation of one billiard ball moving and impacting another followed by a visual sensation of that other ball moving)? This is to ask; how does the perceived world get its *structure*? And what is the nature of that structure? Berkeley can provide an answer to this puzzle: the structure of the perceived world is a *linguistic* or *grammatical* structure.³

In this chapter, I’ll explore Berkeley’s appeal to language and how it works as a solution to this metaphysical problem I’ve outlined above. I’ll begin with a brief summary of his metaphysical

¹ See: George Berkeley, *Berkeley: Philosophical Writings*, ed. Desmond M. Clarke, 1 edition (Cambridge: Cambridge University Press, 2009). *Principles of Human Knowledge* (hereafter PHK) 27 (p.93) for Berkeley on ‘notions’. Berkeley holds that we cannot have an idea of the soul or spirit, but that we can have a ‘notion’ of it.

² Berkeley. 2009. *Three Dialogues between Hylas and Philonous* (hereafter DHP) §205, p.188.

³ This interpretation is explored in depth in: Kenneth L. Pearce, *Language and the Structure of Berkeley’s World* (Oxford, United Kingdom ; New York, NY: OUP Oxford, 2017). I have made constant use of this work in the writing of this chapter.

commitments. I'll then move on to look at his rejection of the 'ideational theory of meaning' and his alternative theory of language – something close to a theory of meaning as use.⁴ Then, I'll explore how his theory of language is applied to his metaphysics: sensations are terms of a divine language that are meaningful primarily because they direct us towards practical goals. Finally, I'll explore how this linguistic understanding of sensation solves the problem of accounting for the world's structure.

1. Berkeley's Slim Ontology

Berkeley's ontology consists only of minds and "fleeting and variable" ideas.⁵ He was an immaterialist, or classical idealist; he denied that matter exists as a mind-independent entity. He is known for the maxim '*esse is percipi*' – to be is to be perceived.⁶ His immaterialism does not mean that he denies the existence of ordinary objects – like trees and houses – but rather that these objects exist as perceived ideas and nothing more. In Berkeley's ontology minds are fundamental, and ideas depend on them for their existence.

Of course, this leaves us with a question about where our ideas are coming from and what (or whom) is bringing them about. The common view (that Berkeley rejects) is something like this: sense perceptions, or sensory ideas, are brought about by independent objects that exist outside our minds. These objects impact upon our sense organs and transmit information about themselves to us. Our sensory ideas, then, provide us with a representation of this mind-independent, physical reality.⁷ Berkeley rejects this view and holds instead that there is no mind-independent physical reality.

Berkeley, like many of the philosophers he read (Descartes, Malebranche, etc.), took for granted that God was the ultimate and underlying cause of all things. Malebranche, for example, argued that God was the only efficient causal agent.⁸ The positions on the issue of mentally receiving ideas roughly split into two groups – either God directly causes our ideas, or physical things impact upon our bodies and cause ideas in our minds (in a process ultimately orchestrated by God). Berkeley intended to cut out the middleman (physical things), which he thought to be redundant. Of course, the latter of these views also raises all sorts of hard questions about how exactly the physical world interacts with our non-physical minds. Berkeley takes it to be a merit of

⁴ Pearce (2017) uses the term 'Theory of meanings' instead of 'ideational theory of meaning'. Turbayne (1970) refers to this theory as the 'proper-name theory of meaning'.

⁵ Berkeley. 2009. DHP §205, p.188.

⁶ Berkeley. 2009. PHK §3, p.84.

⁷ This is something like Descartes' view: physical objects impact upon our physical bodies, creating motions in the nerves which create a 'pattern' of nerves in the brain. This brain pattern then occasions the corresponding sensory idea. Our sensory ideas do not represent physical reality accurately, but they provide us with practical information about how to get ourselves around in the world. This will be discussed in detail in Chapter Three.

⁸ Nicolas Malebranche, *Malebranche: The Search after Truth: With Elucidations of The Search after Truth*, ed. Thomas M. Lennon and Paul J. Olscamp, Revised ed. edition (Cambridge ; New York: Cambridge University Press, 1997). Book 6, Part 2, Chapter 3.

Malebranche. *Dialogues on Metaphysics and on Religion*. Ed. Nicholas Jolley and David Scott. (Cambridge England ; New York: Cambridge University Press, 2008). Dialogue 7.

his view that he avoids these problems. One argument for this slim ontology, in brief, is that it's true that we perceive houses, chairs, tables, etc., but it's also true that we perceive only ideas (Berkeley takes it that this premise is adopted by Locke, Descartes, etc.). Therefore, houses, chairs, and tables etc. are ideas.⁹ Berkeley concluded that physical bodies do not exist, and that the source of our ideas is another mind – God or the 'Author of Nature'.¹⁰

2. Berkeley's Problem: How can we account for the Structure of the Sensible World?

Ideas are the building blocks of Berkeley's world. But since they do not represent any mind-independent physical reality and are so 'fleeting and variable' – what accounts for the structure of the world? For example, how can Berkeley account for the fact that different sensory qualities are united in one object (e.g., an apple's being both red and smooth)? How can he account for the fact that two minds can perceive the 'same' object? What accounts for the fact that our ideas occur to us in a regular order (e.g., that my visual idea of fire is accompanied by a tactile idea of warmth)?

Perhaps the answer may seem obvious; if God is the cause of all our sensations and ideas, then he is responsible for structuring them. This answer is correct. But Berkeley gives us a more complex answer that not only tells us who is responsible for the structure, but also tells us something about *how* that structure is created.

3. Berkeley's Answer: The World has a Linguistic or Grammatical Structure

Berkeley accounts for the structure of the sensible world by using language as an explanatory tool. In his book on this topic, Pearce argues that this works at two levels. First, we represent the world as structured in our own *human* languages (our talk of bodies and the laws of nature); and, importantly, the way that we talk about the structure of the world has some *truth* to it. That is, the world *really is* structured in a way that corresponds to the ways that we talk about it. This is the second level. So, what is the real structure of the world? According to Berkeley, our visual sensations are a language *themselves*. That is, our visual sensory ideas are terms of a language, and the laws of nature are a set of grammatical rules that govern the way that these terms are combined, ordered, and structured.¹¹ God, as the 'Author of Nature', is the institutor of this language.

To understand how this all works, we will first need to go back and look at Berkeley's own remarks on language, to which the next section is devoted.

⁹ Berkeley. 2009. PHK §4, p.84.

¹⁰ Berkeley. 2009. PHK §26 onwards, p.92.

¹¹ Pearce. 2017. p.2.

4. Berkeley on Language: The Ideational Theory of Meaning Denied.

In the introduction to the *Principles of Human Knowledge* (PHK), Berkeley writes: “it is a received opinion that language has no other end but the communicating our ideas, and that every significant name stands for an idea”.¹² I will call this ‘received opinion’ that Berkeley is referring to the ideational theory of meaning. The ideational theory of meaning says that words get to be meaningful because they are conventionally associated with meanings. A ‘meaning’ here is usually understood to be an idea, and an ‘idea’ is a mental entity that is intrinsically representational. Words only get to represent things (as in be *about* things) via their conventional association with ideas, which are non-conventionally *about* things.

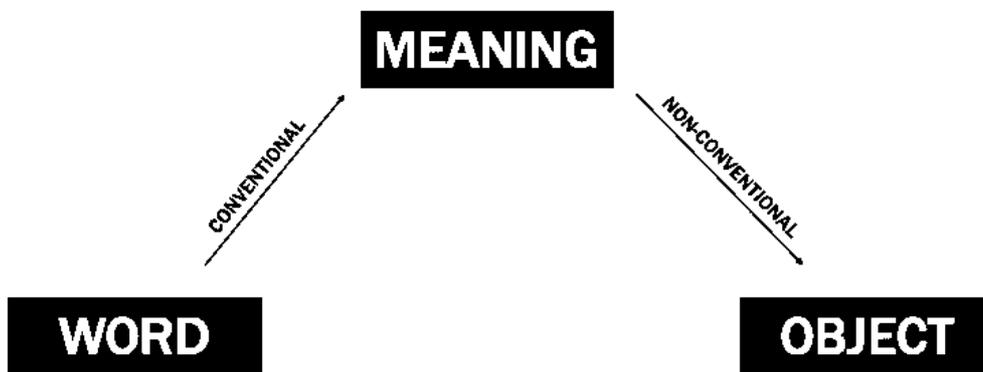


Figure 1. The ideational theory of meaning.

Berkeley is right to refer to the ideational theory of meaning as the ‘received opinion’. Aristotle held that “spoken sounds are symbols of affections of the soul”.¹³ In the early modern period, an ‘affection of the soul’ was broadly taken to be an idea. Descartes seemed to adopt the ideational theory of meaning in roughly the same terms as Aristotle: “whenever I express something in words, and understand what I am saying, this very fact makes it certain that there is within me an idea of what is signified by the words in question”.¹⁴ Following Descartes, the Port Royalists also embraced the ideational theory of meaning: “we can generally say that words are distinct and articulated sounds that people have made into signs to indicate what takes place in the mind” – where the “objects of our thoughts” are in the mind.¹⁵ Locke also held to this kind of view: “Words

¹² Berkeley. 2009. PHK, §19. p.79.

¹³ Aristotle, *Aristotle’s Categories and De Interpretatione*, trans. J. L. Ackrill (Oxford Clarendon Press, 1963). *De Interpretatione*, 1 16a4-7. There was a debate in the medieval period about whether the “affections of the soul” are meant here to signify or refer to objects in any way. There’s a paper by Norman Kretzmann about this: Norman Kretzmann, ‘Aristotle on Spoken Sound Significant by Convention’, in *Ancient Logic and Its Modern Interpretations: Proceedings of the Buffalo Symposium on Modernist Interpretations of Ancient Logic.*, ed. John Corcoran, Synthese Historical Library (Dordrecht: Springer Netherlands, 1974), 3–21.

¹⁴ Descartes (AT VII 160, CSM II, 113.) We will look at Descartes’ theory of language in detail in Chapter Four.

¹⁵ Antoine Arnauld and Pierre Nicole, *Antoine Arnauld and Pierre Nicole: Logic or the Art of Thinking*, ed. Jill Vance Buroker, 5th edition (Cambridge England ; New York, NY, USA: Cambridge University Press, 1996). p.74.

in their primary or immediate Signification, stand for nothing, but the Ideas in the Mind of him that uses them”.¹⁶

On this model, the goal of a linguistic communication is to cause the hearer to entertain the same ideas as the speaker. The speaker, recalling the conventional associations between words and ideas, translates her ideas into words and the hearer does the same thing in reverse. A successful linguistic communication takes place when they both end up thinking about the same things. Of course, many of the philosophers mentioned above recognised that this model is somewhat problematic, since words may stand for more than one idea, or speakers and hearers may have formed slightly different associations between particular words and ideas. Thus, many of our linguistic communications are ‘unsuccessful’, in that speakers and hearers do not end up having the same ideas. Most of the thinkers I mention above say that language is imperfect for this reason, but it is not a reason for them to reject the ideational theory of meaning.

However, Berkeley does reject the ideational theory of meaning and, in doing so, he makes quite a radical departure from the status quo. What leads Berkeley to this? One reason arises from his rejection of the existence of abstract or general ideas. I’ll explain this below.

4.1. Arguments against the Existence of General Abstract Ideas

In the introduction to the PHK, Berkeley denies that he has any abstract general ideas. His evidence for this stems from his own introspection. He writes:

Whether others have this wonderful faculty of abstracting their ideas, they best can tell; for my self I find indeed I have a faculty of imagining, or representing to my self the ideas of those particular things I have perceived and of variously compounding and dividing them.¹⁷

Berkeley is able, for example, to imagine a man with two heads, but he cannot form a general abstract idea of ‘man’. When trying to think of ‘man’, he claims, his idea will be either of a short, tall or middle-sized man, and the man will be either straight or crooked, and so on.¹⁸ That is to say, he is unable to generate a general abstract idea of ‘man’ – the ideas he has will always be of particular men.

Berkeley considers a passage from Locke’s *Essay on Human Understanding* in which Locke claims that the having of general abstract ideas is what distinguishes human beings from ‘brutes’. In this passage, Locke suggests that the reason we know that brutes do not have abstract general ideas is because they do not use general words or signs.¹⁹ Berkeley takes from this that Locke is assuming that the meaningful usage of general words necessitates the possession of general ideas.²⁰ He

¹⁶ John Locke, *An Essay Concerning Human Understanding*, ed. Peter H. Nidditch (Oxford University Press, U.S.A., 1975). §2:2, p.405-406.

¹⁷ Berkeley. 2009. PHK §10, p.72.

¹⁸ Ibid.

¹⁹ Locke, *An Essay Concerning Human Understanding*. 1975. §2:11 (10-11).

²⁰ Berkeley. 2009. PHK §12, p.74.

questions this, suggesting instead (like Hobbes) that “a word becomes general by being made the sign, not of an abstract general idea but of several particular ideas, any one of which it indifferently suggests to the mind.”²¹ So, the term ‘man’ is effectively associated with an idea of a short man as well as an idea of a tall man.

In order to give his readers a clearer view of the impossible nature of general abstract ideas, Berkeley draws on another example given by Locke – the general abstract idea of a triangle. Locke says: “it must be neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon, but all and none of those at once.”²² Berkeley asks his readers again: do you have such an idea? What Locke describes seems impossible to conceive, since a triangle cannot be both equilateral and scalene at once.²³

Pearce describes this as Berkeley’s ‘phenomenological appeal’ – Berkeley denies, on the basis of his own introspection, that he has any such general abstract ideas.²⁴ So, why would anyone claim to have such ideas? In sections 18-19 of the Introduction to the PHK, Berkeley seems to come to an answer to this question. He believes that the source of the notion of general abstract ideas is language.²⁵ He writes: “if there had been no such thing as speech or universal signs, there never had been any thought of abstraction.”²⁶

We can summarise Berkeley’s reasoning as follows. Locke associates the use of general words with the possession of general abstract ideas.²⁷ The thought behind this, as Berkeley understands it, is that every significant word stands for an idea (the ideational theory of meaning). So, since we use significant general words, like ‘triangle’, we must have general abstract ideas that are conventionally associated with those words, like an abstract general idea of a triangle. Berkeley makes his ‘phenomenological appeal’ and claims that we simply don’t possess such general abstract ideas.²⁸ So, either general words are not significant, or the ideational theory of meaning must be rejected. Berkeley maintains that general words are significant but denies that they are significant because they are annexed to *distinct* ideas; this is evident “by a little reflection”.²⁹ So, the ideational theory of meaning must be rejected.

4.2 Matters of Faith and Science

²¹ Ibid.

²² Locke, *An Essay Concerning Human Understanding*. 1975. §4:7 (9).

²³ If Berkeley is committed to the notion that ideas are *images* (as implied in PHK §33), then it becomes more obvious why he says he cannot have an idea of a triangle that is both scalene and equilateral – since you cannot form a mental image of such a thing.

²⁴ Pearce. 2017. p.12.

²⁵ See PHK §18: “The truth of this appears as from other reasons, so also from the plain confession of the ablest patrons of abstract ideas, who acknowledge that they are made in order to naming; from which it is a clear consequence, that if there had been no such thing as speech or universal signs, there never had been any thought of abstraction.” Berkeley. 2009. p.78.

²⁶ Berkeley. 2009. PHK §18, p.78.

²⁷ Locke, *An Essay Concerning Human Understanding*. 1975. §3:3 (6).

²⁸ See: Berkeley. 2009. *An Essay Towards a New Theory of Vision* (hereafter NTV) §124 (p.53). DHP, §193-194 (p.175-177). *Alciphron: or, the Minute Philosopher* (hereafter Alc.) §7.6 (p.299-301). PHK, §10 (p.86).

²⁹ Berkeley. 2009. PHK §18, p.79.

In *Alciphron* 7, Berkeley (through the voice of the character ‘Euphranor’) says more about language and furthers his argument against the ideational theory of meaning. The seventh dialogue begins with a clear statement (from the titular Alciphron) of the position Berkeley will argue against: “Words are signs; they do or should stand for ideas, which so far as they suggest they are significant. But words that suggest no ideas are insignificant.”³⁰ In this dialogue, Berkeley attends to religious terms, like ‘grace’, and scientific terms, like ‘force’.³¹ He argues that these terms do not correspond to distinct ideas, as proponents of the ideational theory of meaning would maintain. Nevertheless, these terms are *meaningful*. So, we should reject the ideational theory of meaning.

Early in the dialogue, Alciphron confronts Euphranor with the assertion that the Christian faith is groundless, since “grace is the main point in the Christian dispensation” and he (Alciphron) is “altogether unable to understand [grace] or frame any distinct idea of it.”³² Since he cannot form a distinct idea of grace, he takes the term to be meaningless. Therefore, it is not possible to have knowledge of or faith in such a thing – and therefore impossible for the Christian religion to exist. Euphranor responds to this by offering an alternative to the ideational theory of meaning (which we will explore in section 5 below).

Later in the dialogue, the interlocutors discuss technical terms like ‘number’ and ‘force’. Euphranor instructs Alciphron: “contemplate force in its own precise idea”.³³ Alciphron professes that he cannot form a distinct and precise idea that corresponds to the term ‘force’. Euphranor goes on to discuss how a term like ‘force’ is meaningful – “there are very evident propositions or theorems relating to force, which contain useful truths” – even though one cannot form a distinct idea of it.³⁴ He rhetorically asks: “shall we deny that it is of use [...] because we have no distinct idea of force?”³⁵

These examples are intended to show Alciphron’s initial argument against Christianity to be unsound. We use and understand many terms that do not correspond to one distinct idea. We do not take terms like ‘number’ and ‘force’ to be meaningless just because we cannot form distinct ideas corresponding to them. Indeed, we use these terms in theories that yield truths, and “direct us in the disposition and management of our affairs, and are of such necessary use that we should not know how to do without them.”³⁶ So, we shouldn’t take the term ‘grace’ to be meaningless just because we cannot form a distinct idea of grace.

So, how are terms like ‘grace’, ‘number’ and ‘force’ meaningful, according to Berkeley? It is to this question that we will now turn.

³⁰ Berkeley. 2009. Alc. §7.2., p.294.

³¹ Berkeley. 2009. Alc. §7, p.299.

³² Berkeley. 2009. Alc. §7.4., p.296.

³³ Berkeley. 2009. Alc. §7.6., p.300.

³⁴ Berkeley. 2009. Alc. §7.7., p.301.

³⁵ Berkeley. 2009. Alc. §7.7., p.301.

³⁶ Berkeley. 2009. Alc. §7.5., p.299.

5. Berkeley's Alternative to the Ideational theory of meaning: Meaning as Use?

Berkeley does not explicitly offer an alternative theory of language to replace the ideational theory of meaning, although he does make several remarks from which we can draw an alternative view.³⁷ He offers two key examples: the card table and the money calculation.

5.1. The Card Table and Money Examples: Meaning as use.

In *Alciphron* 7, Berkeley uses these examples to demonstrate how terms might be meaningful without always exciting distinct ideas.³⁸ I quote the relevant passage in full:

Euph. Counters, for instance, at a card-table are used, not for their own sake but only as signs substituted for money, as words are for ideas... is it necessary every time these counters are used throughout the progress of a game, to frame an idea of the distinct sum or value that each represents?

Alc. By no means. It is sufficient that players at first agree on their respective values, and at last substitute those values in their stead.

Euph. And in casting up a sum, where the figures stand for pounds, shillings, and pence, do you think it necessary, throughout the whole progress of the operation, in each step to form ideas of pounds, shillings, and pence?

Alc. I do not; it will suffice if, in the conclusion, those figures direct our actions with respect to things.

Euph. From hence it seems to follow that words may not be insignificant, although they should not, every time they are used, excite the ideas they signify in our minds; it being sufficient that we have it in our power to substitute things or ideas for their signs when there is occasion. It seems also to follow, that there may be another use of words besides that of marking and suggesting distinct ideas, to wit, the influencing of our conduct and actions; which may be done either by forming rules for us to act by, or by raising certain passions, dispositions, and emotions in our minds. A discourse, therefore, that directs how to act or excites to the doing or forbearance of an

³⁷ See: Kenneth L. Pearce, 'Berkeley's Theory of Language', in *The Oxford Handbook of Berkeley*, ed. Samuel C. Rickless (New York: Oxford University Press, 2022) for an outline of the various views that have been attributed to Berkeley. Some scholars argue that he does not reject the ideational theory of meaning altogether, but merely wants to modify it or carve out some exceptions to it. For variations on this view, see: Jonathan Bennett, *Locke, Berkeley, Hume: Central Themes* (Oxford: Oxford University Press, 1971) (§10).

S. Seth Bordner, 'If We Stop Thinking About Berkeley's Problem of Continuity, Will It Still Exist?', *Journal of the History of Philosophy* 55, no. 2 (2017): 237–60 (p.263).

Ian Hacking, *Why Does Language Matter to Philosophy?*, 1st edition (Cambridge ; New York: Cambridge University Press, 1975). (p.15-16).

John Russell Roberts, *Metaphysics for the Mob: The Philosophy of George Berkeley*, 1st edition (Oxford ; New York: Oxford University Press, 2007). (p.43).

Pearce has argued convincingly against this view and defended a 'meaning as use' alternative which I will explore here, since I do not have the space to explore all the alternative views.

³⁸ Pearce argues that, rather than trying to carve out individual exceptions to the ideational theory of meaning, Berkeley wants to explain our daily linguistic practice. (Pearce. 2017. P.76).

action may, it seems, be useful and significant, although the words whereof it is composed should not bring each a distinct idea into our minds.³⁹

At a card table, counters stand for different amounts of money. But when you are playing a game of cards and using the counters, you are not constantly forming ideas of the amounts of money signified by the counters. Rather, you are moving the counters from place to place according to a set of rules in order to further the game, and it is only when you take your counters to the cashier at the end of the game that you form an idea of the amount of money signified by those counters. Likewise, when we are calculating a monetary value, it is not necessary to form ideas of the distinct pieces of currency. It is enough to move the digits around according to mathematical rules in order to reach a result.

Berkeley holds that this is how language works too. Most of the time, we use our words according to conventional rules in order to achieve various purposes (excite emotions, instruct others, etc.) and we are not, at each instance, forming distinct ideas that correspond to each of the words we are using. Language, for Berkeley, is a public social practice that predominantly serves *practical* ends. A word is used, according to a rule, to achieve some purpose.

This view of language as a practical tool is outlined explicitly in *Alciphron* 7. Berkeley (through Euphranor) comes to the following conclusions:

Thus much, upon the whole, may be said of all signs: that they do not always suggest ideas signified to the mind; that when they suggest ideas, they are not general abstract ideas; that they have other uses besides barely standing for and exhibiting ideas, such as raising proper emotions, producing certain dispositions or habits of mind, and directing our actions in pursuit of that happiness, which is the ultimate end and design, the primary spring and motive that sets rational agents at work: [that signs may imply or suggest the relations of things; which relations habitudes or proportions, as they cannot be understood but by the help of signs, so being thereby expressed and confuted, they direct and enable us to act with regard to things:]⁴⁰ that the true end of speech, reason, science, faith, assent in all its different degrees, is not merely, or principally, or always the imparting or acquiring of ideas, but rather something of an *active operative nature*, tending to a conceived good; which may sometimes be obtained, not only although the ideas marked are not offered to the mind, but even although *there should be no possibility of offering or exhibiting any such idea to the mind*: for instance the algebraic mark, which denotes the root of a negative square, has its use in logistic operations, although it be impossible to form an idea of any such quantity. And what is true of algebraic signs is also true of words and language [...] ⁴¹

Note that, in the last part of this extract, Berkeley moves straight from ‘algebraic marks’ to ‘words and language’ generally. He does this without including a restriction; he means to say that *all* language works in this way – not just technical terms. Our language – all of it – aims at practical ends.

³⁹ Berkeley. 2009. Alc. §7.5., p.297-298.

⁴⁰ Phrase in brackets was added in the 1752 edition.

⁴¹ Berkeley. 2009. Alc. §7.14., p.311. (My emphasis).

This passage from *Alciphron* was key to Flew's conclusion that Berkeley was a precursor of Wittgenstein.⁴² Wittgenstein, of course, is known for his claim that: "In most cases, the meaning of a word is its use".⁴³ For Wittgenstein, to use words meaningfully is to employ them in a 'language game': using words, according to conventional rules, to achieve particular ends. It is easy to think of examples from our daily conversations. Imagine that I were to say to you: "Did you have a nice lie-in this morning while I slaved at the office?" It is clear to you, if we abide by the same language conventions, that I am not literally asking you to describe how enjoyable your lie-in was (in fact, that would be a grave mistake on your part). Instead, I am intending to make you feel guilty about your lie-in, or I am trying to extract sympathy from you. For our communication to be successful, you will need to know that the 'game' is not to answer the question literally and accurately but to help me to feel less resentful about having to go to work while you stayed in bed. It is striking that Berkeley too thinks about the use of words as a kind of game when he compares words to chips in a game of cards.

Once again, in the introduction to the PHK, Berkeley clarifies what he takes to be the purposes of language. He writes:

...the communicating of ideas marked by words is not the chief and only end of language, as is commonly supposed. There are other ends, as the raising of some passion, the exciting to, or deterring from an action, the putting the mind in some particular disposition; to which the former is in many cases barely subservient, and sometimes entirely omitted, when these can be obtained without it, as I think not infrequently happens in the familiar use of language.⁴⁴

Here, Berkeley outlines the ends of linguistic communication that are not simply the 'transferring' of ideas between minds. Rather, a linguistic communication can be successful in many different ways; if it excites a passion, determines an action, or whatever it may be. For Berkeley, like Wittgenstein, the 'meaningfulness' of our language is in the *use* of it; it is what we *do* with our words that matters.

Note that Berkeley acknowledges that *some* words are used to communicate distinct ideas. He just wants to deny that the purpose of *all* words is to communicate distinct ideas. I turn now to briefly review the different kinds of terms that exist for Berkeley.

5.2. Terms in a Language

⁴² See: Anthony Flew, 'Was Berkeley a Precursor of Wittgenstein?', in *Hume and the Enlightenment: Essays Presented to Ernest Campbell Mossner*, ed. W. B. Todd (Edinburgh University Press, 1974).

⁴³ Ludwig Wittgenstein, *Philosophical Investigations*, trans. G. E. M. Anscombe, New edition (Oxford: Wiley-Blackwell, 1973). I §43. P.20.

⁴⁴ Berkeley. 2009. PHK §19, p.79-80.

Pearce identifies three kinds of terms that fit into Berkeley's meaning-as-use language system: 'concrete', 'general', and 'abstract'.⁴⁵ A concrete term is one that signifies one particular idea, or we might say that a concrete term can be 'cashed in' for one particular idea (or one particular collection of ideas) to carry on with Berkeley's card table metaphor. For example, 'Louvre' would be a concrete term. It refers to a particular structure that houses particular artworks in Paris. When I am describing various facts about the Louvre, such as who built it and when, I don't necessarily have an idea (a mental image) of it at every stage, but it is still true that there is one idea (or one particular collection of ideas) for which the term can be 'cashed in'.

Berkeley does not give an examples of 'concrete' terms, but it seems as though proper names of objects fit the bill most of the time. Since he repeatedly suggests that names "do not *always*" stand for one particular idea, the implication is that at least *sometimes* they do.⁴⁶ The most likely candidates seem to be proper names. However, he does give an example of an instance where even a proper name of an individual may be used for a purpose other than summoning a particular idea of that individual. He writes:

Even proper names themselves do not seem always spoken with a design to bring into our view the ideas of those individuals that are supposed to be marked by them. For example, when a Schoolman tells me 'Aristotle has said it', all I conceive he means by it is to dispose me to embrace his opinion with the deference and submission which custom has annexed to that name.⁴⁷

Concrete terms, then, are not defined by Pearce as terms that are used for the purpose of summoning one particular idea.⁴⁸ They may be used for many different purposes, as we see in Berkeley's Aristotle example. Instead, a concrete term should be understood as one that *could* be 'cashed in' for one particular idea. Whether, when we hear or see the word, we do in fact 'cash it in' for the idea is not important. During our daily linguistic practice, the meanings of our utterances are determined by how we *use* the language (i.e. what *results* from our utterances/the utterances of others). The meaning, even of a concrete term, is not determined by the idea it signifies.

Now we come to 'general' terms. A general term is one that may be 'cashed in' for many different ideas. So, the term 'square' may signify many different particular ideas (e.g. a drawn square, or a square shaped object, etc.) – it may be 'cashed in' for any of them. Berkeley is more explicit about how general terms work. He writes: "it seems that a word becomes general by being made the sign, not of an abstract general idea but of several particular ideas, any one of which it indifferently suggests to the mind."⁴⁹

Finally, an 'abstract' term is one that signifies no ideas at all. Berkeley's example of such a term is the term 'force'. 'Force' cannot be 'cashed in' for any particular idea or ideas. In *Alciphron*,

⁴⁵ These are not Berkeley's labels but Pearce's. See: Kenneth L. Pearce, 'The Semantics of Sense Perception in Berkeley', *Religious Studies* 44, no. 3 (2008): 249–68. p. 260-261.

⁴⁶ For example: "That there are many names in use amongst speculative men, which do not *always* suggest to others determinate particular ideas". (Berkeley. 2009. PHK §19, p.79. My emphasis.).

⁴⁷ Berkeley. 2009. PHK, §20, p.80.

⁴⁸ Pearce, 'The Semantics of Sense Perception in Berkeley'. 2008. p. 260-261.

⁴⁹ Berkeley. 2009. PHK, §11, p.74.

Alciphron concedes that thinking of “force itself in its own precise idea” is “no such easy matter”.⁵⁰ However, as we have seen, Berkeley maintains that the term is meaningful, nonetheless. Later, it is explained why this is so:

...you allow there are very evident propositions or theorems relating to force, which contain useful truths...And if, by considering the doctrine of force, men arrive at the knowledge of many inventions in mechanics... and if the same doctrine, which is so beneficial here below, serves also as a key to discover the nature of the celestial motions, shall we deny that it is of use, either in practice or speculation, because we have no distinct idea of force?⁵¹

The doctrine of force is *useful* since it establishes relations between ideas. In this way, it is meaningful, even though it cannot be ‘cashed in’ for any idea or ideas directly. Since the primary end of language, for Berkeley, is more than just the communicating of particular ideas, we can allow for the meaningful use of terms that do not signify any particular idea or ideas. Instead, a term is meaningful if it is used according to linguistic rules in order to achieve a purpose. In this passage above, we see some of the reasons for using, or purposes of, the term ‘force’.

As I have said, Berkeley does not explicitly present this taxonomy of terms (concrete, general, and abstract) himself. Nevertheless, as outlined here, there is textual evidence to support the idea that these three kinds of terms have a place in his language system. In any case, the most important thing is to leave this section with an understanding of Berkeleyan language as a *social practice*. More often than not, the purpose of linguistic communications is not to simply ‘transfer’ ideas between speakers and hearers, but rather to establish some practical outcome. That is why terms that do not signify one distinct idea can still be meaningful within the linguistic practice.

The next step is to examine Berkeley’s remarks on the divine language, or language of nature. To what extent do Berkeley’s comments on language help us to understand the nature and structure of the world of ideas?

6. Application to Metaphysics: Visual Sensory Perceptions as Terms of a Divine Language.

Having looked at Berkeley’s position on language, it is now time to consider his appeal to language in the case of visual sensation. At various points, Berkeley describes visual perceptions as terms of a divine language. In a well-known passage from the *New Theory of Vision* (NTV), he writes:

I think we may fairly conclude that the proper objects of vision constitute a universal language of the Author of Nature, whereby we are instructed how to regulate our actions in order to attain

⁵⁰ Berkeley. 2009. Alc. §7.6., p.300.

⁵¹ Berkeley. 2009. Alc. §7.7., p.301.

those things that are necessary to the preservation and well-being of our bodies, as also to avoid whatever may be hurtful and destructive to them.⁵²

Similarly, in *Siris*, he writes:

Therefore, the phenomena of nature, which strike on the senses and are understood by the mind, form not only a magnificent spectacle, but also a most coherent, entertaining, and instructive discourse.⁵³

And, in the PHK, Berkeley refers to God as the “Author of Nature”.⁵⁴ He writes:

...the steady, consistent methods of nature, may not unfitly be styled the language of its Author, whereby He discovers His attributes to our view, and directs us how to act for the convenience and felicity of life.⁵⁵

In these passages, we see the visual phenomenal world described as a language – a system of signs – instituted by God.⁵⁶ This language has been established for certain practical ends; namely, to keep us free from pain, to aid us in the enjoyment of life, and to know God.⁵⁷

There is some debate as to whether Berkeley believed that our visual sensations *literally* constitute a language, or whether he meant that our visual sensations are *like* a language in various respects. Atherton, for example, thinks that Berkeley meant the comparison with language to be taken as an analogy or a model.⁵⁸ Pearce and others argue that Berkeley’s talk of the divine language was meant to be taken literally.⁵⁹ For my purpose here, it doesn’t really matter whether the divine language is literally a language, or metaphorically a language. Even if Berkeley only meant to indicate that our visual sensations were like a language, this still leaves us with an answer to our original metaphysical problem: the structure of reality is either *literally* a linguistic or grammatical structure, or *just like* a linguistic or grammatical structure.

⁵² Berkeley. 2009. NTV §147, p.62.

⁵³ George Berkeley, *Siris: A Chain of Philosophical Reflexions and Inquiries Concerning the Virtues of Tar Water; And Divers Other Subjects Connected Together and Arising One from Another* (Dublin printed, London re-printed, for W. Innys, and C. Hitch, in Pater-noster-row; and C. Davis in Holbourn., 1744). §254, p.121.

⁵⁴ Berkeley. 2009. PHK §66, p.109.

⁵⁵ Berkeley. 2009. PHK §108, p.126.

⁵⁶ Visual sensations constitute a language, with other sensations as ‘furnishings’. “Other senses may indeed furnish signs; and yet those signs have no more right than inarticulate sounds to be thought a language.” (Berkeley. 2009. Alc. §4.12., p.285.)

⁵⁷ Pearce. 2017. p. 204.

⁵⁸ Margaret Atherton, *Berkeley’s Revolution in Vision* (Ithaca: Cornell University Press, 1990). Chapter 11.

⁵⁹ See: Pearce. 2017.

See also: Paul J. Olscamp, ‘Does Berkeley Have an Ethical Theory?’, in *Berkeley: Principles of Human Knowledge. Text and Critical Essays.*, ed. Colin Turbayne (Indianapolis: Bobbs-Merrill Educational Publishing., 1970), 182–200. (p.184).

Walter E. Creery, ‘Berkeley’s Argument for a Divine Visual Language’, *International Journal for Philosophy of Religion* 3, no. 4 (1972): 212–22.

Tom Stoneham, ‘Response to Atherton: No Atheism Without Skepticism’, in *Debates in Modern Philosophy: Essential Readings and Contemporary Responses*, ed. Stewart Duncan and Antonia LoLordo (Routledge, 2013). (p. 219-220).

In order to understand exactly how Berkeley thinks our visual sensations constitute a language, I will now consider three aspects of the language of nature: pragmatics, semantics, and syntax.

6.1. Pragmatics

As we have seen, Berkeley thinks about language (as in human language) as a tool that serves practical ends. We see from the passages quoted in §6 above that Berkeley is especially concerned with the practical purpose of the language of nature too: to “direct us”; an “instructive discourse” by which we are told “how to regulate our actions”.⁶⁰ God guides us via the language of visual sensation so that we might act in order to preserve our own well-being and pursue happiness.⁶¹ Our visual sensations, in their consistent and regular structure, allow us to make predictions so that we might pursue “that happiness, which is the ultimate end and design, the primary spring and motive, that sets rational agents at work.”⁶²

Since Berkeley holds a meaning-as-use type theory of language, we should understand the ‘meanings’ that are communicated via the terms of the visual language (our visual sensations) as practical guidelines about what to do. For example, my visual sensation of a brick wall, along with my experience of the conventions of the language of nature (that is, my experience of nature e.g., that brick walls are usually hard), allows me to predict the occurrence of the tactile sensation of hardness were I to touch it and, therefore, to resist banging my head against it.

6.2. Semantics

What are the *semantics* of the language of nature? If our visual ideas constitute a language instituted by God (the Author of Nature), then what does God mean to *say* with this language? The language of nature tells us about three things: itself, God, and other minds.

First, let’s consider the way in which the language of nature is self-referential. In the *New Theory of Vision* (NTV), Berkeley tells us that “visible figures represent tangible figures much after the same manner that written words do sounds”.⁶³ So – a visual idea represents a tangible idea in the way that the written English word “circle” represents the spoken sound “sə:kəl”. Of course, we would say that the word “circle” represents *more* than just the sound “sə:kəl”; namely, it also represents *circles*. The English language is not just about itself. Do visual ideas signify anything *beyond* tangible ideas for Berkeley?

⁶⁰ Berkeley. 2009. PHK §108, p.126. NTV §147, p.62.
Berkeley, *Siris* (1744). §254.

⁶¹ This point isn’t particularly unique to Berkeley. The view that visual sensations have a practical purpose to secure our health and well-being is one that he shares with many other philosophers, including Descartes and Malebranche. See: Descartes, AT VII 82-83, CSM 2, 57.
Malebranche, *Malebranche: The Search after Truth* (1997) § I, 5, 1.

⁶² Berkeley. 2009. Alc. §7.14., p.311.

⁶³ Berkeley. 2009. NTV §143, p.60.

In *Alciphron*, Berkeley tells us that “the proper objects of sight are light and colours” which “form a language wonderfully adapted to suggest and exhibit to us the distances, figures, situations, dimensions, and various qualities of tangible objects [...] *just as words suggest the things signified by them.*”⁶⁴ So, in NTV, the relation between visual ideas and tangible ideas is compared to the relation between spoken words and written words, and here in *Alciphron*, the relation between visual ideas and tangible ideas is compared to the relation between words and what they *signify*. If written words signify more than just their sounds (and spoken words signify more than just their written form), then it seems as though Berkeley contradicts himself in these passages. Is the language of nature about more than just itself for Berkeley?⁶⁵

Pearce attempts to unscramble this issue by drawing attention to Berkeley’s claim that “It is customary to call written words and the things they signify by the same name.”⁶⁶ Berkeley gives the example of a square: “a tangible square, and the monosyllable consisting of six letters whereby it is marked, are of the same species because they are both called by the same name.”⁶⁷ Written words (e.g., ‘square’) signify *both* their sounds (‘skweə’) *and* the things to which they refer (squares). Likewise, spoken words signify *both* their written forms and the things to which they refer. So – within the language of nature – we can say that visual ideas signify tangible ideas (as written words signify spoken words) and vice versa, *and* that visual and tangible ideas signify something beyond each other too.⁶⁸

Of course, as we saw in the previous section, it is important for Berkeley that the language of nature is self-referential at least in one aspect, since the terms of the language of nature (ideas) tell us how to “attain those things that are necessary to the preservation and well-being of our bodies” – viz. *other ideas*. Think again about the wall example. The visual idea of the wall suggests to me the tactile idea of hardness, which means that I can adjust suitably adjust my behaviour (e.g. trying not to bump into it) to avoid sensations of pain. Atherton summarises Berkeley’s conclusion thus: “What vision is for is to stand for nonvisible objects.”⁶⁹ However, in addition to this, the language of nature also tells us about things outside of itself: God and other minds.

How do our visual ideas inform us about other minds? In the NTV, Berkeley talks about the way in which our visual ideas of facial colour and expression inform us about “the passions in the mind of another”.⁷⁰ He gives the example: “We often see shame or fear in the looks of a man, by perceiving the changes of his countenance to red or pale.”⁷¹ Of course, as Berkeley acknowledges, we do not literally “see” the shame or fear directly (since it is impossible to ‘see’ into another’s mind, and shame and fear are not the kinds of things we can have visual ideas of).

⁶⁴ Berkeley. 2009. Alc. §4.10, p.281. (My emphasis.).

⁶⁵ Some argue that the language of nature is purely self-referential for Berkeley. On this, see: Paul J. Olscamp, *The Moral Philosophy of George Berkeley* (The Hague: Martinus Nijhoff, 1970). (p.32-33). Kenneth P. Winkler, *Berkeley: An Interpretation* (Oxford University Press UK, 1989). (p.21).

J. D. Mabbott, ‘The Place of God in Berkeley’s Philosophy’, *Journal of Philosophical Studies* 6, no. 21 (1931): 18–29. (p.26-27).

⁶⁶ Berkeley. 2009. NTV §140, p.59.

⁶⁷ Ibid.

⁶⁸ For Pearce’s discussion of this, see: Pearce. 2017. p.197-198.

⁶⁹ Atherton, *Berkeley’s Revolution in Vision*, 1990. p.196.

⁷⁰ Berkeley. 2009. NTV §9, p.8. See also: NTV §23 and NTV §65.

⁷¹ Berkeley. 2009. NTV §9, p.8.

Rather, Berkeley means that, by perceiving the changes in the colour of a face, we understand that there exists another mind that experiences passions in a similar way to ourselves.

Berkeley says more about our knowledge of other minds (and the knowledge of God) in the PHK:

A human spirit or person is not perceived by sense, as not being an idea. When therefore we see the colour, size, figure, and motions of a man, we perceive only certain sensations or ideas excited in our own minds; and these [...] serve to mark out unto us the existence of finite and created spirits like ourselves. [...] And after the same manner we see God.⁷²

Berkeley holds that the language of nature (constituted by our visual ideas) does refer beyond itself – to other minds and to God. Our visual ideas signify the presence of other spirits, which, as he says at the beginning of this quoted passage, are not ideas themselves, and so are not a part of the language of nature.⁷³

As we see from the passage above, the language of nature also informs us about God. In *Alciphron*, Berkeley asserts: “the visual Language proves, not a Creator merely, but a provident Governor actually and intimately present”.⁷⁴ In the PHK, Berkeley writes:

[W]e do at all times and in all places perceive manifest tokens of the divinity, every thing we see, hear, feel, or any wise perceive by sense, being a sign or effect of the power of God...⁷⁵

Since God is the *author* of the language of nature, all of His ‘words’ (our ideas) are signs of Him. Put otherwise, because God is the efficient cause of all of our ideas, the ideas themselves are *signs of or denote* Him. Berkeley writes: “nothing can be more evident to any one that is capable of the least reflexion than the existence of God [...] who is intimately present to our minds, producing in them all that variety of ideas or sensations”.⁷⁶ God, of course, is outside of the language of nature (since He is not an idea).

In an earlier work, Pearce attempts to categorize the terms of the language of nature using the same categories I outlined in section 5.2. For example, he postulates that the visual idea of the human body is an example of an ‘abstract’ term that refers to the soul (a non-idea).⁷⁷ It is not clear to me that Berkeley would have endorsed this project of categorising the terms of the language of nature – since it is not something that he makes any attempt to do himself. In any case, I do not believe that this attempt to provide a taxonomy of terms in the language of nature enhances the point that Berkeley is trying to make: that God has instituted a system of signs to (1) keep us safe, (2) to inform us of the existence of other spirits, and (3) to reveal Himself to human beings. For Berkeley, regarding our visual sensations as terms of a language is valuable in that it explains visual

⁷² Berkeley. 2009. PHK §148, p. 145.

⁷³ For an in depth discussion of Berkeley on ‘notions’, see: Daniel E. Flage, *Berkeley’s Doctrine of Notions: A Reconstruction Based on His Theory of Meaning* (New York: Palgrave Macmillan, 1987).

⁷⁴ Berkeley. 2009. Alc. §4.14, p. 287.

⁷⁵ Berkeley. 2009. PHK §148, p.145.

⁷⁶ See: Berkeley. 2009. PHK §149, p. 145.

⁷⁷ Pearce, ‘The Semantics of Sense Perception in Berkeley’. 2008. p.264.

perception (especially in accounting for our perceptions of distance, size, and so on) and is important in proving the existence of God in the NTV and *Alciphron*.

6.3. Syntax and Grammar

Let's remind ourselves of the problem we started with. For Berkeley, the visual world is composed of variable and fleeting ideas – “a great number of arbitrary signs, various and apposite” - and yet, that world is orderly and structured.⁷⁸ Berkeley tells us that our sensory ideas have a “steadiness, order, and coherence, and are not excited at random”.⁷⁹ Furthermore, multiple sensory qualities seem to occur together regularly (e.g., pebbles are both hard and smooth). So, how are we to conceive of the structure and order of our ideas?

For Berkeley, it is the syntax and grammar of the language of nature that accounts for structure of the perceived world. That is, they account for the fact that ideas occur in systematic order, and that multiple qualities constitute a ‘single object’. In *Siris*, he writes:

There is a certain analogy, constancy, and uniformity in the phenomena or appearances of nature, which are a foundation for general rules; and these are a grammar for the understanding of nature, or that series of effects in the visible world whereby we are enabled to foresee what will come to pass in the natural course of things.⁸⁰

The grammatical rules of the language of nature govern our ideas so that they occur in regular patterns (e.g., the visual idea of fire is always followed by the visual idea of smoke) and occur in combinations (e.g., the visual ideas of greenness and roundness are combined with the tactile idea of smoothness and the gustatory idea of tartness – and we come to recognise this as one object – ‘apple’). Berkeley describes the latter as the forming of ideas “into machines” – that is, “artificial and regular combinations” that are “made by rule”.⁸¹ These grammatical rules are important, since they allow us to make accurate predictions about what will happen, which mean that we can better preserve our wellbeing.

Let's consider the *syntax* of the language of nature in more detail. Syntax concerns the ordering of terms in a language. Consider these sentences in English: ‘George is taller than John’ and ‘John is taller than George’. The ordering of the terms here is crucial, since the meaning of the sentence changes completely depending on which term comes first. Now, let's think about this in the case of Berkeley's language of nature. Consider the relation between the visual idea of bright orangey light, and the visual idea of black smoke. These visual ideas might occur in a particular order (e.g., smoke then fire) and might serve to keep us safe from burns or smoke inhalation, or

⁷⁸ George Berkeley, *The Theory Of Vision Vindicated And Explained*. (1860). (London: Nabu Press, 2012). (Hereafter TVV). §40, p.71.

⁷⁹ Berkeley. 2009. PHK §30, p.94.

⁸⁰ Berkeley, *Siris* §252, p.328.

See too: Berkeley. 2009. PHK §108-110, p.126-127.

⁸¹ Berkeley. 2009. PHK §65, p.109.

to keep us warm. In each case, they communicate a different practical meaning – which is the purpose of a language for Berkeley (as explored in section 5). Just as in English, the order of their occurrence is important in communicating this meaning.

The kind of order we observe in nature is typically explained in terms of cause and effect: e.g., fire is always followed by smoke because fire *causes* smoke. Berkeley rejects this explanation on the grounds that only minds or spirits can cause things, although he agrees that we can preserve our casual causal talk (e.g., ‘fire heats’).⁸² This causal talk is accurate to a high degree because of these grammatical rules.

The grammatical rules of the language of nature can be thought of as the ‘laws of nature’.⁸³ In the PHK, Berkeley writes:

The ideas of sense [...] have likewise a steadiness, order, and coherence, and are not excited at random [...] but in a regular train or series, the admirable connexion whereof sufficiently testifies the wisdom and benevolence of its Author. Now the set of rules or established methods, wherein the mind we depend on excites in us the ideas of sense, are called the ‘laws of nature’, and these we learn by experience, which teaches us that such and such ideas are attended with such and such other ideas in the ordinary course of things.⁸⁴

Berkeley goes on to say that we are often inclined to make the mistake the constancy of our ideas (e.g., the fact that our visual idea of fire always occurs together with our tactile idea of heat) for a necessary cause-and-effect relation. He says that we are inclined to “attribute power and agency to the ideas themselves, and make one the cause of another, than which nothing can be more absurd and unintelligible.”⁸⁵ Instead of attributing causal power to our visual idea of fire by thinking that it is responsible for producing heat, we must reflect on the fact that God is securing our wellbeing by connecting our sensations according to a set of rules: the grammatical rules of the language of nature. These rules are responsible for the structure of our experience.

There is no *necessary causal connection* between our visual idea of fire and the tactile idea of heat, since the former does not cause the latter, but Berkeley says that we can “know” that ‘fire warms us’ because this is what we experience.⁸⁶ We are experienced in the regularities of nature, which means that we come to properly recognise our visual idea of fire as a *sign* for our tactile idea of warmth.⁸⁷ Berkeley summarises in the TVV:

Ideas, which are observed to be connected together, are vulgarly considered under the relation of cause and effect, whereas, in strict and philosophic truth, they are only related as the sign to the thing signified.⁸⁸

⁸² Berkeley. 2009. PHK §51-52, p. 102-103.

⁸³ Berkeley likely had Newton’s three laws of motion in mind here. See: Pearce. 2017. p.189-192. Also: Berkeley. 2009. PHK, §108-110, p.126-127.

⁸⁴ Berkeley. 2009. PHK §30, p.94.

⁸⁵ Berkeley. 2009. PHK §32, p.94.

⁸⁶ Berkeley. 2009. PHK §31, p.94.

⁸⁷ See also: Berkeley. 2009. PHK §65, p.109.

⁸⁸ Berkeley. TVV §13, p.27-28.

We might speak informally of fire ‘causing’ heat, but in “strict and philosophic truth”, according to Berkeley, we should properly understand the visual idea of fire as a sign for the tactile idea of warmth.

Berkeley describes the connections between the ‘terms’ of the language of vision and what they signify as arbitrary. He begins: “A great number of arbitrary signs, various and opposite, do constitute a language”, and he goes on to make the comparison with visual and tangible sensations: “in fact, there is no more likeness to exhibit, or necessity to infer, things tangible from the modifications of light, than there is in language, to collect the meaning from the sound.”⁸⁹

What Berkeley seems to be saying here is that the relations between things we see and things we touch are arbitrary. They are just like the relations between spoken sounds and meanings. We might have used a spoken word other than ‘pig’ to provoke the idea of such a creature in the hearer; there is no necessary connection between that sound (‘pig’) and the idea of a pig. Rather, they are connected arbitrarily according to our language conventions. So, Berkeley wants to say the same of the language of vision. There are no *necessary* connections between visual ideas and what they signify, like tactile ideas.

6.4. What are the terms of the visual language?

Turbayne provides one possible answer to this question. In his particularly literal interpretation of the language of nature, he argues that each sensible quality, like orangey light or heat, is a letter of the “alphabet of nature”. He holds that these letters combine to make terms of the language of nature or “particulars”. He uses the example of an apple, and assigns each letter a sensible quality. So, ‘a’ is ‘redness’, ‘p’ is ‘sweetness’ (which occurs twice), ‘l’ is ‘roundness’, and ‘e’ is ‘crispness’.⁹⁰ So according to Turbayne, somewhat in tension with the passage from the NTV in 6.2 above,⁹¹ the relation between ‘redness’ (a visual idea) and ‘crispness’ (a tactile idea) is not so much like the relation between a written word (say ‘apple’) and a spoken word (‘æpəʌl’) – but, within the context of the whole ‘term’ (the apple), it is more like the relation between the letter ‘a’ and the letter ‘l’ and the letter ‘e’ in the English word ‘apple’.

Turbayne holds that these letters of the alphabet of nature are combined according to rules. He writes:

The rules of syntax of the language of nature are called the laws of nature [...] The rules of composition and syntax (= a putting together in order) of a language describe the ways in which the letters and their combinations are combined.⁹²

So, Turbayne includes within the grammar of the language of nature the rules according to which letters are combined as well as the rules according to which terms are combined.

⁸⁹ TVV §40. p.71.

⁹⁰ Colin Murray Turbayne, ‘Berkeley’s Metaphysical Grammar’, in *A Treatise Concerning the Principles of Human Knowledge / George Berkeley with Critical Essays*, ed. Colin Murray Turbayne (Bobbs-Merrill, 1970). P.15-19.

⁹¹ Berkeley. 2009. NTV §143, p.60.

⁹² Turbayne, ‘Berkeley’s Metaphysical Grammar’. 1970. p.25.

Turbayne's project to literally and precisely formulate an 'alphabet of nature' does not seem to be Berkeley's project.⁹³ However, I think Turbayne is right to include the rules that govern the formation of particular terms, along with the rules according to which terms are combined, as a part of the grammar of the language of nature.

Pearce also holds that bodies "are the words of the language of nature".⁹⁴ Berkeley, through the rules of the language of nature (the 'grammar' rules explored in 6.3 above), manages to 'construct' bodies or objects. The unifying relations that we usually understand to be causal (e.g., that fire causes heat, and so fire is hot) should be understood, according to Berkeley, as 'grammatical' (or having to do with the structure of the language of nature). We can say that 'fire is hot' is true (or true to a high degree) because the visual idea of fire signifies the tactile idea of heat. The two are connected in that they occur together in experience (which is ultimately caused by God) and so they come to suggest each other.⁹⁵

6.5. Putting Everything Together

For Berkeley, our visual sensations constitute a language (either literally or metaphorically). The language is instituted by God to tell us (a) about the language itself in order that we might preserve our wellbeing, (b) about Himself, the author of the language of nature, and (c) about other minds.

The language of nature is structured, like natural human languages, according to grammatical or syntactical rules. In human languages, rules dictate how letters ought to be combined in order to spell out words, as well as prescribing how words ought to be ordered in order to communicate different meanings. Likewise, the rules of the language of nature mean that sensory ideas occur in regular patterns rather than at random. This means that we can know how best to act in order to best preserve our wellbeing. The rules also direct how ideas are combined in order to form 'terms' of the language of nature (bodies or objects). The ideas that make up these bodies are not causally connected, but connected through sign-signified relations. For Berkeley, it is the syntax and grammar of the language of nature that account for the fact that ideas occur in systematic order, and that multiple qualities constitute a 'single object'. That is, these grammatical or syntactical rules account for the structure of the perceived world.

7. Conclusion: Language & Grammar as a Solution to the Structure Problem

I have argued that Berkeley's appeal to language solves a problem that is generated by his metaphysics. For Berkeley, our visual sensations are terms of language (either literally or metaphorically) and that means that we can understand the structure of reality as a linguistic or

⁹³ Although Berkeley does make some reference to 'letters'. See: Berkeley. 2009. PHK §65, p.109. Alc. §4.10, p.282.

⁹⁴ Pearce. 2017. p.191.

⁹⁵ See: Berkeley. 2009. PHK §65, p.109.

grammatical structure. Our fleeting sensations (terms or parts of terms in the language) become combined and ordered according to the laws of nature (the ‘grammar manual’ of the language). As I did with Hobbes in the previous chapter, I’d now like to reflect on the explanatory power of this appeal to language.

I don’t think that we have to take Berkeley’s appeal to language literally in order for it to serve its explanatory purpose. Further, I don’t think that it is necessary to construct, on Berkeley’s behalf, a complete ‘alphabet of nature’ or taxonomy of terms of the language of nature.⁹⁶ Berkeley’s appeal to language has explanatory power even without these details being meticulously explicated. Indeed, I think that we gain insight by thinking about Berkeley’s appeal to language more broadly.

In the last chapter, I suggested that Hobbes’ appeal to language was successful at least in part because it is an appeal to something intimately familiar to us. Even though Hobbes, on close inspection, cannot satisfactorily explain everything about how language solves his problem (e.g., how words can be both particular sounds or marks whilst also being universal), we may be inclined to accept his explanation because we are so familiar with language. It seems natural to accept that words can be universals, whilst also accepting that words are part of material reality.

Berkeley’s solution to the structure problem is, I think, more successful than Hobbes’ solution to the abstract and active thought problem. Berkeley’s position is internally consistent, and he doesn’t leave so many questions unanswered as Hobbes’ does. Nevertheless, like Hobbes, I argue that Berkeley too makes use of the intimate familiarity of language in his explanation. The structure of the perceived world, Berkeley claims, is like the structure of words and sentences in our languages. This is a kind of structure that we are intimately familiar with, so much so that we often don’t reflect on it at all. Recall the sentences ‘George is taller than John’ and ‘John is taller than George’. As English speakers, we effortlessly understand the meaning of these sentences without necessarily thinking about the way the sentences are structured (even though, in this case, the structure plays a crucial role in securing the meaning).

In the same way, Berkeley suggests that we effortlessly understand the ‘practical meanings’ (e.g., how to preserve our wellbeing) that are underpinned by structural relations in nature (relations we have hitherto understood as cause-and-effect relations) without necessarily reflecting on these structures. We *inhabit* these structures, just as we inhabit the structure of language. It is so familiar to us that it is almost invisible.

For Berkeley, to be is to be perceived. So, in what sense can we say that the structure of the language of nature is invisible or imperceptible? As we go about our daily lives, the fact that we are in a constant discourse with God is something that we can neglect to realise. Berkeley acknowledges this himself. In PHK, he writes:

It is therefore plain that nothing can be more evident to any one that is capable of the least reflexion than the existence of God, or a spirit who is *intimately present to our minds*, producing in them all that variety of ideas or sensations, which continually affect us, on whom we have an absolute and entire dependence, in short, ‘in whom we live, and move, and have our being’. That the discovery of this

⁹⁶ As Turbayne and Pearce respectively attempt.

great truth, which lies *so near and obvious to the mind*, should be attained to by the reason of so very few is a sad instance of the stupidity and inattention of men, who, *though they are surrounded with such clear manifestations of the Deity, are yet so little affected by them that they seem as it were blinded with excess of light*.⁹⁷

Here, Berkeley considers why some men do not believe in the existence of God. He gives a possible reason: some men do not or cannot pay attention to those things that are so intimately present to them. It is possible for something that surrounds us all the time to be invisible to us.⁹⁸ Berkeley urges us to take the time to reflect on our common experience so that we might understand what it means and whom it is caused by. Likewise, we are encouraged to reflect on how our reality is truly structured.

Berkeley uses our familiarity with language to make something that seems very complex, namely the structure of perceived reality, easier to grasp. In the previous chapter, I argued that Hobbes does the same thing: he uses the familiarity of language to make something complex seem easy to grasp. Of course, the way that Berkeley appeals to language is different from the way that Hobbes does. For Hobbes, it is the invention of *natural language(s)* that endows human minds with their distinctive powers of abstract and active thought. Berkeley is not appealing to natural languages like English or French. His explanation involves an appeal to the language of visual sensation (the language of nature), whether we think this explanation is an analogy or comparison (our visual sensations are *like* a language) or whether we think Berkeley holds that our visual sensations *literally constitute* a language. Nevertheless, I have argued that both thinkers aim to reap the explanatory benefits that language affords because it is so intimately familiar.

In the next chapter, I begin building my case for the linguisticity of sensation in Descartes' account. But before doing this, I first need to address another kind of account that has been attributed to him (notably, by Berkeley): a geometric account of sensation, whereby perceptions can be explained in terms of lines and angles. I conclude that Descartes' account of sensation is, in fact, strikingly similar to Berkeley's *linguistic* account in several important respects. I believe that it is possible for Descartes' account of sensation to be described as geometric or linguistic, depending on which parts of the account one is considering. I conclude that Descartes' psychological account of sensation is linguistic in that sensory ideas should be understood as the meanings of bodily signs. This central claim will be developed later in chapters five, six and seven.

⁹⁷ Berkeley. 2009. PHK §149, p.145. (My emphasis.).

⁹⁸ It is interesting the Berkeley has something very similar to say about natural language. We become so used to words that we "act in all respects as if we heard the very thoughts themselves." (Berkeley. 2009. NTV §51 p.24). The suggestion is that words become imperceptible because we are so familiar with them. See this passage in full for Berkeley's comparison between natural language and the language of vision.

Chapter Three

Sensation: Geometric or Linguistic?

“We may climb into the thin and cold realm of pure geometry and lifeless science, or sink into that of sensation.”

Ralph Waldo Emerson

In this chapter, I begin building my case for the linguisticity of sensation in Descartes’ account. I will argue that Descartes’ account of sensation is, in fact, strikingly similar to Berkeley’s linguistic account in several important respects. However, this is contrary to Berkeley’s own opinion. Berkeley contrasts his own account of sensation with Descartes’, attributing to him a ‘geometric’ account of sensation instead. In this chapter, I’ll consider this alternative, ‘geometric’ account of sensation that Berkeley accredits to Descartes, before moving on to explore the ways in which their accounts are similar.

Berkeley held that an appeal to ‘innate geometry’ could not adequately explain the visual experiences of distance, size, and shape as the “writers of optics”, such as Descartes and Malebranche, had thought (or so he thought they had thought).¹ Berkeley ascribed to Descartes the view that “men judge of distance by the angle of the optic axes”.² He disputes this kind of view in strong terms, asking: “I appeal to anyone’s experience whether, upon sight of an object, he computes its distance by the bigness of the angle made by the meeting of the two optic axes?”³ As we have seen, Berkeley proposes a linguistic account of visual sensation in place of this geometric model, whereby: “the proper objects of vision constitute a universal language of the Author of nature”.⁴

In this chapter, I explore whether Berkeley’s criticism of Descartes’ ‘geometrical’ account succeeds. First, I consider what a ‘geometric optics’ might mean, and I argue that Descartes’ account only deserves to be called geometric in two respects. First, that geometrical properties can be understood as properly belonging to external objects, but that this understanding is *intellectual*, not sensory. Second, that Descartes’ physiological account of visual sensation can be described in geometric terms, but that his *psychological* account of visual sensation cannot.

¹ Berkeley. 2009. NTV §23-24, p.11.

² Berkeley. 2009. NTV §42, p.21.

³ Berkeley. 2009. NTV §12, p.9.

⁴ Berkeley. 2009. NTV §147, p.62.

Having looked at where geometry applies, I move on to discuss the similarities between Berkeley's and Descartes' accounts of sensation. Some scholars, such as Atherton, understand Berkeley's 'language analogy' as an alternative to Descartes' 'geometric analogy'.⁵ I believe that it is a mistake to set these two accounts in opposition to each other. It is possible for Descartes' account of visual sensation to be described as both geometric *and* linguistic in different ways depending on which parts of the account one is considering. I argue that the accounts of Descartes and Berkeley are strikingly similar in several important respects. By examining these similarities, I will show that Descartes' psychological account of sensation is best understood as linguistic.

1. Geometric Optics

Here in section one, I'll consider the ways in which Descartes' account of sensation does deserve to be called 'geometric'. In §1.1, I explore the first. I start with the idea that our perceptions of size, shape, and distance are *different in kind* from our perceptions of colour, taste, and so on because the former essentially generate judgements based on geometrical calculations. I argue against this position, and conclude instead that, at least at the sensory level, there is no difference between perceptions of size/shape/etc. and perceptions of colour/taste/etc. Rather, the difference between perceptions of size/shape/etc. and perceptions of colour/taste/etc. lies at the *intellectual* level: geometry is relevant at the intellectual level, but not at the sensory level. I argue that, for Descartes, we can distinguish these perceptions *intellectually* after we have experienced them but, insofar as they are all sensory perceptions, they are the same.

In §1.2, I consider the second way in which Descartes' account of sensation might deserve to be called geometric. I explore Berkeley's charge against Descartes: that it is impossible to make sense of the idea that we see, that is have visual sensory perceptions, via a 'natural geometry'. I argue that Berkeley misinterprets Descartes' account. For Descartes, 'natural geometry' is something *physiological* rather than something psychological. So, we can say that geometry is relevant at the *physiological* level, but not at the psychological/sensory level.

I'll begin with a passage from the *Sixth Replies* wherein Descartes describes three grades of sensory response. This will help us to determine where geometry is relevant in Descartes' account of sensory perception. Here is the relevant passage:

If we are to get a clear view of what sort of certainty attaches to the senses, we must distinguish three grades of sensory response. The first is limited to the immediate stimulation of the bodily organs by external objects; this can consist in nothing but the motion of the particles of the organs, and any change of shape and position resulting from this motion. The second grade comprises all the immediate effects produced in the mind as a result of its being united with a bodily organ which is affected in this way. Such effects include the perceptions of pain, pleasure, thirst, hunger, colours, sound, taste, smell, heat, cold and the like, which arise from the union and as it were the intermingling of mind and body, as explained in the Sixth Meditation. The third grade includes all the judgements about things outside us which we have been accustomed to make from our earliest years - judgements which are occasioned by the movements of these bodily organs.⁶

⁵ Margaret Atherton, *Berkeley's Revolution in Vision* (Ithaca: Cornell University Press, 1990). p.200.

⁶ Descartes. Sixth Replies. AT VII 436-437, CSM II 294-295.

Grade one encompasses the purely physiological process that gives rise to sensations: external objects impact the body and set up motions in the nerves, resulting in a pattern of motion in the nerves in the brain. Grade two concerns all the “immediate effects” that result in the mind, which are our sensations, sensory perceptions or sensory ideas (I will use these terms interchangeably to refer to the sensory content [pains, smells, colours, etc.] that we are immediately conscious of). Grade three concerns the judgments that we make about external objects on the basis of these sensory perceptions. Later, Descartes notes that these judgements “depend solely on the intellect”, even though he includes them as a grade of sensory response.⁷

One way in which Descartes’ account of sensation might qualify as geometrical would be if geometrical judgements or calculations were made at level of sensory perception (grade two) as is suggested by Maull.⁸ Her suggestion is that our sensory perceptions of shape, size, and so on (primary qualities) differ in kind from our sensory perceptions of colour, sound, and so on (secondary qualities) since geometry is involved in the former, but not in the latter. In the following section (§1.1) I will explain why I disagree with Maull’s suggestion.

1.1. Geometric Optics and the Primary/ Secondary Quality Distinction

Descartes doesn’t explicitly draw the primary/secondary quality distinction as Locke does, but he does distinguish between geometrical properties such as size and shape that belong to bodies insofar as they are extended, and non-geometrical properties such as colour, taste etc. which do not properly belong to bodies.⁹ One way in which Descartes’ account of sensation might qualify as geometrical would be if this distinction between primary and secondary qualities was made at the level of sensory perception, grade two, as suggested by Maull.

Maull attempts to explain how Descartes’ account of visual perception is an application of geometry to nature.¹⁰ At times, she seems to claim that, for Descartes, our visual perceptions of distance, shape, size, and so on (what she refers to as ‘primary qualities’) are “very different” from visual perceptions of colour (or ‘secondary qualities’).¹¹ This is because perceptions of figure bear some resemblance to the external objects that they represent and, in virtue of this resemblance, they immediately generate intellectual judgements about the dimensions of external objects, whereas perceptions of colour do not resemble external objects at all.¹² Because of their resemblance, perceptions of figure are subject to what Maull calls an “algorithm” that generates

⁷ Descartes. Sixth Replies. AT VII 438, CSM II 295.

⁸ Nancy L. Maull, ‘Cartesian Optics and the Geometrization of Nature’, *The Review of Metaphysics* 32, no. 2 (1978): 253–73.

⁹ See: Descartes. Principles §1.53. AT VIII A 25, CSM I 210. Also: Descartes. Principles §1.69. AT VIII A 33-34, CSM I 217-218.

For a discussion of Descartes on the primary and secondary quality distinction, see: Anna Ortín Nadal, ‘Descartes on the Distinction Between Primary and Secondary Qualities’, *British Journal for the History of Philosophy* 27, no. 6 (2019): 1113–34, <https://doi.org/10.1080/09608788.2019.1568227>.

¹⁰ Maull. 1978. p.272.

¹¹ Maull. 1978. p.262.

¹² Maull. 1978. p.263.

judgements about the primary qualities of external objects.¹³ Since perceptions of figure “can be the subject matter of geometry”, we are able to apply geometrical rules to these perceptions in order to “form perceptual judgments about three-dimensional objects”.¹⁴ I’ll refer to this automatic application of geometrical rules as the ‘natural geometry’ algorithm.

Maull seems to be committed to (a) the view that we have two distinct kinds of sensory perceptions (perceptions of primary qualities and perceptions of secondary qualities) at grade two, and (b) the view that grades two and three are not distinct at all when we perceive primary qualities, so our sensory perceptions of size/shape/etc. essentially involve judgements.¹⁵ I will consider these points in turn. I’ll conclude that sensory perceptions of primary and secondary qualities (at grade two) do not differ in kind, and that we can perceive primary qualities (again, at grade two) *without* the involvement of intellectual judgements.

I’ll begin with view (a). At one point, Maull claims that Descartes’ account of vision “presupposes the distinction between primary and secondary qualities”, because there is something markedly different about our sensory perceptions of figure as opposed to our sensory perceptions of colour.¹⁶ The difference, Maull thinks, is that our sensory perceptions of figure bear *some* (although still not perfect) resemblance to the physical objects outside of the mind, whereas our sensory perceptions of colour/etc. bear *no* resemblance to the physical objects outside of the mind. This accounts for the fact that sensory perceptions of figure are subject to the ‘natural geometry’ algorithm, whilst those of colour are not.¹⁷ According to Maull, Descartes explains this point by using two different analogies: the analogy with words and the analogy with engravings.

The analogies appear in the *Optics*, where Descartes is careful to stress that ideas in our minds can be stimulated by things that do not resemble those ideas at all. Here is the relevant passage:

We must take care not to assume – as our philosophers commonly do – that in order to have sensory perceptions the soul must contemplate certain images transmitted by objects to the brain [...] We should, however, recall that our mind can be stimulated by many things other than images – by signs and words, for example, which in no way resemble the things they signify. And if, in order to depart as little as possible from accepted views, we prefer to maintain that the objects which we perceive by our senses really send images of themselves to the inside of our brain, [...] It is enough that the image resembles its object in a few respects. Indeed the perfection of an image often depends on its not resembling its object as much as it might. You can see this in the case of engravings: consisting simply of a little ink placed here and there on a piece of paper, they represent to us forests, towns, people, and even battles and storms; and although they make us think of countless different qualities in these objects, it is only in respect of shape that there is any real resemblance. And even this resemblance is very imperfect, since engravings represent to us bodies of varying relief and depth on a surface which is entirely flat. Moreover, in accordance with the

¹³ Maull. 1978. p.263.

¹⁴ Maull. 1978. p.272.

¹⁵ Atherton seems to read Maull in this way: “The perception of [secondary qualities] is sensory and the perception of [primary qualities] is intellectual or judgemental.” (Atherton. 1990. p.21). See also: Alison Simmons, ‘Descartes on the Cognitive Structure of Sensory Experience’, *Philosophy and Phenomenological Research* 67, no. 3 (2003): 549–79.

¹⁶ Maull. 1978. p.259.

¹⁷ Maull. 1978. p.272.

rules of perspective they often represent circles by ovals better than by other circles, squares by rhombuses better than by other squares, and similarly for other shapes.¹⁸

Descartes stresses in this passage that we should “not assume” that the soul must consider “images” in the brain in order to have sensory perceptions, and he uses the analogy with words to show that the mind can be stimulated to have sensory perceptions which “in no way resemble” the things that stimulate them. I take from this that he is presenting a view where the relation between sensory ideas in the mind and their stimuli (motions of nerves in the brain) is not grounded in resemblance. Although, Descartes does make a move from the analogy with words (where there is no resemblance) to the analogy with engravings (where there is little resemblance).

Maull suggests that Descartes’ move from the analogy with words to the analogy with engravings is a softening of his stance against the resemblance theory of perception.¹⁹ This is because Descartes goes from a comparison with words which “in no way resemble the things they signify” to a comparison with engravings which resemble the things they signify “in a few respects”. She interprets this move to mean that Descartes does not hold to a strict view of non-resemblance between ideas in the mind and the things that stimulate them, since there can be resemblance with respect to shape.²⁰ Maull concludes that our sensory perceptions of figure can represent extendedness by resembling it (although imperfectly), and this is what makes them different in kind to our sensory perceptions of colour/etc.

For Descartes, colours, tastes, and the like as we experience them do not inhere in objects. Material objects, on his view, are simply extended, and so there is no quality in material objects that resembles colour as we see it. On Descartes’ view, our sensory perceptions of various colours and other purely sensory qualities are stimulated by the differences in the motion of the particles which, in turn, set up different motions in the nerves of the sensory organs and the brain. These differing motions are responsible for stimulating our perceptions of different colours/tastes/etc.²¹

So, Maull thinks that our sensory perceptions of figure can represent extendedness by imperfectly resembling it, but our sensory perceptions of colours, tastes, and so on cannot represent by resemblance, since there is no resemblance at all between these perceptions and the things that stimulate them. This difference between kinds of perceptions is what she means when she says that the primary/secondary quality distinction is “presupposed” – there is a difference between primary and secondary qualities at the perceptual level (grade two).²²

¹⁸ Descartes. Optics. AT VI 112-113, CSM I 165.

¹⁹ Maull. 1978. p.261.

²⁰ Maull. 1978. p.262.

²¹ Descartes. Principles §4.198. AT VIII A 322-323, CSM I 285.

The content of our sensory ideas doesn’t exist in objects as such. For more on this, see:

Marleen Rozemond, ‘Descartes on Mind-Body Interaction: What’s the Problem?’, *Journal of the History of Philosophy* 37, no. 3 (1999): 435–67. (p.450).

Alison Simmons, ‘Are Cartesian Sensations Representational?’, *Noûs* 33, no. 3 (1999): 347–69. (p.347)

²² Maull. 1978. p.259.

A few questions are raised by Maull’s suggestion that Descartes softens his stance against the resemblance theory of perception. First, what does she mean by ‘resemblance theory of perception’? Maull doesn’t explicitly say what she means, but Descartes himself outlines a ‘resemblance theory’ at the beginning of the above passage from the *Optics*, and I take it that this is what she is referring to. Descartes strongly argues against a theory whereby we perceive little images of external objects that represent those objects *because* they resemble them. He says that, if we must conceive of images, we must conceive of them in a different way – i.e., we mustn’t suppose that their power to represent relies necessarily on their resemblance. First, he talks about words, which he takes to be good examples of things that represent successfully but do not resemble the things they represent in any respect. He then considers the engravings example, but he is still very careful to stress that the resemblance is “very imperfect”.²³ He also stresses, at the end of this passage, that “the problem is [...] not to know how [these images] can resemble these objects”.²⁴

These remarks suggest that Descartes isn’t trying to *qualify* the resemblance theory of perception. He is trying to get rid of it. Further, later in the *Optics*, Descartes says very explicitly: “You see, then, that in order to have sensory perceptions the soul does not need to contemplate any images resembling the things which it perceives.”²⁵ In addition, he writes: “the problem is to know simply how [brain images] can enable the soul to have sensory perceptions of *all the various qualities* of the objects to which they correspond – *not to know how they can resemble those objects*.”²⁶

Even as we perceive shapes of bodies, our ideas might not resemble the true shapes of the bodies themselves. Descartes tells us that “It is obvious too that we judge shape by the knowledge or opinion that we have of the position of the various parts of an object, and not by the resemblance of the pictures in our eyes. For these pictures usually contain only ovals and rhombuses when they make us see circles and squares.”²⁷ *Even* for shape, then, there is no necessary chain of resemblance between object, brain figure and sensory idea.

I take from this that Descartes is concerned with the question of how the stimulations in the nerves of the body can enable the soul to have all the sensory perceptions that it does, not how those nerve patterns resemble anything. Further, he is concerned with all sensory perceptions alike – “sensory perceptions of *all the various qualities* of the objects to which they correspond”.²⁸ We might expect, if Descartes was really suggesting that our sensory perceptions of figure differ in kind from our perceptions of colour, that he would specify that resemblance is important in the case of shape, size, etc. but not for colour, texture, etc. However, Descartes does not make this distinction at all. Rather, he is presenting an account where, as far as he is concerned, you can leave resemblance at the door, because it is not doing any of the work.

²³ Descartes. *Optics*. AT VI 113, CSM I p.165.

²⁴ Descartes. *Optics*. AT VI 113-114, CSM I p.166.

²⁵ Descartes. *Optics*. AT VI 114, CSM I p.166.

²⁶ Descartes. *Optics*. AT VI 113-114, CSM I p.166. (My emphasis.).

²⁷ Descartes. *Optics*. AT VI 140-141, CSM I 172.

²⁸ Descartes. *Optics*. AT VI 113-114, CSM I p.166. (My emphasis.).

Descartes' project is to show how the 'ordination of nature' can *replace* the resemblance theory of perception. He says that we must hold that it is the movements in the nerves of the brain that act upon our souls and are "ordained by nature to make it have such sensations".²⁹ He isn't 'softening his stance' against the resemblance theory of perception but determined to replace it altogether. Further, as I highlighted above, he seems to be thinking of all sensations as alike and not singling out perceptions of primary qualities.³⁰

Now, there is one important way in which our perceptions of figure *do* differ from our perceptions of colour, but I will argue that this difference cannot be found at the level of sensory perception (grade two). Rather, this difference is at the *intellectual level* (grade three). For Descartes, the only properties of bodies that can be clearly and distinctly understood are the geometrical properties, since body is simply extension.³¹ We can clearly and distinctly understand body, when we make use of the intellect alone, as "something which is extended in length, breadth and depth."³² This is made clear from Descartes' wax example in the second meditation – all the qualities that the wax seemed to possess initially (taste, colour, texture, sound, smell) changed, and yet the same wax remained. Descartes perceives clearly and distinctly in his "mind alone" that the wax is "merely something extended, flexible and changeable".³³

It should be noted that, in the wax example, Descartes lists shape along with all of the 'secondary qualities' [taste, colour, and so on] as if they are on a par. All of those qualities change when the wax melts.³⁴ This is significant because it suggests that there is nothing special or different about the way in which our perceptions of shape arise at grade two. It is only when we *intellectually reflect* (grade three) on our grade two perceptions that we can clearly and distinctly understand that shape properly belongs to the wax (in that it is extended), whereas the colour, for example, does not.

Descartes explains that our *knowledge* of what it is for a body to have a shape is different from our knowledge of what it is for a body to be coloured.³⁵ We can, I suggest, think of this as a kind of difference between our perceptions of e.g., shape and colour, although the difference is at the intellectual level (grade three) rather than the sensory level (grade two). This is the difference:

It is true that when we see a body we are just as certain of its existence in virtue of its having a visible colour as we are in virtue of its having a visible shape; but our knowledge of what it is for the body to have a shape is much clearer than our knowledge of what it is to be coloured.³⁶

We are able to correctly judge that bodies have sizes and shapes, since a clear understanding of bodies includes an understanding of size and shape. However, this difference does not exist at

²⁹ Descartes. Optics. AT VI 130, CSM I p.167.

³⁰ Atherton makes a similar point against Maull's reading, claiming that the Optics contains "nothing to suggest that the means that give rise to a 'one-foot-away look' more accurately reflect or resemble characteristics of objects in the external world than does a 'red look'." As far as they are both sensations, they are on a par. (Atherton. 1990. p.25).

³¹ Descartes. Rules for the Direction of the Mind. AT X 443-445, CSM I p.59-60.

³² Descartes. Principles §2.4. AT VIII A 42, CSM I p.224.

³³ Descartes. Meditation 2. AT VII 31, CSM II p.20.

³⁴ Descartes. Meditation 2. AT VII 30-31, CSM II p.20.

³⁵ See also: Principles §1.69. AT VIII A 34, CSM I p.218.

³⁶ Descartes. Principles §1.69. AT VIII A 34, CSM I p.218.

the level of sensation (grade two) on its own. It is only at the level of intellectual judgement that our perceptions are separated out in this way. So, to conclude §1.1, the first way in which geometry is relevant to Descartes' account is at grade three (the intellectual level). I have argued against Maull's claim that there is a difference in kind between our grade two perceptions of primary (geometric) and secondary (non-geometric) qualities. I have suggested instead that geometry is not relevant to our grade two perceptions, and that Descartes' account of sensation can be called 'geometric' in this respect: we can have *true* intellectual judgements (grade three) about geometrical properties of material objects.

I'll now move on to the second aspect of Maull's position, (b) – the view that, in the case of our perceptions of primary qualities only, grades two and three are not truly distinct, so our sensory perceptions of size/shape/etc. *essentially* involve judgements. Maull uses the term "perceptual judgements", which can be read to mean that the sensory perception and the judgement are really just one thing.³⁷ Maull describes the process like this: first the 'rules of perspective' mean that three-dimensional objects project themselves onto a two-dimensional plane (the surface of the pineal gland), then we are able to "reverse these rules to apply a natural geometry and to form perceptual judgements about three-dimensional objects".³⁸ So we see – that is, we have a sensory perception of – a three-dimensional object, but this perception is also a judgement that the object is three-dimensional, since it has come about as a result of geometrical reasoning.³⁹ This is what she thinks is covered by the term 'natural geometry'.⁴⁰ Berkeley seems to hold the same kind of view as (b). As will become clear in the next section, Berkeley attributes to Descartes the view that geometrical judgements are essentially involved in perception of primary qualities.

In the following section (§1.2), I suggest that there is a second way in which Descartes' account rightfully deserves to be called geometrical, but I'll argue that it's not geometrical in the way that Maull and Berkeley think it is. As a response to Maull's (b) view and Berkeley, I will give some reasons to think that the application of 'natural geometry' that Descartes describes actually takes place at the physiological level (grade one). If this is the case, then perceptions of primary qualities are at grade two, since they come about as a result of physical stimulation and not as the result of intellectual reasoning. Following these perceptions, we then make judgements about external objects (grade three) that are separate from our sensory perceptions of them. To give Descartes' own example, our astronomically informed judgement that the sun is many times larger than the earth, is separate from our sensory perceptions of the sun (a small-ish disc in the sky).⁴¹ Knowing this fact about the sun, and therefore judging it to be so (grade three), does not affect the way that we *see* (grade two) the sun.

³⁷ Maull. 1978. p.272.

³⁸ Maull. 1978. p.272.

³⁹ Simmons calls these 'constructive judgements', since they are a part of the construction of our perception, in contrast to 'projective judgements' that are judgements about the objects outside of the mind (Simmons. 2003. p.554). This helps to make sense of the (b) view – although I'm not convinced that Descartes' gives us enough reason to think that there are two kinds of judgement, or two senses of the term 'judgement'. There is not space to go into this in detail in this chapter.

⁴⁰ Descartes uses the term 'natural geometry'. See: Descartes. Optics. AT VI 137, CSM I 170.

⁴¹ See: Descartes. Sixth Replies. AT VII 440, CSM II, p.296.

1.2. Geometric Optics and Descartes' Physiology

I'll now present the second way in which I believe that Descartes' account can rightfully be called 'geometrical'. This concerns his *physiological* account of vision (grade one). I'll begin with Berkeley's reading of Descartes' 'natural geometry', and his subsequent criticisms.

Berkeley discusses 'geometric optics', the theory of vision that he attributes to Descartes and others, in a few different places across his corpus. In *An Essay towards a New Theory of Vision* (NTV), he describes "those lines and angles, by means whereof some men pretend to explain the perception of distance", and he mockingly asks: "I appeal to anyone's experience whether, upon sight of an object, he computes its distance by the bigness of the angle made by the meeting of the two optic axes?"⁴² A little later on in the NTV, Berkeley describes this geometric position further:

...that, by altering the disposition of the eyes, the mind perceives whether the angle of the optic axes or the lateral angles comprehended between the interval of the eyes and the optic axes are made greater or lesser; and that accordingly, by a kind of natural geometry, it judges the point of their intersection to be nearer or farther off. But that this is not true I am convinced by my own experience, since I am not conscious that I make any such use of the perception I have by the turn of my eyes. And for me to make those judgements, and draw those conclusions from it, without knowing that I do so, seems altogether incomprehensible.⁴³

Berkeley is critical of the idea that a subject could perceive through a calculation of lines and angles between the eyes and external objects. Like Maull, Berkeley seems to think that Descartes is positing some judgement of angles as part of the perception of distance. Since we are not conscious of any such judgement or calculation of angles, Berkeley dismisses this understanding of distance perception. He refers to this account as 'natural geometry', which is a term that Descartes himself uses in discourse six of the *Optics*.⁴⁴

Again, however, this doesn't seem to be the account that Descartes gives.⁴⁵ I suggest that (i) Descartes is not using the term 'natural geometry' to mean what Berkeley (and Maull) thinks it means, (ii) that Descartes thinks of distance perceptions (and sensory perceptions of size, shape and position) as *related to* but not *perceived through* the lines and angles of the optic axes. The optic axes have a role to play, but this is a grade one role.

First, let's consider the sense in which Descartes is using the term 'natural geometry'. He uses this term in discourse six of the *Optics*, which is concerned with vision, and in another passage on vision in the *Treatise on Man*. In discourse six of the *Optics*, he begins the relevant passage by talking about the position of objects: "As regards position, we perceive it by means of our eyes

⁴² Berkeley. 2009. NTV §12. p.9.

⁴³ Berkeley. 2009. NTV §19. p.10.

⁴⁴ Descartes. *Optics*. AT VI 137, CSM I 170: "as if by a natural geometry".

⁴⁵ Gaukroger too asserts that there is no conscious intellection in distance perception. See: Stephen Gaukroger, *Descartes' System of Natural Philosophy* (Cambridge: Cambridge University Press, 2002). p.209.

exactly as we do by means of our hands.”⁴⁶ By this, he means that our perceptions of the positions of objects are stimulated in the same way as our other sensory perceptions (of colour, texture, and so on), that is, through motions in the nerves of the body. This could be motions in the nerves of the hands and arms (as when we touch some object) or motions in the nerves of the eyes (as when we see some object), and so on. All of the nerves find their origin in “the tiny parts of the brain”, where they are “ordained by nature to enable the soul not only to know the place occupied by each part of the body it animates relative to all the others, but also to shift attention from these places to any of those lying on the straight lines which we can imagine to be drawn from the extremity of each part and extended to infinity.”⁴⁷ There need to be enough ever-so-slight changes in the brain to correspond to the variety in our sensory experiences. The geometry of the gaze is what makes these tiny differences.

The blind man and sticks example is brought in to illustrate this point. Since, in this discourse, Descartes is concerned with vision in particular, the blind man’s hands are meant to be analogous to the eyes and his sticks are meant to be analogous to the ‘optic axes’ (the straight lines of vision from each eye). As the blind man moves his arms (and thus his sticks), certain changes in his brain occur depending on what resistance he meets and at what location on the sticks. “Similarly,” Descartes says, “when our eye or head is turned in some direction, our soul is informed of this by the change in the brain.”⁴⁸ As I said in §1.1, Descartes is keen to make it clear that the perception of the position of an object is not had because an image emitted from that object has made its way to the soul somehow. Rather, the physical aspect of the process can be entirely explained with reference to the motions in the nerves, and the fact that they are “ordained by nature” to make the soul have certain sensory perceptions.⁴⁹



Fig. 1

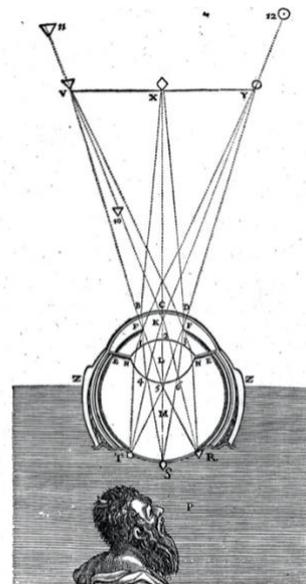


Fig. 2

⁴⁶ Descartes. *Optics*. AT VI 134, CSM I 169.

⁴⁷ Descartes. *Optics*. AT VI 134-135, CSM I 169.

⁴⁸ Descartes. *Optics*. AT VI 135, CSM I 169.

⁴⁹ Descartes. *Optics*. AT VI 137, CSM I 169.

Descartes then moves on to discuss distance perception. He begins by stating that, as with perceptions of position, distance perceptions also do not rely on images emitted from objects.⁵⁰ He goes on to list a few factors that contribute to perceptions of distance: the shape of the eyes, the relation between the eyes, the lines of vision or optic axes, and the distinctness or indistinctness of the shape seen.⁵¹ It is important to note that Descartes tells us explicitly that, ordinarily, we “do not reflect” upon the movements and the changes of shape that our eyes undergo.⁵² That is to say that we are not usually consciously aware of the movement of the eyes, apart from when we reflect upon it (as we do when we are considering how vision works).⁵³ Again, it is only because the movements of our eyes cause tiny particular changes in the brain that we have psychological awareness of different sensory ideas (at grade two).⁵⁴ He then draws the analogy with the blind man very explicitly:

In the second place, we know distance by the relation of the eyes to one another. Our blind man holding the two sticks AE and CE [fig.1] (whose length I assume he does not know) and knowing [*sachant*] only the distance between his two hands A and C and the size of the angles ACE and CAE, can tell from this knowledge, as if by a natural geometry, where the point E is. And similarly, when our two eyes A and B are turned towards point X, the length of the line AB and the size of the two angles XAB and XBA enable us to know where the point X is [fig.2].⁵⁵

There are a few terms in this passage that may seem a bit incongruous with what has been said so far. First, that the blind man has *knowledge* of the distance between his hands and of the angles between his hands and his sticks. Note that the term used in the original French (*savoir*) means ‘to know’, not so much in a cognitive or intellectual sense (if this had been the sense that Descartes wanted to convey, perhaps he may have chosen ‘*connaître*’), but rather to mean something more like ‘to be aware of’.⁵⁶ It is much easier to accept that the blind man can be *aware of* the rough distance between his hands or the rough angle of his sticks, but far more difficult to understand how he could be said to *know* the distance or the angles. Indeed, earlier in the passage Descartes presumes that he does not know the length of his sticks (“whose length I assume he does not know [*ignoré*]”).⁵⁷ It would be odd of Descartes to think that the blind man does not know the length of his sticks, but does know the size of the angles between the sticks. Similarly, it

⁵⁰ Descartes. Optics. AT VI 137, CSM I 170.

⁵¹ Descartes. Optics. AT VI 137, CSM I 170.

⁵² Descartes. Optics. AT VI 137, CSM I 170.

⁵³ See §1.44, The Passions of the Soul (AT XI 361-362, CSM I p.344) for a passage on how we do not will our eyes to change shape.

⁵⁴ See the end of Discourse 4: Descartes. Optics. AT VI 113-114, CSM I, 166.

⁵⁵ Descartes. Optics. AT VI 137-138, CSM I 170.

⁵⁶ Hatfield agrees: “The outcome of natural geometry is described more as a phenomenal awareness than the product of judgement.” (Gary Hatfield, ‘On Natural Geometry and Seeing Distance Directly in Descartes.’, in *Mathematizing Space: The Objects of Geometry from Antiquity to the Early Modern Age*, ed. Vincenzo De Risi (Birkhäuser, 2015), 157–91.) p.173.

⁵⁷ Descartes. Optics. AT VI 137, CSM I 170.

is a bit outlandish to suppose that we know the distance between our eyes, or the size of the angles between our eyes and objects that we see ‘naturally’ – that is, without the use of a ruler or protractor. It is far more consistent to read Descartes as saying that we have a kind of bodily awareness, rather than a conscious, cognitive knowledge of these lengths and angles. This seems to be what he wants to call ‘natural geometry’.

If we read Descartes in this way, then we ought to conclude that his ‘natural geometry’ properly applies only to the body (grade one), rather than the mind (grades two and three). The components of the physical visual system embody natural geometrical relations which allow for fine-grained changes in the brain, which account for the differences in our sensory perceptions in the mind. But these physical geometrical relations are not *perceived by the mind* (at grade two). Hatfield argues along similar lines, concluding that the physical processes of the body “constitute geometrical operations that might approximately be called a ‘natural geometry.’”⁵⁸ The blind man with his sticks is intended to represent the eyes and the optic axes in order to illustrate the physical processes involved in visual perception. In fact, the *Optics* as a whole is intended to describe “light and light-rays; [...] the parts of the eye [...] and how vision comes about” with the stated aim: “to show how they can be aided by the inventions” of telescopes, microscopes, and so on.⁵⁹ The aim of the *Optics* was not to give an account of mental reasoning about the things that we see, but rather to give a physiological account of vision.

Berkeley (and, indeed, Maull) seems to mistake Descartes’ physiological account of vision for a psychological one. Berkeley ascribes to Descartes the view that *minds* perceive lengths and angles in order to calculate distance (“the mind perceives whether the angle of the optic axes or the lateral angles comprehended between the interval of the eyes and the optic axes are made greater or lesser”) and goes on to reject this account on the grounds that he is completely unaware of ever having perceived distance through angles and lengths in this way.⁶⁰ This is what Berkeley calls ‘natural geometry’ – and he seems to think that, for Descartes, this belongs at grade two or three of sensation, since we are supposedly conscious of it.

Descartes did not mean to suggest that we have grade two sensory perceptions of the angles and lines between our eyes and objects, or the corporeal figures in the brain. The relation between the mind and the physiological eye and brain is causal (or at least quasi-causal) – it is not a relation of perception.⁶¹ Descartes is quite clear that the mind does not *look at* the corporeal figures in the brain, “as if there were yet other eyes within our brain with which we could perceive” them.⁶² If Descartes had meant to explain how the mind perceives, he would probably have referred to *ideas* of lines, angles, and so on, but we find no such reference in the *Optics*.

For Descartes, if something is perceived by the mind, then that something is an idea. Since his use of the term ‘idea’ departs from the standard notion of an ‘idea’ as a sensory or imagined image, he repeats his definition of the term multiple times in his replies, letters, and so on. He

⁵⁸ Hatfield. 2015. p.181. Hatfield describes the pineal gland as part of a geometrical mechanism.

⁵⁹ Descartes. *Optics*. AT VI 81, CSM I 152.

⁶⁰ Berkeley. 2009. NTV §19. p.10.

⁶¹ I will talk about body-mind causation at length in Chapter Six.

⁶² Descartes. *Optics*. AT VI 130, CSM I p.167.

writes: “I have frequently pointed out that I use the term ‘idea’ to apply to what is established by reasoning as well as anything else that is perceived in any manner whatsoever” and “I am taking the word ‘idea’ to refer to whatever is immediately perceived by the mind.”⁶³ So, when Descartes talks about the mind’s perceptions, we can expect that he will be talking about ideas. In light of this, we ought to review the passages from the sixth discourse of the *Optics* and see if Descartes is talking about *ideas* of lengths and angles, or merely referring to lengths and angles as a part of his description of the physical visual system.

Descartes does refer to sensory perceptions or ideas in the *Optics*, but he does not refer to perceptions or ideas of the various lines and angles between the eyes and objects. In fact, at multiple points Descartes describes the mind/soul at a kind of remove from the physical status of the eyes, for example: “as we adjust a the shape of the eye according to the distance of objects, we change a certain part of our brain in a manner that is ordained by nature to make our soul perceive this distance.”⁶⁴ Here, Descartes tells us that the soul perceives the distance, not the shape of the eye. The shape of the eye is involved in the process, since changes in the shape of the eye result in changes in the brain which, according to nature’s ordination, result in different ideas occurring in the mind, but the shape of the eye is not the object of the idea – that is, the shape of the eye is not perceived by the mind.

Likewise, for the blind man, we find that his soul is not concerned with the position of his sticks or his arms, but only the position of the external objects immediately near to him – and he can “determine the places they occupy without in any way knowing or thinking of those which his hands occupy.”⁶⁵ Since the blind man’s hands are analogous to eyes, we can take from this that one’s soul needn’t have any immediate awareness of the position of the eyes in order to know the positions of the external objects with which one is concerned.

There is one more passage from the *Optics* which deserves our attention. Descartes considers a subject with only one eye. The subject is able to successfully generate the perceptions of distance, size and shape by “changing the position” of the single eye.⁶⁶ Descartes explains:

And this is done by a mental act which, though only a very simple act of the imagination, involves a kind of reasoning quite similar to that used by surveyors when they measure inaccessible places by means of two different vantage points.⁶⁷

Descartes’ description of this process as a ‘mental act’ similar to the ‘reasoning’ used by surveyors presents a problem for my reading, since he is deliberately describing this process as a mental one, rather than a purely physiological one.

Nevertheless, I think we have good reason to think that, in cases where our physiology is compromised, the mind can ‘intervene’. In order to have perceptions of distance, the pineal gland

⁶³ Descartes. Third Replies. AT V II 181 & 185, CSM II 127 & 130.

⁶⁴ Descartes. Optics. AT VI 137, CSM I 170. (My emphasis.).

⁶⁵ Descartes. Optics. AT VI 135, CSM I 169.

⁶⁶ Descartes. Optics. AT VI 138, CSM I 170.

⁶⁷ Descartes. Optics. AT VI 138, CSM I 170.

needs to be stimulated in a specific way. If we only have one working eye, we are required to ensure that that eye is doing the work of two eyes – by changing the position of the single eye, remembering the perception of the previous position, and imagining a blending of the two perceptions – in order to stimulate the gland in the right way. Since this is not all happening automatically at grade one, we have to *actively* and *consciously* imagine the coming together of two sensory perceptions. However, this is not the usual case – “Ordinarily”, Descartes says, all this happens “without our reflecting upon it.”⁶⁸ And so I don’t think this is reason enough to reject my reading of what occurs in the ordinary case.

I’ve considered Berkeley’s reading of Descartes: that he subscribed to a ‘geometric optics’, according to which the mind perceives the lengths and angles created between the eyes and external objects in order to calculate distance and position. I have argued that Berkeley mistakes Descartes’ account of the physiology of vision for an account of what the mind sees (the psychology of vision). The mind does not perceive lengths and angles – that is, it does not have ideas of lengths and angles – but rather, because movements in the optic nerves cause different patterns of movement in the brain, different sensory ideas arise. The grade two sensory ideas are perceived by the mind – but the grade one movements of the nerves, the position and shape of the eyes, the angle of the optic axes, and so on are not.

Berkeley, if he had understood Descartes’ *Optics* in this way, might have just agreed with him. In *The Theory of Vision Vindicated and Explained* (TVV), Berkeley writes:

[A]lthough to talk of seeing by tangible angles and lines be direct nonsense, yet, to demonstrate from angles and lines in feeling to the ideas in seeing that arise from the same common object, is very good sense. If by this no more is meant, than that men might argue and compute geometrically by lines and angles in optics, it is so far in carrying it in any opposition to my Theory, that I have expressly declared the same thing.⁶⁹

In this passage, it seems that Berkeley is entirely willing to accept geometrical descriptions, apart from when they are applied to “ideas in seeing”. So, insofar as Descartes did not mean to apply geometry to our sensory ideas (grade two), but only to physiological processes (grade one), it seems that they agree.

Likewise, in the following passage, Berkeley writes:

To explain how the mind or soul of a man simply sees is one thing and belongs to Philosophy. To consider particles as moving in certain lines, rays of light as refracted, or reflected, or crossing, or including angles, is quite another thing, and appertaineth to Geometry. To account for the sense of vision by the mechanism of the eye, is a third thing, which appertaineth Anatomy and experiments. These two latter speculations are of use in practice, to assist the defects and remedy the distempers of sight, agreeably to the natural laws contained in this mundane system. But the

⁶⁸ Descartes. *Optics*. AT VI 137, CSM I, p.170.

⁶⁹ Berkeley. TVV §31. p.56-57.

former theory is that which makes us understand the true Theory of Vision, considered as a faculty of the soul.⁷⁰

Again, we have Berkeley distinguishing between matters of the soul – how we see, or how we come to have sensory ideas of sight – and matters of geometry and anatomy – refraction of light, the mechanism of the eye, and so on. I have argued here that this same distinction is present in Descartes’ account. Descartes’ term ‘natural geometry’ is used to describe a process that takes place at the physiological level (grade one), rather than the psychological level (grades two and three). Geometry does not apply to the grade two sensory ideas that are perceived by the mind, but it does apply to the grade one movements of the nerves: the position and shape of the eyes, the angle of the optic axes, and so on.

In sum, in section one, I have argued, against Maull and Berkeley, that geometry does not apply to sensory perceptions at grade two in Descartes’ account of sensation. Instead, I have suggested that Descartes’ account only deserves to be called geometric in two respects. First, that geometrical properties can be understood as properly belonging to external objects, but that this understanding is *intellectual*, not sensory. Second, that Descartes’ physiological account of visual sensation can be described in geometric terms, but that his *psychological* account of visual sensation cannot.

In the next section (§2), I review Berkeley’s positive account of visual sensation: his linguistic account. I will use this to go on to argue that there are striking similarities between Berkeley’s account and Descartes’ account of the psychology of vision. Ultimately, I will argue that Descartes too held a linguistic account of the psychology of sensation.

2. Berkeley, Descartes, and Linguistic Theories of Sense

As outlined in the previous chapter, Berkeley is committed to this principle: “Vision is the Language of the Author of Nature”.⁷¹ Berkeley tells us that the language of vision instituted by the author of nature is designed to instruct us on how to preserve ourselves. He writes:

Upon the whole, I think we may fairly conclude that the proper objects of vision constitute a universal language of the Author of nature, whereby we are instructed how to regulate our actions in order to attain those things that are necessary to the preservation and well-being of our bodies, as also to avoid whatever may be hurtful and destructive of them. It is by their information that we are principally guided in all the transactions and concerns of life.⁷²

So, one of the primary purposes of the language of vision, according to Berkeley, is to guide us in keeping our bodies safe, healthy, and to regulate our actions so that we can achieve our aims. The other aims, as outlined in the previous chapter, are to inform us of the existence of other spirits, and to allow God to reveal Himself to human beings.

⁷⁰ Berkeley. TVV §43. p.76.

⁷¹ Berkeley. TVV §38. p.65.

⁷² Berkeley. 2009. NTV §147. p.62.

As we have seen, Berkeley's contrasts his own view – that vision is a language to be understood so that we might best direct our actions – with what he takes to be Descartes' view. Berkeley attributes to Descartes the view that seeing distance, size and shape are matters of working out geometrical calculations, rather than matters of recognising associations between visual signs. I have argued that Berkeley gets Descartes wrong by ascribing to him a theory of vision that involves conscious geometrical calculations. However, there are striking similarities between their accounts of the psychology of vision, which I shall now explore. In §2.1, I'll draw out a positive account of Descartes' theory of vision (and, in his case, sensation generally). I will argue that Descartes also presents a linguistic account of sensory experience and I'll go on to explore what Descartes' account has in common with Berkeley's.

2.1. Descartes and the Language Analogy

As explained in §1 above, Descartes describes three 'grades' of sensation: (1) the physiological, (2) the 'immediate effects' in the mind (our sensory experience), and (3) the judgments that we make regarding external objects on the basis of that sensory experience. Of course, there is an obvious question about how exactly the physical motions in the body 'cause' or bring about non-physical effects in the mind; a question that has puzzled readers of Descartes for more than four hundred years. This is one of Descartes' distinctive metaphysical problems, and it is this problem that I will be focussing on in the remainder of this thesis.

Descartes, famously, doesn't provide a philosophically robust solution to this problem. However, he does draw an analogy multiple times across his corpus that gives us a way of understanding the relation between the body and the mind during sensory experience. This is the analogy with language. In an important passage from *The World*, he writes:

Words, as you well know, bear no resemblance to the things they signify, and yet they make us think of those things, frequently even without our paying attention to the sound of the words or their syllables. Thus it may happen that we hear an utterance whose meaning we understand perfectly well, but afterwards we cannot say in what language it was spoken. Now if words, which signify nothing except by human convention, suffice to make us think of things to which they bear no resemblance, then why could nature not also have established some sign which would make us have the sensation of light, even if the sign contained nothing in itself which is similar to this sensation? [...] by the same token it is our mind which represents to us the ideas of light each time our eye is affected by the action which signifies it.⁷³

As we have already seen, he also draws this analogy between the process of sensory experience and language in the *Optics*. I will repeat the relevant passage:

We must take care not to assume – as our philosophers commonly do – that in order to have sensory perceptions the soul must contemplate certain images transmitted by the objects to the brain; or at any rate we must conceive the nature of these images in an entirely different manner

⁷³ Descartes. *The World*. AT XI 4, CSM I 81.

from that of the philosophers. [...] We should, however, recall that our mind can be stimulated by many things other than images – by signs and words, for example, which in no way resemble the things they signify.⁷⁴

Here, Descartes distances himself from the (somewhat caricatured) Aristotelian view that we sensorily experience objects due to those objects somehow transferring or ‘transmitting’ images of themselves to the mind. Instead, he asks us to think about how words, when heard or read, stimulate the mind to form an idea of the thing signified by the word, even though that word bears no resemblance to that object. We ought to think about the pattern composed by movements in the brain as being like a word, instead of an image.⁷⁵

So too, in the *Principles*, he writes:

It can also be proved that the nature of our mind is such that the mere occurrence of certain motions in the body can stimulate it to have all manner of thoughts which have no likeness to the movements in question. This is especially true of the confused thoughts we call sensations or feelings. For we see that spoken or written words excite all sorts of thoughts and emotions in our minds.⁷⁶

In the *Sixth Meditation*, Descartes uses the terminology of ‘signs’:

Every time this part of the brain is in a given state, it presents the same signs to the mind, even though the other parts of the body may be in a different condition at the time. [...] For example, when the nerves in the foot are set in motion in a violent and unusual manner, this motion, via the spinal cord, reaches the inner brain, and there gives the mind its sign for having a certain sensation, namely the sensation of pain in the foot.⁷⁷

In the *Passions of the Soul*, Descartes compares words of a language to movements of the pineal gland again:

[A]lthough nature seems to have joined every movement of the gland to certain of our thoughts from the beginning of our life, yet we may join them to others through habit. Experience shows this in the case of language.⁷⁸

From these passages across these major works, it is clear that Descartes thought that this analogy with words and signs was useful for explaining the relation between the body and the mind during sensory experience. He encourages us to think about the various patterns of nerves in the

⁷⁴ Descartes. Optics. AT VI 112, CSM I 165.

⁷⁵ Perhaps the most important difference between words and images is the way that each represents their contents. Words do not represent by resemblance. There is a great deal to say about this, which I cannot do justice to here.

⁷⁶ Descartes. Principles. AT VIII A 320-321, CSM I 284.

⁷⁷ Descartes. Sixth Meditation. AT VII 86 (My translation).

⁷⁸ Passions of the Soul §1.50. AT XI 368-369, CSM I 348. This passage makes a slightly different use of the language example. Here, words are compared to sensory ideas, and their meanings are compared to passions. The relation between sensory ideas and passions is like the relation between words and their meanings in that these relations are formed through habit and can be changed. This is, of course, a different use of the language example. The only point I wish to highlight is simply that Descartes says that the movements in the brain are “ordained by nature” to give rise to certain sensory perceptions.

brain as signs or words. These brain ‘words’ (I will refer to them as ‘brain figures’) are “ordained by nature” to stimulate the corresponding sensory ideas within the mind.⁷⁹ Descartes seems to be suggesting that we should understand the relation between brain figures and sensory ideas to be akin to the relation between words of a language and their meanings: sensory ideas should be thought of as the meanings of brain figures.

So, if we take it that the brain figures and sensory ideas are connected in a similar way to the way words and their meanings are connected, an obvious question arises about how these connections come about. We might typically think that words become connected to their meanings due to conventions held between language users. But what can we say about the connections established between brain figures and sensory ideas? Descartes seems to think that these connections are instituted by God (or nature).⁸⁰ He uses this phrase “ordained by nature” multiple times to describe how the motions in the brain give rise to the sensory ideas in the mind.

Now arises the question of why God would create such a system, whereby motions in the brain (brain figures) are connected to sensory ideas in a way similar to the way that words are connected to their meanings. The answer here is almost identical to the one that we saw from Berkeley earlier. God has devised such a system – the best possible system – for preserving the health and wellbeing of the mind-body composite.⁸¹ In the Sixth Meditation, Descartes writes:

For the proper purpose of the sensory perceptions given me by nature is simply to inform the mind of what is beneficial or harmful for the composite of which the mind is a part; and to this extent they are sufficiently clear and distinct.⁸²

Descartes holds that God connects body and mind through a system of meaning in order to keep us safe and healthy. Far from the geometric account that Berkeley ascribes to Descartes, it is becoming clear that Descartes had a psychological theory of vision (or, sensory perception in general in his case) that is grounded in connections that should be described as linguistic, rather than geometric.⁸³ I’ll now move on to consider the ways in which Descartes’ and Berkeley’s accounts of sensation are similar.

2.2 – Comparing the Accounts of Descartes and Berkeley.

Both Berkeley and Descartes, I suggest, have theories that include a ‘language of sensation’. I propose that there are several significant points upon which Berkeley and Descartes can agree. I list them here:

⁷⁹ Descartes repeatedly uses this phrase “ordained by nature” – see: Optics (AT VI 130, CSM I 167), Passions of the Soul (AT XI 368-369, CSM I 348), The World (AT XI 4, CSM I 81).

⁸⁰ By ‘nature’, Descartes means that God has set things up this way. In the Sixth Meditation, he explains: [I]here is no doubt that everything I am taught by nature contains some truth. For if nature is considered in its general aspect, then I understand by the term nothing other than God himself, or the ordered system of created things established by God.” (AT VII 80, CSM II 56.)

⁸¹ Descartes. Meditation 6. AT VII 87, CSM II 60.

⁸² Descartes. Meditation 6. AT VII 83, CSM II 57.

⁸³ I’ll discuss this in depth in Chapter Five.

- (1) God communicates information about what is helpful and harmful through our sensations.
- (2) Linguistic terms do not resemble what they signify (and this is a significant similarity between natural languages and ‘languages of sensation’).
- (3) Linguistic terms bear no necessary connection to what they signify (and this is a significant similarity between natural languages and ‘languages of sensation’).
- (4) That God is the institutor of the ‘language of sensation’.

I’ll look at each of these points in turn. First, as we have already seen, both Descartes and Berkeley clearly recognise that the purpose of our sensations is to preserve our health and wellbeing. In the Sixth Meditation, Descartes explains that the sensations produced in the mind are “most especially and most frequently conducive to the preservation of the healthy man.”⁸⁴ In this strikingly similar passage, Berkeley writes:

[T]he proper Objects of Vision constitute the Universal Language of Nature, whereby we are instructed how to regulate our Actions, in order to attain those things, that are necessary to the Preservation and Well-being of our Bodies, as also to avoid whatever may be hurtful and destructive of them. It's by their Information that we are principally guided in all the Transactions and Concerns of Life.⁸⁵

On this point, then, Berkeley and Descartes agree.

On to the second point of comparison. As we have seen, Descartes and Berkeley both draw an analogy with language in order to explain the process of sensory perception. At the points at which they draw this analogy, they both stress that one of the key aspects of the comparison with language is the feature of non-resemblance. Berkeley writes:

[L]anguages and signs of human appointment; [...] do not suggest the things signified by any likeness or identity of nature, but only by a habitual connection that experience has made us to observe between them.⁸⁶

Here, Berkeley draws attention to that fact that words do not resemble what they signify. Rather, the two are related because of a “habitual connection” that is established through our experience. For Berkeley, it is the same for our perceptions. A visual perception of an object with jagged edges is a sign for a tactile perception of sharpness not because there is any similarity or resemblance between these perceptions, but rather because they have become connected in our experience – like the way in which words become connected to the objects they signify.

Similarly, Descartes regularly stresses the point of non-resemblance. For example, in the *Optics*: “our mind can be stimulated by many things other than images – by signs and words for example which in no way resemble the things they signify.”⁸⁷ It is a key part of his explanation of the process of visual sensation that the patterns in the brain are like words insofar as they do not *resemble* what they signify.

⁸⁴ Descartes. Meditation 6. AT VII 87, CSM II 60.

⁸⁵ Berkeley. 2009. NTV §147. p.62.

⁸⁶ Berkeley. 2009. NTV §147. p.62.

⁸⁷ Descartes. Optics. AT VI 112, CSM I 165.

Of course, Descartes and Berkeley use the analogy with language in different ways by comparing different things to words/signs. For Descartes, the comparison is between words/signs and patterns of movement in the brain. The sensory ideas that result in the mind are like the meanings of those brain figures. For Berkeley, the sensory idea is compared to the word/sign, and it (mostly) signifies other sensory ideas. Further, as will come to light in Chapter Four, Berkeley holds a different theory of language and meaning to Descartes. Nevertheless, they both use this analogy with language to highlight non-resemblance between whatever corresponds to the sign or word and whatever it corresponds to (the meaning or what is signified). They highlight this because they both hold to the idea that signification doesn't require resemblance.⁸⁸

In addition, both Descartes and Berkeley hold that words/signs and their meanings/what is signified are not connected by *necessity* – and this is also a key feature of their explanations of sensory perception. As we see in the quote from Berkeley above, he stresses that words (and, therefore, terms of the 'language of vision') “do not suggest the things signified *by any likeness or identity of nature*”.⁸⁹ As Atherton summarises: “If vision works like a language, then the visual signs do not represent through resemblance or necessary connections but instead by means of contingent connections established in experience.”⁹⁰ God hasn't made it so that necessary connections exist between, for example, visual sensations and tactile sensations. Rather, we learn of their contingent connection through experience.

In Descartes, we don't find anything quite as explicit. However, I believe there is good reason to think that Descartes thinks of the connections between brain figures and sensory ideas as 'conventional', rather than necessary. For one thing, he doesn't describe the connections between nerve patterns in the brain and sensory ideas within the mind as necessary connections. Further, he gives an example in the *Optics* that suggests that the body might be in some state whilst not provoking the usual sensory idea:

For when the soul is distracted by an ecstasy or deep contemplation, we see that the whole body remains without sensation, even though it has various objects touching it.⁹¹

Here, we see a situation in which the body, and therefore the brain, is in some particular state being touched by various objects. However, since the soul is distracted, no sensory ideas result. It seems, then, that it is not necessarily the case that particular body state X gives rise to particular sensory idea Y, even if it usually does (we are to assume that the mind usually has some set of sensory ideas when these objects touch the body – when it is not distracted).

However, even if the brain can be in some state without necessarily giving rise to the corresponding sensory idea, this doesn't yet rule out the possibility that the connection between *that* brain state and *that* sensory idea is 'necessary' in the sense that the brain state couldn't have

⁸⁸ Descartes' views on representation/signification will be explored at length in Chapter Seven of this thesis.

⁸⁹ Berkeley. 2009. NTV §147. p.62. (My emphasis.).

⁹⁰ Atherton. 1990. p. 200.

⁹¹ Descartes. *Optics*. AT VI 109, CSM I 164.

been connected to any *other* sensory idea. On this point, Descartes is quite clear. In the *Sixth Meditation*, he writes:

My final observation is that any given movement occurring in the part of the brain that immediately affects the mind produces just one corresponding sensation; and hence the best system that could be devised is that it should produce the one sensation which, of all possible sensations, is most especially and most frequently conducive to the preservation of the healthy man.⁹²

Now, given that any brain state has one particular corresponding sensation, does that mean that the connection between them is ‘necessary’ in the sense that it couldn’t have been otherwise? Just after this passage above, Descartes goes on to say:

It is true that God could have made the nature of man such that this particular motion in the brain indicated something else to the mind; it might, for example, have made the mind aware of the actual motion occurring in the brain, or in the foot, or in any of the intermediate regions; or it might have indicated something else entirely.⁹³

It seems, then, that the connections between brain states and sensory ideas are also not necessary in the sense that they couldn’t have been otherwise. Descartes acknowledges that they could have been. However, they are set by God for the purpose of keeping us healthy. My suggestion is that we ought to think about this as we think about the way in which words are connected to meanings. It’s true that any word might have had a different corresponding meaning. The word ‘circle’ might have been connected with an idea of a square, for example. There is no necessary connection between words in a natural language and their meanings. The institutors of the language decide the connections for a particular purpose – to be able to effectively communicate.

There is one other passage of interest on this point. In the *Passions of the Soul*, Descartes talks about the way in which the soul can master the passions. He writes:

It is useful to note here, as already mentioned above⁹⁴, that although nature seems to have joined every movement of the gland to certain of our thoughts from the beginning of our life, yet we may join them to others through habit.⁹⁵

A little later, he gives the example of being caught off-guard by something unpleasant in a dish you are eating and enjoying. This experience might mean that you can no longer eat that dish without feeling repulsed. A new connection between that dish and a feeling of repulsion has been created. Descartes takes this as evidence that we might forge new connections between the movements in the brain and our passions. I raise this only because I think it suggests a certain flexibility in the relationship between the body and the mind for Descartes. In any case, this kind of view seems incompatible with the idea that there are necessary and law-like connections between movements in the brain and experiences in the mind.

This leads us nicely on to the final point of comparison between Descartes and Berkeley: that God is the institutor of the language of sensation. Berkeley, as we have seen, refers to the

⁹² Descartes. Meditation 6. AT VII 87-88, CSM II 60.

⁹³ Descartes. Meditation 6. AT VII 88, CSM II 60-61.

⁹⁴ A reference to Article 44.

⁹⁵ Descartes. Passions of the Soul. AT XI 368-369, CSM I 348.

institutor of the language of vision as the “Author of nature”. In the following passage from the PHK, Berkeley explains that our sensations come to us in an order that testifies to the goodness of the Author of nature. He writes:

The ideas of sense [...] have likewise a steadiness, order, and coherence, and are not excited at random, as those which are the effects of human wills often are, but in a regular train or series, the admirable connexion whereof sufficiently testifies the wisdom and benevolence of its Author.⁹⁶

Furthermore, in a later section of the PHK, Berkeley quotes a passage from Acts 17 to refer to the Author of nature as “that supreme and wise spirit, ‘in whom we live, move, and have our being.’”⁹⁷ These passages make it quite clear that by ‘Author of nature’, Berkeley intends to refer to God.

As explained above, Berkeley believes that the language of vision is put in place by God, in part, to preserve the well-being of our bodies. God is the institutor of this language and maintains the connections between the signs and the things signified: the visual with the tactile, and so on. As we have seen, the connections are not underpinned by a relation of necessity or resemblance for Berkeley. So instead, God, as creator of the language system, preserves the meanings of the signs.

Likewise, Descartes makes it quite clear in the passages quoted above that God is the institutor of the language-like connections between brain figures and sensory ideas. In this passage from *The World* mentioned above, Descartes writes:

if words, which signify nothing except by human convention, suffice to make us think of things to which they bear no resemblance, then why could nature not also have established some sign which would make us have the sensation of light, even if the sign contained nothing in itself which is similar to this sensation?⁹⁸

In this passage, it seems to be particularly important to Descartes that words “signify nothing except by human convention”, and he goes on to rhetorically ask: “why could nature not also have established some sign?”⁹⁹ Here, the suggestion is that nature (or, more accurately, God – since he equates the two)¹⁰⁰ establishes these signs, much as human beings do when they establish words that signify particular things. In this passage, it seems key that Descartes chooses to use the example of words, rather than other kinds of signs. It is key because words are established signs – and Descartes wants to say that the same is true of the motions in the material world: they are established (or given/constituted) signs for the sensory ideas that we experience.

Descartes also uses this phrase “ordained by nature” in the *Optics*.¹⁰¹ The nerve movements in the brain are “ordained by nature” to make us have the sensory perceptions that we have.¹⁰²

⁹⁶ Berkeley. 2009. PHK §30. p.94.

⁹⁷ Berkeley. 2009. PHK §66. p.109.

⁹⁸ Descartes. *The World*. AT XI 4CSM I 81. (My emphasis.).

⁹⁹ Ibid.

¹⁰⁰ See footnote 78 (Sixth Meditation: AT VII 80, CSM II 56.)

¹⁰¹ Descartes. *Optics*. AT VI 130, CSM I 167.

¹⁰² Ibid.

Again, he is keen to emphasise that the motions in the matter have been ordained or established to serve some particular role.

And Descartes repeats this phrase “ordained by nature” in Part One of the *Passions of the Soul*. He writes that movements of the pineal gland “are ordained by nature to represent to the soul” sounds or visual sensations.¹⁰³ He is saying again that movements in the brain (movements of the pineal gland) are “ordained by nature” to give rise to sensory ideas (sounds or visual perceptions).

So, we have these passages from *The World*, the *Optics* and the *Passions of the Soul* – and in all of these places Descartes makes it clear that material motions are ‘ordained’ or established by nature/God to be signs for sensory ideas.

3. Concluding Remarks

I have argued, against Berkeley (and Maull), that Descartes does not hold that geometrical judgements are part of our sensations at grade two. This means that Descartes’ account of visual sensation is not geometrical in a way that is opposed to Berkeley’s linguistic account. Rather, we should conclude that Descartes’ physiological account of visual sensation is consistent with a psychological account that is linguistic in a similar way to Berkeley’s own. In fact, Berkeley himself seems to combine a geometrical ‘physiological’ account with a linguistic psychological account.¹⁰⁴ Finally, I have argued that the psychological accounts of Descartes and Berkeley show significant similarities, and that these are characteristic of a linguistic account of visual sensation.

In the next chapter, I’ll look at Descartes’ remarks on language. Even though Descartes does not provide us with a complete theory of language, we can use his remarks – as well as accounts from Descartes’ contemporaries – to build a Cartesian theory of language. This will provide the basis for a fuller account of Descartes’ linguistic explanation of the body-mind union in the case of sensation, which I will develop in Chapter Five.

¹⁰³ Descartes. *Passions of the Soul*. AT XI 368-369, CSM I 348.

¹⁰⁴ Of course, there are clear and important differences between Descartes and Berkeley on this point. For one thing, the ‘physiological’ means something quite different for Berkeley. However, setting aside the obvious differences between the metaphysical commitments of Descartes and Berkeley, we can say that Berkeley is happy to accept that thinking about light moving in certain lines/refraction/etc. belongs to geometry (see Berkeley. TVV §43. p.76-77).

Chapter Four

A Cartesian Theory of Language

“Take care of the sense and the sounds will take care of themselves.”

Lewis Carroll

In the previous chapter, I argued that Descartes’ account of sensation is not ‘geometric’ in the way that Berkeley construes it, and I began to build my case for the linguisticity of sensation in Descartes’ view. In this chapter, my aim is to discover what theory of language Descartes held to. This will provide the basis for a fuller and more informed account of Descartes’ linguistic explanation of the body-mind union in the case of sensation. Chiefly, my aim in this chapter is to work out what Descartes thought about the connection between words and their meanings.

In chapter two, I explored Berkeley’s philosophical position. I argued that he makes an appeal to language in order to solve a metaphysical problem (as I will argue, in Chapter Five, that Descartes did too). As mentioned, Berkeley has a particular view of language in mind; a ‘meaning as use’ type of theory. Here, I argue that this is not so for Descartes. Instead, I will argue that Descartes held to a broadly Aristotelian theory of language. Descartes adopted the ideational theory of meaning that Berkeley forcefully rejected.

Descartes himself does not give a complete theory of language in any of his works. Nevertheless, he does make several remarks on language that give us a clue as to how he understood it. I will begin by looking at those remarks. One of the places where Descartes is most explicit about language is during a correspondence with an anonymous author (who is most likely to be Hobbes). During this exchange, it comes to light that Descartes holds an ideational theory of meaning, whereby the meanings of words are ideas in the mind. In the last part of this chapter, I will look at the work of some later Cartesian thinkers who provide us with more comprehensive theories of language. By the end, we’ll have a Cartesian theory of language to work with, and we’ll be ready to apply it to Descartes’ account of sensory perception in Chapter Five.

1. Descartes on Language

Many of the rare explicit remarks that Descartes makes about language concern the distinction between humans and non-human animals. For Descartes, the use of language indicates the presence of a rational soul that is capable of thought. In the *Discourse on the Method*, Descartes writes:

[I]t is quite remarkable that there are no men so dull-witted or stupid – and this includes even madmen – that they are incapable of arranging various words together and forming an utterance from them in order to make their thoughts understood; whereas there is no other animal, however perfect and well-endowed it may be, that can do the like. This does not happen because they lack the necessary organs, for we see that magpies and parrots can utter words as we do, and yet they cannot speak as we do: that is, they cannot show that they are thinking what they are saying.¹

He goes on to mention that human beings born deaf are still able to use a language to communicate their thoughts, albeit a different kind of language system. However, Descartes believes that the various sounds and signals that animals use do not indicate the presence of a rational soul. Instead, he says that they indicate passions.

In a letter to the Marquess of Newcastle, dated 23rd November 1646, Descartes explains:

In fact, none of our external actions can show anyone who examines them that our body is not just a self-moving machine but contains a soul with thoughts, with the exception of spoken words, or other signs that have reference to particular topics without expressing any passion. [...] I add also that these words or signs must not express any passion, to rule out not only cries of joy or sadness and the like, but also whatever can be taught by training to animals.²

Descartes goes on to give an example. If you were to train a magpie to say “good day” each morning by rewarding it with some food every time it uttered the phrase, this utterance would express nothing except its hope to be fed. This hope for food is a passion, according to Descartes. This, he thinks, is the most that animals are able to express, even if we can teach them phrases in our own languages. He contrasts this with the way that human beings use language, to express thoughts – like “God exists” – that bear no relation to passions.³ He concludes: “This seems to me a very strong argument to prove that the reason why animals do not speak as we do is not that they lack the organs but that they have no thoughts.”⁴

These passages, along with several others concerning the distinction between humans and animals, reveal something about the way Descartes is thinking about how language works.⁵ Namely, they reveal that Descartes thinks that words (and signs such as those used in sign language) express thoughts. Put another way, we can say that, for Descartes, the meanings of words are thoughts or ideas.

This kind of view of words and meanings can be traced back to Aristotle. In *De Interpretatione*, Aristotle states:

Now spoken sounds are symbols of affections in the soul, and written marks symbols of spoken sounds. And just as written marks are not the same for all men, neither are spoken sounds. But

¹ Descartes. Discourse on the Method. AT VI 57-58, CSM I 140.

² Descartes. Letter to the Marquess of Newcastle. AT IV 574, CSMK III 303.

³ Ibid.

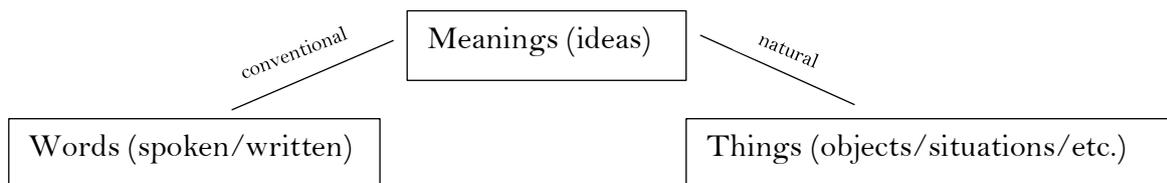
⁴ Ibid.

⁵ See passages: AT I 76-82, CSMK III 10-13; AT VII 178-179, CSM II 126; AT X 433, CSM I 53; AT VIII A 37-38, CSM I 220; AT VI 56-58, CSM I 140.

what these are in the first place signs of – affections of the soul – are the same for all; and what these affections are likenesses of – actual things – are also the same.⁶

For Aristotle then, words signify thoughts (or ‘affections of the soul’) and thoughts bear relations of likeness to actual things. The relation between spoken or written words and the affections of the soul they signify is conventional. Aristotle explains: “I say ‘by convention’ because no name is a name naturally but only when it has become a symbol.”⁷ As we see, Aristotle acknowledges that people use different spoken and written words to signify the same thoughts. Different communities can maintain different language conventions. However, the relation between the thoughts and the actual things that they represent is a *natural* relation: a relation of likeness determined by the natural properties of things.⁸

As we have seen from the passages from Descartes’ *Optics* in the previous chapter, Descartes disagrees with Aristotle insofar as he thinks that our ideas do not bear likeness to or resemble the things that they represent. Nevertheless, on the basis of his admittedly scant remarks on the subject, Descartes seems to broadly agree with Aristotle on how language works. That is, Descartes seems to think that words bear conventional relations to ideas, and ideas bear natural (or, perhaps more accurately, ‘God-ordained’) relations to things. This kind of theory can be depicted like so:



We see this kind of view is implied in several other passages from Descartes’ works: for example, in a letter that Descartes writes to Mersenne in November of 1629 regarding a proposal for a ‘new’ universal language.⁹ Descartes has several things to say about this proposition. Interestingly, he questions the idea that the new language would allow us to understand texts from the past. He writes:

He [the proposer of the ‘new language’] says that he will expound the thoughts of the writers of antiquity from the words they used, by taking each word as expressing the true definition of the thing spoken of. Strictly this means that he will expound the thoughts of these writers by giving their words a sense they never gave them themselves; which is absurd.¹⁰

⁶ Aristotle, *De Interpretatione* (16a4-9).

⁷ Aristotle, *De Interpretatione* (16a27-28).

⁸ For a discussion of this, see Deborah Modrak, *Aristotle’s Theory of Language and Meaning*, 1st edition (Cambridge University Press, 2009). (p.19-20). Aristotle discusses this relation of likeness in *De Anima* III 3-8.

⁹ Universal language projects were popular around Descartes’ time. See for example: John Wilkins, *An Essay towards a Real Character and a Philosophical Language* (Sa. Gellibrand, and for John Martin, 1668)., Francis Lodwick (Vivian Salmon and Francis Lodwick, *The Works of Francis Lodwick: A Study of His Writings in the Intellectual Context of the Seventeenth Century* (Longman, 1972)., and Leibniz (Gottfried Wilhelm Leibniz, *Philosophical Essays*, trans. Roger Ariew and Daniel Garber (Indianapolis: Hackett Publishing Co, Inc, 1989).

¹⁰ Descartes. Letter to Mersenne. AT I 78, CSMK III 11.

Descartes doesn't think that it would be possible to know or explain the thoughts of writers from the past simply by working out a fixed definition of each word they used. This is because the meanings of words, for Descartes, are the ideas or thoughts that the speaker or writer had in mind and intended to express when using the words. The idea that we could work out what writers of the past were thinking by giving our own definitions of the words they used is nonsensical for Descartes – to do this would just be to expound our own thoughts.

I don't mean to suggest that Descartes thought that the meanings of words are entirely private. It is not the case that *only* the speaker or writer knows the meaning of what they are saying. Descartes acknowledged that we associate certain thoughts or ideas with certain words in our languages according to conventions that are adopted by a whole community.¹¹ A successful communication happens when a speaker or writer chooses words that, according to shared language conventions, express the thoughts that they have in their minds and the listener or reader forms the same thoughts upon the occasion of hearing or reading those words. Thus, in virtue of the shared language conventions, both parties end up with the same ideas in their minds.

Although successful communication is possible (and presumably quite common in day-to-day life), Descartes makes more than one remark on the topic of unsuccessful linguistic communication. For example, in the *Rules*, he writes: “if philosophers always agreed about the meanings of words, their controversies would almost all be at an end.”¹² Here, he implies that a great many philosophical disagreements might exist at the level of words, rather than at the level of ideas. Descartes also suggests that confusion arises due to our ideas themselves being confused. In the aforementioned letter to Mersenne from 1629, Descartes writes: “As it is, almost all our words have confused meanings, and men's minds are so accustomed to them that there is hardly anything which they can perfectly understand.”¹³ We may give the impression that we have clear ideas by using words to denote them – words with which we are very familiar, even if the idea itself is not clear in our minds.

Confusion may also arise because different people associate different ideas with the same words, or different words with the same ideas. Even within a linguistic community that shares language conventions, this kind of confusion can arise. See this passage from the *Principles*:

[B]ecause of the use of language, we tie all our concepts to the words used to express them; and when we store the concepts in our memory we always simultaneously store the corresponding words [...] The thoughts of almost all people are more concerned with words than with things; and as a result people very often give their assent to words they do not understand, thinking that

¹¹ See Descartes AT CSM II 126: “Who doubts that a Frenchman and a German can reason about the same things, despite the fact that the words they think of are completely different? And surely the philosopher refutes his own position when he talks of the arbitrary conventions that we have laid down concerning the meaning of words. For if he admits that the words signify something, why will he not allow that our reasoning deals with this something which is signified, rather than merely with the words?”

¹² Descartes. *Rules for the Direction of the Mind*. AT X 434, CSM I, 54.

¹³ Descartes. *Letter to Mersenne*. AT I 81, CSMK III, 13.

they once understood them, or that they got them from others who did understand them correctly.¹⁴

Our understanding of the words is closely joined to the ideas that are associated with those words; so much so that we become unable to properly separate the idea from the word it has become associated with. We may fall into error because we think only of the words, rather than the ideas themselves. Or we may miscommunicate with each other because, when we hear a word, we cannot help but think of the idea we have associated with that word – even if the speaker/writer intended for us to think of a different idea, or even if we have made a mistake in associating that idea with that word in the first place. Descartes also clarifies that “Words are human inventions” and so “one can always use one or several to express the same thing”.¹⁵ This may lead to additional confusion, since words are not strictly fixed to any one idea in particular.

Language, then, according to Descartes, is an imperfect tool used for communication of our ideas, and our possession of this capacity is a sure sign of our being ‘ensouled’, in contrast to non-human animals. Unlike Berkeley, Descartes seems to embrace an ideational theory of meaning, whereby the meanings of words are ideas in the mind.

In the following section, I’ll discuss the correspondence between Descartes and Hobbes. As explained in chapter one, Hobbes understands an idea as an image pressed into the brain via the sense organs. For Hobbes, there will therefore be some words that do not correspond to an idea, like the word ‘God’ (since we cannot have an *idea* of God according to Hobbes’ position). For Hobbes, there are lots of kinds of terms which we can meaningfully use in propositions but for which we cannot have corresponding ideas (like, for example, abstract or universal terms – or any terms that signify things that we cannot have direct sensory impressions of). I suggest that the correspondence between Hobbes and Descartes brings out a crucial difference between the way that each of them are thinking about the relation between language and ideas: for Hobbes, the use of a term does not imply the existence of an idea that corresponds to that term. I think that Descartes’ responses to Hobbes reveal that he is committed to the view that if we can use a term meaningfully, we must have a corresponding idea.

1.1 Descartes, Hobbes, and the Idea of God.

One of the key discussions in the exchange between Hobbes and Descartes in the third objections and replies concerns ideas: specifically, what they are. This discussion relies heavily on the metaphysical assumptions of each philosopher and, as I will argue here, on their theories of language. This debate between Hobbes and Descartes is particularly interesting since it is one of the few points at which we gain a clear insight into the way that Descartes thinks about words and meanings.

In May 1641, an anonymous letter was sent to Descartes by Mersenne. There is substantial evidence that this letter was authored by Hobbes, and that it is a continuation of the discussion in

¹⁴ Descartes. Principles of Philosophy §74. AT VIII A 37-38, CSM I 220.

¹⁵ Descartes. Letter to Mersenne. AT III 417, CSMK III, 187.

the third objections and replies, and so I will go ahead and refer to Hobbes as the author.¹⁶ This letter, dated 19th May 1641, raises the objection that Descartes' arguments for the existence of God are circular and/or question-begging. In order to understand the argument that Hobbes is presenting against Descartes here, we must first understand how they each define what an 'idea' is.

As explained in chapter one, Hobbes uses the term 'idea' to refer to an image in the imagination or a 'phantasm': an impression in the brain following the stimulation of the sense organs. In the third set of objections, Hobbes draws the following distinction: "There is a great difference between imagining, that is, having an idea, and conceiving in the mind, that is, using a process of reasoning to infer that something is, or exists."¹⁷ Descartes, says Hobbes, has failed to explain how these two processes are different. For Hobbes, 'imagining', or having an idea, and actively reasoning towards a conclusion are different. As explored in chapter one, active reasoning takes place at the level of *words* for Hobbes, rather than at the level of ideas.

Descartes introduces a conception of an 'idea' that is quite different from this. For Descartes, as he explains in more than one of his replies to Hobbes, an idea is "whatever is immediately perceived by the mind" or "everything which is in our mind when we conceive something, no matter how we conceive it."¹⁸ So, for Descartes, 'idea' is a much broader term. It covers not only what we can imagine – that is, what we can picture in the imagination – but *anything* that we can conceive of and perceive immediately in the mind, including sensory ideas and also those things that we cannot picture, like a shape with a thousand sides. Whilst Descartes moves away from the notion that an idea must be an image, Hobbes holds that an idea is necessarily an image in the sense that it is an impression in the brain.¹⁹

In the third objections and replies and in the May 19 letter, the discussion is centred on the idea of God. For Hobbes, we cannot have an idea of God. Hobbes writes:

[W]e have no idea or image corresponding to the sacred name of God. And this is why we are forbidden to worship God in the form of an image; for otherwise we might think that we were conceiving of him who is incapable of being conceived.

It seems, then, that there is no idea of God in us.²⁰

We cannot picture or imagine God, on Hobbes' account, because we cannot have a sensory impression of God. Ideas are exclusively of "sensible and finite things".²¹ This means that, for Hobbes, we cannot have a conception of God.

¹⁶ For a summary of the evidence and a good discussion of the issues raised in the May 19 letter, see: Gianluca Mori, 'Hobbes, Descartes, and Ideas: A Secret Debate', *Journal of the History of Philosophy* 50, no. 2 (2012): 197–212..

¹⁷ Descartes. Third Objections & Replies. AT VII 178, CSM II 125.

¹⁸ Descartes. Third Objections & Replies. AT VII 181, CSM II 127.

Letter to Mersenne July 1641: AT III 392-393, CSMK 185.

¹⁹ For Descartes on ideas, see: AT III 393, CSMK III 185; AT VII 160, CSM II 113; AT VII 366, CSM II 253; AT VII 181, CSM II 127.

²⁰ Descartes. Third Objections & Replies: AT VII 180, CSM II 127.

²¹ May 19 Letter. (My translation).

Marin Mersenne, *Correspondance Du P. Marin Mersenne Religieux Minime* (Paris: CNRS, 1932). X. 643-45.

For Descartes, we can have an idea of God. This idea is not located in the imagination but in the *intellect*. We do not have a mental image of God, but that doesn't mean that we cannot conceive of Him. In the Fifth Meditation, he writes: "Certainly, the idea of God, or a supremely perfect being, is one which I find within me just as surely as the idea of any shape or number."²² Shape, number, and other mathematical ideas, for Descartes, are accessed via the intellect. We have a concept of 'one', even though this idea is not a mental image. Our idea of God is like this. We have a clear and distinct, intellectual, innate idea of God, according to Descartes, and we may reflect on this idea to discover what truly pertains to God's essence, e.g. existence, supreme intelligence, etc.²³

Having looked at Hobbes' and Descartes' differing views of ideas, let's turn to the argument of the May 19 letter. Hobbes' argument runs as follows: first, he follows along with Descartes' line of thinking. The idea of God cannot exist as an image in the imagination since God is infinite and cannot be sensed. So, the idea of God must be a 'rational idea' (Hobbes grants for the sake of the argument that there can be such a thing) that exists in the rational understanding. For Hobbes, this is going to be some words that form a proposition. Hobbes recounts the example of the multiple ideas of the sun. We have more than one idea of the sun: first, the simple idea that we gain via our sensory perception of the sun (a small bright circle) and second, the more complex idea that we gain when we understand the "astronomical demonstrations" (something we might understand as a very large hot sphere).²⁴ The first of these is an image formed from a sense impression and the second is located in the rational understanding; or so Hobbes allows for the sake of the argument. For Hobbes, the first of these ideas (the sense impression) can be called a simple idea, whilst the second (the 'rational idea') is complex, since it is a bit of reasoning.

Hobbes' thinking rests on this distinction between simple and complex ideas. He associates simple ideas with individual words: "I certainly have an idea of the sun by means of my vision, which consists of a small bright circle. That simple idea is conveyed when I say the name 'sun'. Names in fact only indicate simple concepts."²⁵ Complex ideas are associated with propositions. Hobbes goes on to say:

[I]f that which is expressed by a word is called an idea, in the sense that the idea of God is understood, it follows that the idea of God can only be portrayed as a proposition – this for example: God exists – not by a single name only, which is only a part of the proposition.²⁶

Hobbes seems to hold that ideas of the rational understanding (intellectual ideas) – if they exist – are necessarily complex and, thus, can only be portrayed via propositions and not via singular terms. The term 'God' then is meaningless by itself – since there is no simple idea of God (no sense impression and, therefore, no image in the imagination). To conclude his point, Hobbes states: "These, I say, are the things I understand concerning the distinction between the ideas

²² Descartes. Fifth Meditation. AT VII 65, CSM II 45.

²³ For a discussion of intellectual knowledge, see: John Carriero, *Between Two Worlds: A Reading of Descartes's Meditations* (Princeton: Princeton University Press, 2009). First Meditation (pp.27-64).

²⁴ May 19 Letter. (My translation).

²⁵ May 19 Letter. (My translation).

²⁶ May 19 Letter. (My translation).

placed in the imagination, and those placed in the mind, or intellect, or reason.”²⁷ Simple terms correspond to ‘simple ideas’ or images in the imagination, and ‘complex propositions’ correspond to ideas of the intellect or understanding.

After this explanation, Hobbes launches his criticism against Descartes’ proof of God’s existence in the Third Meditation²⁸: “the chief argument that shows that ‘it is true that God exists’ is question-begging.”²⁹ Either Descartes assumes a given ‘idea’ of God (which Hobbes has taken to be the proposition ‘God exists’), and so he has assumed what he was supposed to be proving to be true. Or, he hasn’t assumed it, but proven it to be the true idea of God, from which he can reason that God exists, and thus he “proves the same thing by the same thing, namely it’s the same thing to have the idea of God, and to infer by reasoning that God exists.”³⁰ In either case, Descartes’ argument is reduced to: if God exists, then God exists.

I believe that Descartes’ responses to this letter reveal something about the way that he thinks about language generally. Descartes replies in two parts. In the first part, he explains in detail what he means by ‘idea’. “I use the word ‘idea’”, he says, “to mean everything which can be in our thought, and I distinguish three kinds.”³¹ The three kinds that Descartes describes are those he mentions in the Third Meditation: adventitious, innate, and invented. Interestingly, Descartes picks up on Hobbes’ reference to the idea of the sun that we have by means of astronomical reasoning and says that this idea is an invented or constructed idea. This suggests that Descartes and Hobbes are thinking along similar lines, on this point at least. The implication is that Descartes is thinking about the idea of the sun that we gain from astronomical reasoning as ‘complex’ in some sense, since it has been constructed by the thinker as the end result of a process of reasoning. Descartes goes on to say: “Now if from a constructed idea I were to infer what I explicitly put into it when I was constructing it, I would obviously be begging the question.”³² Consider the following example: I can infer that ‘the sun is a sphere’ from my idea of ‘the sun’, since I construct my idea of ‘the sun’ by putting together my ideas of ‘spherical’ and ‘hot’. Since the thinker has constructed their idea of ‘the sun’ in the first place, they cannot infer anything *new* (i.e., anything they didn’t put into it) when considering that idea.

However, Descartes maintains that his idea of God is not like this. He writes: “it is not the same if I draw out from an innate idea something which was implicitly contained in it but which I did not at first notice in it.”³³ Descartes’ idea of God, he says, is an *innate idea*, not an invented idea. Descartes did not construct his idea of God himself. When we reflect upon an innate idea, like the idea of God, we may draw out other things contained within it, like perfect goodness, omnipotence, existence, and so on. However, this is quite different from Descartes’ conception of an invented idea. It is not that the innate idea of God has been *constructed* of various parts (existence, omnipotence, omniscience, etc.) by the thinker, like the rational idea of the sun as something like

²⁷ May 19 Letter. (My translation).

²⁸ Descartes. Third Meditation. AT VII 44-45, CSM II 30-31.

²⁹ May 19 Letter. (My translation).

³⁰ May 19 Letter. (My translation).

³¹ Descartes. Letter to Mersenne, 16 June 1641, AT III 383, CSMK 183.

³² Descartes. Letter to Mersenne, 16 June 1641, AT III 383, CSMK 183-184.

³³ Descartes. Letter to Mersenne, 16 June 1641, AT III 383, CSMK 184.

‘hot sphere 150 million kilometres away’. Rather, we have one innate idea – ‘God’ – that we can characterise in one single, simple term. As Descartes says, when we reflect on the idea we may be able to understand more about what pertains to God’s essence – but these qualities that pertain to God are not parts that we have used to construct our idea of God in the first place.

Since Descartes rejects Hobbes’ suggestion that his idea of God is something constructed like the bit of reasoning (proposition) ‘God exists’, the charge of question-begging that Hobbes’ puts against Descartes fails to stand up, at least if Descartes is right. What is interesting here is the way that these two philosophers seem to be talking past each other: even in spite of Hobbes’ efforts to follow Descartes “way of thinking”.³⁴ Certainly an example of an unsuccessful communication!

Hobbes cannot understand how an idea that corresponds to the singular term ‘God’ could exist, and Descartes cannot see how Hobbes can be using the term ‘God’ meaningfully *without* having a corresponding idea. Descartes’ initial response to the May 19 letter is one of bafflement:

...Is it possible that your correspondent [Hobbes] could not, as he says, understand what I mean by the idea of God, the idea of the soul, and the ideas of imperceptible things? I mean only what he must necessarily have understood himself when he wrote to you that he did not understand my meaning. For he does not say that he has no conception corresponding to the expressions ‘God’, ‘soul’, ‘imperceptible things’; he just says that he did not know what was to be understood by the idea of these things. But if he had any conception corresponding to these expressions, as he doubtless had, he knew at the same time what was to be understood by the ideas – namely nothing other than the conception that he himself had...

But I realise that he is not one of those who think they cannot conceive a thing when they cannot imagine it, as if this were the only way we have of thinking and conceiving. He clearly realised that this was not my opinion, and he showed that it was not his either, since he said himself that God cannot be conceived by the imagination. But if it is not by the imagination that God is conceived, then either one conceives nothing when one speaks of God (which would be a sign of terrible blindness) or one conceives him in another manner; but whatever way we conceive him, we have the idea of him. *For we cannot express anything by our words, when we understand what we are saying, without its being certain thereby that we have in us the idea of the thing which is signified by our words.*³⁵

Here, Descartes expresses his inability to understand how Hobbes has written a letter to him concerning God, the soul, and so on, all the while insisting that he has no ideas of those things. Descartes believes that if you are using the words (when you understand what you are saying) then you have a conception of the things signified by those words, and to have a conception is to have an idea. The conception, Descartes explains again, needn’t be an image in the imagination, and he acknowledges that he and Hobbes agree on this: there can be no image of God in the imagination.

Later in the reply to the May 19 letter, Descartes says: “I mean by the idea of God nothing but what all men habitually understand when they speak of him.”³⁶ Since we are able to communicate about God and use the term ‘God’ meaningfully, it follows, for Descartes, that we

³⁴ May 19 Letter. (My translation).

³⁵ Descartes. Letter to Mersenne, July 1641, AT III 392-393, CSMK 184-185. (My emphasis).

³⁶ Descartes. Letter to Mersenne, July 1641, AT III 393, CSMK 185.

possess an idea of God. Now, when we reflect on what we mean by the term ‘God’ – that is, when we reflect on our idea of God – we deepen our understanding, and we come to realise that God must exist and that certain qualities pertain to his essence, and so on. Nevertheless, even before we have engaged in this reflection, we possess an idea of God when we can use the word ‘God’ meaningfully.

From this correspondence, we see that Descartes and Hobbes are operating with different conceptions of how language works. For Descartes, when one uses a term meaningfully, that is evidence for one’s possession of an idea, which one uses that word to express. For Hobbes, it needn’t be the case that one has an idea (as in a simple idea – an image in the imagination) in mind when using a certain term. Rather, as explored in chapter one, Hobbes has a kind of outside-in view on which language – as sounds and markings out in the world – makes it possible for minds to represent abstract thoughts and have voluntary control over what is present in thought. We can do our ‘thinking’ *with* the words, according to Hobbes: assenting to the proposition ‘God exists’ just means using language in a certain way and does not require possession of an idea of God, or indeed any ‘ideas’ in his sense of the term. Whereas, for Descartes, our thought is *prior* to the words we choose to try to express those thoughts. Correctly using a word requires possession of a corresponding idea.

1.2. Summary: Descartes’ Own View

From Descartes’ own remarks on language, and from his rejection of the contending view from Hobbes, I think we may reasonably conclude that he did indeed subscribe to a broadly Aristotelian theory of language: an ideational theory of meaning. It appears that, for Descartes, ideas are the meanings of words, ideas naturally represent/signify things, and words come to signify things too in virtue of the ideas they are associated with. The connection between words and ideas is conventional and might have been otherwise, whilst the connection between ideas and what they represent is natural.³⁷

2. Cartesians and Language

Even with this reasonable conclusion in mind, I’d like to turn now to the work of some of the later Cartesian thinkers to further inform our thinking on this topic. I’ll first look at the works of Cartesian Lodewijk Meyer, since he provides a more complete theory of language. I will also look at Antoine Arnauld and Pierre Nicole’s *Logic or the Art of Thinking*, and at Johannes de Raey’s view on language.

³⁷ For some more remarks on Descartes’ view of language, see: John G. Cottingham, *Descartes Dictionary*, 1st edition (Oxford, OX, UK ; Cambridge, Mass., USA: John Wiley & Sons, 1993). (p.103) and Noam Chomsky, *Cartesian Linguistics: A Chapter in the History of Rationalist Thought*, 3rd edition (Cambridge ; New York: Cambridge University Press, 2009). (p.59-77).

2.1. Lodewijk Meyer and Language

Meyer's work, *Philosophy as the Interpreter of Holy Scripture* (1666), attempts to do for theology what Descartes has done for philosophy, that is, "renew[...] it from its very foundations' and restore it to its 'natural splendour'".³⁸ In this work, Meyer outlines his theory of language. He begins with a thought from Cicero, that words are signs for concepts.³⁹ Since concepts in the mind are representations of things in the world, the same words may be used to denote the concepts and the things which are represented by them. Meyer claims: "that those sounds and utterances should denote this and not that concept, this and not that thing, depends solely on the arbitrary decision and tradition of men."⁴⁰ So, it seems that Descartes would agree with Meyer here: language is a convention amongst human beings, set up for convenience so that they may reveal their thoughts to each other. It is nothing more than a system of signs, that might well have been an entirely different system of signs, just as long as it enables communication.

Meyer is careful to distinguish between the *concept*, the *word*, and the *external object/feature*. On Meyer's theory, words signify concepts. Concepts represent external objects. So, the same word may be used to denote the concept – say the concept 'pig' – and the external object – a particular pig. But words are only really *signs* for concepts. It is only in their 'second place' that they signify things outside of the mind.⁴¹

What is the nature of a word for Meyer? Later on, he explains:

All words can be considered in two ways: they can be taken absolutely or relatively. Taken absolutely, there is again a twofold division: they can be pronounced orally, or else written by hand. In the former case they are vocal sounds produced by the mouth and projected into the air. But when they are written, they are characters and marks inscribed and depicted on paper or other material. In both cases they can be said to be real entities. Considered from a relational perspective, when attention is given not so much to their nature as to the respect and relatedness included therein, they are signs of other things. And they are not natural signs, as they are called, which have some connection in nature with the thing signified, but arbitrary signs, as deriving their signification from human convention and decree, as we said in chapter two. And since the essence of a sign depends entirely not on nature but on reason, they are to that extent nothing other than entities of reason. Therefore considered absolutely, they can be known only through themselves alone; but considered relatively and as signs, they can be known only through the medium of other things, the things signified, since it is the property of relative things 'to be and to be known simultaneously'.⁴²

Here, Meyer is offering two ways to understand words. First, we may understand them through themselves as *real* entities – as combinations of marks on a page, or vocal sounds. Second, we may

³⁸ Lodewijk Meyer, *Philosophy as the Interpreter for Holy Scripture* (1666), Trans. Samuel Shirley, (Wisconsin: Marquette University Press 2005) p.25-26.

³⁹ Meyer. 1666. p.38.

⁴⁰ Ibid.

⁴¹ Meyer. 1666. p.38.

⁴² Ibid. p.236.

understand them as entities of *reason* – as *signs* for other things. If we are to understand them in this second sense, we must also understand the things that they are signs *of* – that is, the concepts for which they stand. Only when we understand the concept *and* the word as the sign for the concept *simultaneously* do we understand words in the second sense: as entities of reason or *signs*.

Meyer concludes that: “no words taken in isolation with their meaning unknown can ever produce in the understanding ideas of the things they denote.”⁴³ That is, a word as understood in the first sense – through itself as a real entity – has no power to *produce* an idea in the mind. To understand a word in this way would be like reading a word written in a language you did not understand: the marks on the page are simply marks on the page, and would not produce ideas in you by themselves. In order to understand, you would need something like a translation manual. You would need to know the concept that the word signified *first* in order to understand it as a sign for that concept (and then as a sign for a corresponding thing in the external world).

Meyer makes it very clear that words in themselves, considered apart from their meanings, cannot *cause* ideas (as in bring them into existence) in the mind. Rather, they incite the ideas so that they are brought to the forefront of consciousness for further consideration:

...however much we have clear and distinct ideas presented to the mind of things signified by words — e.g., God and omniscience — yet the sentence ‘God is omniscient’, either read or heard, will not be cause through itself of the proper understanding that God is omniscient, but only the occasional or impulsive cause, or something of the sort. For these words cannot bring it about by true causality that someone should have certain and evident assurance that omniscience pertains to God’s nature; they can only be the occasion or incitement whereby the intellect is roused and induced to contemplate more carefully the ideas of God and omniscience, to compare them one with another, and thus to apprehend that the latter is necessarily included in the former.⁴⁴

Meyer tells us that words ‘inspire the reader to think and they urge him towards ideas which he *already possesses* in his mind’.⁴⁵ Rather, than bringing ideas into existence, words bring existing ideas to the forefront of the mind for proper consideration. The ideas, Meyer claims, are *already* in the mind. Words have a function, and that function is simply to “provide occasion and material for our thinking” – nothing more.⁴⁶

We have good reason to think that Descartes would have broadly agreed with Meyer’s description of language. First, as explored in §1 above, all of Descartes’ own remarks on language suggest that he too believed that words primarily signify ideas. It accords with this ideational view that words also come to signify (in Meyer’s second sense) objects through their associations with those ideas. Further, Descartes would almost certainly have agreed that words “taken in isolation” have no power to produce ideas. We see this implied in the passage where Descartes talks about the texts of antiquity. If one has only the words from these ancient texts, one cannot know for

⁴³ Ibid. p.237.

⁴⁴ Meyer. 1666. p.238.

⁴⁵ Ibid. (My emphasis.).

⁴⁶ Ibid. p.239.

This stands in contrast to the view of Hobbes and Berkeley that words need not excite ideas to be significant.

certain the sense that the writer was trying to communicate.⁴⁷ It is implied that the words on their own don't have the power to produce those ideas. One must *already possess* ideas that are associated with those words in order for the words to have meaning. As described above, the problem with interpreting ancient texts is that we may have a set of ideas associated with the words that are very different from the ideas of the original writer, so we end up entertaining our own ideas rather than acquiring the ideas that were originally intended by the writer.

I will come back to Meyer's account of language in Chapter Six, where I will explore some of these ideas in relation to the question of body-mind causation. For now, I'll turn to some other remarks on language from Cartesian thinkers. I argue that these thinkers too, in line with the theory I have attributed to Descartes, propose a theory of language and meaning whereby the meanings of words are the ideas that they are intended to express.

2.2. Other Cartesians and Language.

First, I'll look at Arnauld and Nicole's *Logic as the Art of Thinking* (better known as the *Port-Royal Logic*). Arnauld and Nicole accept the truth of Descartes' fundamental philosophical commitments: his mind-body dualism, his mechanistic physics, and his doctrine of innate ideas. In this text, they aim to provide a Cartesian guide for good thinking. They promote the use of reason and set out to teach people how to educate their judgement and make it "as precise as possible."⁴⁸ Much of this text is devoted to logic, grammar, and language, and how these relate to thinking.⁴⁹

In chapter four of the first part, Arnauld and Nicole describe words as "conventional signs of thoughts".⁵⁰ Of signs in general, they say:

[W]hen we view a certain object merely as representing another, our idea of it is an idea of a sign, and the first object is called a sign. This is how we ordinarily think of maps and paintings. Consequently the sign includes two ideas, one of the thing which represents, the other of the thing represented. Its nature consists in prompting the second by the first.⁵¹

So, for any sign, our idea of that sign includes both the idea of the sign itself (e.g. the map, the painting, or the word) and the idea of the thing it signifies (e.g. the terrain, the subject, or the idea the word expresses). The nature of the sign is that it 'prompts' the idea of the thing it signifies.

⁴⁷ Descartes. Letter to Mersenne, AT I 78, CSMK III 11.

⁴⁸ Arnauld and Nicole, *Antoine Arnauld and Pierre Nicole: Logic or the Art of Thinking*. (p.5). (Hereafter PRL).

⁴⁹ In Medieval and Early Modern philosophy, it seems to be the case that questions about language are very closely tied to logic, and often discussed within this context. See: Jaap Maat, 'Language and Semiotics', in *The Oxford Handbook of Philosophy in Early Modern Europe*, ed. Desmond M. Clarke and Catherine Wilson (Oxford University Press, 2011). p.273.

⁵⁰ Ibid. p.37.

⁵¹ Arnauld & Nicole. PRL. p.35.

Arnauld and Nicole go on to distinguish various kinds of sign, all of which work by prompting the idea of the thing signified. Conventional signs are distinguished from “natural signs, which do not depend on human fancy”.⁵² Arnauld and Nicole’s example of a natural sign is the image that appears in the mirror.⁵³ Like the views I have discussed so far, they maintain that ideas *naturally* represent things in the world. By contrast, words represent (or signify) ideas only *conventionally*.

Like Meyer and Descartes, Arnauld and Nicole believe that we cannot use words meaningfully unless we have ideas in mind that we mean to express with those words. They write:

It follows that we can express nothing by our words when we understand what we are saying unless, by the same token, it were certain that we had in us the idea of the thing we were signifying by our words [...] For there would be a contradiction in maintaining that I know what I am saying in uttering a word, and yet that I am conceiving nothing in uttering it except the sound itself of the word.⁵⁴

This passage echoes Descartes’ reply to Hobbes and, in fact, Arnauld and Nicole refer to the idea of God as their example. They write:

For if we had no idea of God, in uttering the name “God” we would conceive only these three letters ‘G’, ‘o’ and ‘d’ [...] If we had no idea of God, on what could we base everything we say about God, such as that there is only one, that he is eternal, all powerful, all good, all wise? None of this is contained in the sound “God” but only in the idea of God connected to this sound.⁵⁵

Arnauld and Nicole operate with a theory of language and meaning that is broadly the same as Meyer’s and the Aristotelian model that I have attributed to Descartes: words express ideas, and ideas represent objects or features in the world. Words then, in a secondary sense, signify these objects or features in the world.

The last Cartesian thinker that I’ll briefly mention is Johannes De Raey, since he was another one of the few Cartesians to write about language at length. Like Descartes, Meyer, Arnauld, and Nicole, De Raey holds that the meanings of words are ideas.⁵⁶ In his *De cognitione humana*, De Raey describes a theory of language much like Meyer’s. A word signifies something when it makes us think of that something.⁵⁷ The idea brought to mind, then, is the meaning of the word. Ideas naturally refer to or signify things.⁵⁸ So the words, through their association with ideas, come to refer to or signify things too.⁵⁹

⁵² Ibid. p.36-37.

⁵³ Ibid. p.37.

⁵⁴ Ibid. p.26.

⁵⁵ Ibid. p.27.

⁵⁶ For a brief discussion of De Raey’s views on language, see Verbeek’s ‘Dutch Cartesian Philosophy’ in Steven M. Nadler, ed., *A Companion to Early Modern Philosophy* (Malden, Mass: John Wiley & Sons, 2002).

⁵⁷ Johannes de Raey, *Clavis Philosophiae Naturalis Aristotelico-Cartesiana* (Daniele Elsevirii, 1677). p. 244.

⁵⁸ Johannes de Raey, *Cogitata de Interpretatione* (Amsterdam: H. Wetstenium, 1692). 61-62.

⁵⁹ For a longer discussion of this, see: Andrea Strazzoni, *The Foundation of Early Modern Science: Metaphysics, Logic and Theology*. (Rotterdam: Erasmus, 2015). p. 93.

In his work *Cogitata de Interpretatione*, De Raey identifies two different sets of ideas born out of the Cartesian metaphysical system: philosophical or scientific ideas (which are clear and distinct) and ‘every day’ ideas (ideas of ordinary experience). He puts forward the view that there must be two different types of language to correspond to these different sets of ideas. De Raey criticises Meyer for attempting to use philosophy to interpret scripture since this, he argues, is to mix up the types of language. The language of scripture is ‘every day’ language, so one cannot use the language of philosophy to interpret it, or so De Raey holds.⁶⁰

The reason that one should not mistake one type of language for the other is that the words of each language have different types of meanings or, to put it another way, are associated with different types of ideas. Matters of scripture cannot be expressed using the language of philosophy or science, since the ideas associated with the language of scripture are different from those associated with the language of philosophy. To use one language to try and interpret the other will leave you either confused, or with false judgements, and this is the charge that De Raey sets against Meyer.

This criticism that De Raey puts against Meyer is not so important for our purposes, but it does help to highlight the delicate connection between words and ideas that De Raey observed. For De Raey, it is important that words refer to their objects by way of meanings, which are ideas of those objects. This allows him to say that different words for the same object can have different meanings, depending on whether their corresponding ideas are ‘philosophical’ or everyday. The fact that different kinds of ideas amount to distinct meanings further solidifies the point that is relevant for our purposes: the meanings of words are ideas in the mind.

3. Concluding Remarks

Having considered Descartes’ own remarks on language, and the theories of language proposed by later Cartesians, I think we may now safely proceed with a broadly Aristotelian theory of language in mind when interpreting Descartes’ analogy between language and sensation: an ideational theory of meaning. Words come to be meaningful because they are associated with meanings (ideas) in the mind.

This Aristotelian or Cartesian theory stands in contrast to the meaning-as-use type view that I have attributed to Berkeley.⁶¹ According to this position, words are like tokens in a game that are moved around and combined according to a set of conventions. On this view, we don’t know a word’s meaning by having a corresponding thought or idea, but rather by knowing how to use it correctly according to social conventions.

⁶⁰ For more on this, see: A. Strazzoni, ‘Johannes de Raey and the Cartesian Philosophy of Language’, *Lias* 42, no. 2 (2015): 89–120.

⁶¹ See Chapter Two of this thesis.

Another type of theory Cartesians would reject is a theory where words stand directly for objects *without* the mediation of ideas.⁶² For the Cartesians, words signify objects only via ideas, which is why De Raey can believe that different words for the same object can nevertheless differ in meaning.

As we have seen from their correspondence, Descartes explicitly disagrees with Hobbes about language. The notion that one could use a word meaningfully without having a corresponding idea is nonsensical to Descartes. Whatever exactly Hobbes' theory is – whether he too has a meaning-as-use type theory like Berkeley, or whether he has a kind of view where words come to stand for objects directly by 'tracking' them (e.g. the word is sounded every time the object is nearby) – it is certainly not the view that Descartes holds himself.

We've now finished laying the groundwork for the main idea I will present in this thesis. We've considered the views of Hobbes and Berkeley, and I've argued that both of them make an appeal to language in order to resolve distinctive problems generated by their metaphysical commitments. I will now argue that Descartes does the same. In the following chapter, I will focus on the language analogy as a resolution to the problem of body-mind interaction in sensation. I will argue that the relationship between brain states and sensory ideas is akin to the relationship between words and their meanings, according to an ideational theory of meaning, and that this analogy is the best explanatory tool that Descartes can use to explain this relationship.

⁶² This is a *possible* implication of Russell's 'On Denoting'. (Bertrand Russell, 'On Denoting', *Mind* 14, no. 56 (1905): 479–93.)

Chapter Five

Descartes, Sensation, and the Language Analogy

*“Love’s mysteries in souls do grow,
But yet the body is his book.”*

John Donne

Having examined a Cartesian theory of language, it is now time to explore Descartes’ appeal to language as a solution to his metaphysical problem. First, I’ll outline what Descartes’ metaphysical problem is: the infamous interaction problem as it applies to sensory perception. Then I’ll explore Descartes’ repeated appeals to language. I suggest that thinking about the human being as a linguistic system is the best way we can understand Cartesian sensory perception. I argue that this interpretation improves our limited understanding (that is, our non-metaphysical understanding) of the relation between the body and the mind. I’ll also discuss a position that is close to my own, advanced by Chignell. I explain how my interpretation differs from his, since I am not offering the linguistic understanding of the human being as a *metaphysical* understanding. Rather, I think it is a kind of practical understanding that is rooted in our experience.

1. Body-Mind and Mind-Body Problems

We began by looking at Hobbes, Berkeley, and the ways in which they appeal to language to solve or reinterpret problems generated by their metaphysical positions. My first aim in this chapter is to show that Descartes makes a similar appeal and, therefore, that he fits into this pattern of explanation. My second aim is to show that Descartes’ language analogy provides an illuminating way of understanding the body-mind union in the case of sensation. We should start by looking at the problem that Descartes faces, famously referred to as the ‘mind-body problem’ or the ‘interaction problem’.¹

¹ See, for example: Jonathan Bennett, *Learning from Six Philosophers: Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume.*, 1st Edition (Oxford : New York: Clarendon Press, 2001).

Janet Broughton, ‘Adequate Causes and Natural Change in Descartes’ Philosophy’, in *Human Nature and Natural Knowledge: Essays Presented to Marjorie Grene on the Occasion of Her Seventy-Fifth Birthday*, ed. Alan Donagan, Anthony N. Perovich, and Michael V. Wedin, Boston Studies in the Philosophy of Science (Dordrecht: Springer Netherlands, 1986), 107–27.

Let's begin by thinking about the details of the problem. Descartes describes mind and body as two distinct substances with distinct natures or essences: "extension in length, breadth and depth constitutes the nature of corporeal substance; and thought constitutes the nature of thinking substance."² Descartes tells us that the natures of mind and body are "not only different, but in some way opposite".³

We must add to this Descartes' apparent commitment to a causal likeness principle.⁴ At various points, Descartes seems to commit himself to the idea that efficient causal relations can only exist between things that are *alike* (insofar as they can share modes/properties). In the *Conversation with Burman*, Descartes asserts: "It is a common axiom and a true one that the effect is like the cause."⁵ This likeness or similarity principle is suggested in the Third Meditation, where Descartes takes it to be "manifest from the natural light" that there is "at least as much reality in the efficient and total cause as in the effect of that cause."⁶ Descartes goes on to rhetorically ask: "For where, I ask, could the effect get its reality from, if not from the cause? And how could the cause give it to the effect unless it possessed it?"⁷ These passages strongly suggest that 'efficient and total' causes pass on properties or features to their effects. That is: efficient causation involves something being transferred from cause to effect.⁸

Put this all together and we arrive at a problem: given the total heterogeneity of mind and body and Descartes' commitment to the causal likeness principle, how can we say that these two substances causally interact with each other?⁹ That is, how can states of the body cause certain

S. V. Keeling, *Descartes*, New edition (Oxford University Press, 1968 [originally published 1934]). Ch. 6.
Margaret D. Wilson, 'Descartes on the Origin of Sensation', *Philosophical Topics* 19, no. 1 (1991): 293–323.

² Descartes. Principles §1.53. AT VIII A 25, CSM I p.210.

³ Descartes. Meditations (synopsis). AT VII 13, CSM II p.9-10.

⁴ Some scholars have interpreted the causal likeness principle to mean that a cause must be as perfect (or as real) as its effect. This interpretation allows for the possibility of an effect being quite dissimilar to its cause, just as long as it does not possess more reality than its cause. See, for example: Louis E. Loeb, *From Descartes to Hume: Continental Metaphysics and the Development of Modern Philosophy* (Ithaca, N.Y: Cornell University Press, 1981). p. 140.

I am inclined to agree with Cottingham that Descartes strongly implies that efficient causation requires a likeness so that there can be transference between cause and effect.

See: John Cottingham, 'Descartes on Colour', *Proceedings of the Aristotelian Society* 90 (1989): 231–46.

⁵ Descartes. Conversation with Burman. AT V 156, CSMK III 339-340.

⁶ Descartes. Third Meditation. AT VII 41, CSM II p.28.

⁷ Descartes. Third Meditation. AT VII 41, CSM II p.28.

⁸ Chignell summarises this view of transeunt efficient causation nicely. See: Andrew Chignell, 'Descartes on Sensation: A Defense of the Semantic-Causation Model', *Philosopher's Imprint* 9, no. 5 (2009). p.2.

Nadler talks about something literally passing from cause to effect in the body-body case. See: Steven Nadler, 'Descartes and Occasional Causation', *British Journal for the History of Philosophy* 2, no. 1 (1994): 35–54. p.38.

Schmaltz defends a kind of efficient causation in the body-body case, but does not agree that something must literally pass from cause to effect. See: Tad M. Schmaltz, *Descartes on Causation* (Oxford: Oxford University Press, 2008).

⁹ For more iterations of this question, see: Eileen O'Neill, 'Mind-Body Interaction and Metaphysical Consistency: A Defense of Descartes', *Journal of the History of Philosophy* 25, no. 2 (1987): 227–45.

Daisie Radner, 'Descartes' Notion of the Union of Mind and Body', *Journal of the History of Philosophy* 9, no. 2 (1971): 159–70.

Desmond M. Clarke, *Descartes's Theory of Mind*, Revised ed. edition (Oxford: Oxford University Press, USA, 2005).

states of the mind (as they seem to when we have sensations)?¹⁰ And how can certain states of mind cause certain motions in the body (as when we voluntarily act)?

These questions I have posed here are distinct insofar as they concern two different relational ‘directions’: the question of sensation concerns the body-mind direction, and the question of voluntary action concerns the mind-body direction. Accounting for body-mind relations and mind-body relations were treated as separate problems by some of Descartes’ predecessors.¹¹ Mind-body causation was thought to be less problematic than body-mind causation, because of the superiority, or greater reality, of the mental over the corporeal. Effects in the body could thus draw their reality from causes in the mind.¹² Rozemond gives us reason to think that the problems are treated differently by Descartes too.¹³ She points out that Descartes doesn’t seem to think that there is a problem with two very different substances interacting. In fact, he says as much in a letter to Clerselier:

I will tell you that the whole difficulty [...] proceeds from a supposition that is false and that cannot be proved, namely that if body and soul are two substances with different natures, that prevents them from being able to act on one another.¹⁴

So, Descartes doesn’t accept that there is a general problem with two substances with different natures interacting. Nevertheless, Descartes offers slightly different responses depending on which ‘direction’ of interaction he is considering (body-mind or mind-body). Descartes’ response to Elisabeth’s questions about how the mind acts on the body (which I will explore in a moment) focuses on *the way that we know* that mind acts on body. Descartes offers very little regarding the details of *how* they interact. Whereas, in his explanations of sensory perception, he does consistently offer us something (the language analogy) that sheds some explanatory light on various aspects of the process – even if he still cannot provide a metaphysically robust account of the details of *how* body acts on mind.¹⁵

¹⁰ Cottingham (1993) frames the question: how does the qualitative character of our sensory experience arise from the categories of physical science? (p.149).

In contemporary philosophy, this problem is often referred to as the ‘explanatory gap’, a term coined by Joseph Levine (Joseph Levine, ‘Materialism and Qualia: The Explanatory Gap’, *Pacific Philosophical Quarterly* 64, no. October (1983): 354–61.)

¹¹ For a discussion of this, see: Rozemond, ‘Descartes on Mind-Body Interaction: What’s the Problem?’ 1993. Rozemond suggests that Aquinas, among others, held that the problem of body-to-mind causation was a distinct problem.

See: St Thomas Aquinas, *Summa Theologica*, trans. Fathers of the Dominican Province, New edition (New York: Ave Maria Press, 2000). §I.84.6.

¹² For more on causation and ‘ontological rank’, see:

Pauline Phemister, ‘Are Mind-Body Relations Natural and Intelligible? Some Early Modern Perspectives’, in *Causation and Modern Philosophy* (Routledge, 2010). p.88.

¹³ Rozemond. 1999.

¹⁴ Descartes. Fifth Objections & Replies. AT IX-1 213, CSM II 275.

¹⁵ Whilst I agree with Rozemond that there are important differences between the body-mind and mind-body problems, I do not fully agree that the body-mind problems are not strictly heterogeneity problems. Instead, I think that Descartes’ focus on dissimilarity trickles down from the fact that mind and body are distinct substances with differing natures. Unfortunately, I do not have the space to fully discuss this here.

Here, I will focus on the body-mind problem, particularly in the case of sensation, since Descartes appeals to language to shed explanatory light on the process of sensory perception. My aim is to explore what is gained from this appeal, and to suggest that he fits into a now-familiar pattern of explanation along with Hobbes and Berkeley. All three figures make an appeal to language in order to shed explanatory light on their respective metaphysical problems.

Let's remind ourselves of the details of the process of sensory perception. First, physical objects external to the body impact the body in various ways and create motions in the nerves (e.g., when we see some object, the optic nerve is moved in a particular way). These motions in the nerves make their way to the brain and create a pattern of motion in the nerves of the brain. These brain patterns occasion the mind to have particular sensory ideas.¹⁶ As I have said previously, I will use the terms 'sensory idea', 'sensory experience' and 'sensation' interchangeably to refer to the immediate experience of a sensation (e.g., of the colour red) in the mind. The problem is that Descartes says very little about *how* the nerve patterns in the brain occasion or give rise to sensory ideas within the mind.

The first thing to do is consider what kind of response Descartes might be able to give in answer to this problem. In what follows, I will look at some of the responses that Descartes gives when questioned about the union of mind and body. It will come to light that a *metaphysical* explanation of *how* the nerve patterns in the brain occasion sensory ideas within the mind is not possible.¹⁷ Instead, Descartes offers us a different way of thinking about the relation between body and mind when sensory perception occurs.

2. How can we understand the union of mind and body?

One of Descartes' most well-known interlocutors, Princess Elisabeth of Bohemia, questions Descartes on the relationship between the mind and the body. I think that their correspondence sheds some light on how Descartes views this issue.

Elisabeth, in response to Descartes' first letter to her, says that she would find it easier to understand the relation between the mind and the body if she were to conceive of the mind as something extended.¹⁸ In his response, Descartes writes that to conceive of the mind as something extended is "strictly speaking [...] what it is to conceive its union with the body".¹⁹ In other words, to think of the soul or mind as something material is *the same as* thinking of the union. As far as Descartes is concerned, Elisabeth doesn't really need his help with her conception of the union of

¹⁶ Descartes. Optics. AT VI 109-135, CSM I 164-169.

¹⁷ When I talk about a 'metaphysical' understanding, I am thinking about an understanding that is grounded in clear and distinct ideas. In Descartes' responses to Elisabeth (that I will look at in this chapter), he talks about 'pure' understanding. I take this to be the kind of intellectual understanding we can have of the soul, God, mathematics, pure body, etc. We are able to have a metaphysical understanding of these, but not, I will argue, of the mind-body union.

¹⁸ Princess Elisabeth of Bohemia and René Descartes, *The Correspondence between Princess Elisabeth of Bohemia and René Descartes*, trans. Lisa Shapiro, New edition (Chicago: University of Chicago Press, 2007). (Hereafter abbreviated 'S'). p.68.

¹⁹ S. p.69.

mind and body. Rather, he seems to think that she needs help identifying what *kind* of knowledge (knowledge of the mind, knowledge of the body, or knowledge of the union) she has. I don't mean to suggest that Descartes sets out to classify kinds of knowledge for the sake of it, but rather that he wants to signal to Elisabeth that she already has knowledge of the union; it is just not the kind of knowledge that she has of other things (like the mind or the body respectively).

In order to try to better explain this to Elisabeth, Descartes refers back to the primitive notions that he outlined in his first letter to her. The primitive notions are “like originals on the pattern of which we form all our other knowledge.”²⁰ He outlines the primitive notions of extension, thought, and the union. It is from the notion of extension that our understanding of body follows (e.g., our conceptions of shape and movement). Our knowledge of the mind (e.g., our knowledge of the will, the understanding, and so on) follows from the primitive notion of thought. Finally, from the notion of the union, our knowledge of how bodies act upon souls (bringing about sensations and passions) and how souls act upon bodies (bringing about voluntary movements) follows.²¹

Descartes writes:

I consider also that all human knowledge consists in distinguishing well these notions, and in attributing each of them only to those things to which it pertains. For when we want to explain some difficulty by means of a notion which does not pertain to it, we cannot fail to be mistaken; just as we are mistaken when we want to explain one of these notions by another; for being primitive, each of them can be understood only through itself.²²

Each of the primitive notions has its own epistemic territory. To try to use one notion to explain or understand something included under another notion is to make a mistake. For example, to try to understand how the mind has sensations by reflecting on the primitive notion of thought is erroneous, since sensations are included under the primitive notion of the union, not the primitive notion of thought.

It appears to Descartes that Elisabeth is making a mistake of this kind. She is thinking about the way in which the mind moves the body in the same manner as the way in which she would think about the interaction between two bodies. That is to say, she is thinking about mind-body interaction under the primitive notion of extension – a mistake!

Descartes wants to explain to Elisabeth how our knowledge of each of these notions differs. He writes:

The soul is conceived only by the pure understanding; the body, that is to say, extension, shapes and motions, can also be known by the understanding alone, but is much better known by the understanding aided by the imagination; and finally, those things which pertain to the union of soul

²⁰ S. p.65.

²¹ S. p.65.

²² S. p.65.

and the body are known only obscurely by the understanding alone, or even by the understanding aided by the imagination; but they are known very clearly by the senses.²³

The kind of understanding we have of the mind alone is purely intellectual. Likewise, we can understand body in a purely intellectual way, although the notion of extension may seem clearer to us if we also imagine it (that is, form a kind of mental image of something extended in length, breadth, and depth). However, the notion of the union of mind and body cannot be understood in a purely intellectual way at all. Descartes suspects that Elisabeth is trying to understand the relation between the mind and the body in an intellectual way (or, perhaps, she is trying to imagine it – as when she says that she might ‘concede’ extension to the soul). Elisabeth’s attempt to understand the union in this way is mistaken, according to Descartes.

Where does this leave us with regards to Elisabeth’s request? Descartes is often accused of giving Elisabeth an unsatisfying answer. She asks him to explain *how* the mind and the body ‘act upon’ each other, as he says they do. His reply, in essence, seems to be that Elisabeth *already* understands how the body and mind interact through the senses, passions, and the experience of voluntary actions. If she hopes for an intellectual or metaphysical understanding – a kind of understanding akin to the understanding we have of the mind alone (or the body alone), which we gain through the practice of philosophical reflection – then, unfortunately, it is not possible.²⁴

One of the reasons that Descartes’ answer to Elisabeth is often taken to be unsatisfying is, I think, because it’s not immediately clear how we *know the union* simply by having sensory experiences or voluntarily acting. In this chapter, I’ll suggest that the language analogy does give us something a little more than this. Language, whilst still being something that we best know through experience, is also something that we recognise to be a connection between two distinct domains. As I hope it’s clear through the last few chapters of this thesis, I take this to be a key reason as to why Descartes uses the language analogy in his explanation of sensory perception.

Like Elisabeth, Gassendi also questions the idea that mind and body are distinct substances that can, nevertheless, interact with each other. In the fifth set of objections to Descartes’ *Meditations*, Gassendi tries to work out how the mind could ‘be present’ at one point within the brain. He first objects that there is a problem if the single point is extended (since that would mean that the mind must also be extended), or, if this point is a ‘mathematical point’, then it would be “purely imaginary”.²⁵ Then, he objects that there is no one point within the brain where all of the

²³ S. p.69.

²⁴ For a position similar to mine, see: Alison Simmons, ‘Mind-Body Union and the Limits of Cartesian Metaphysics’, *Philosopher’s Imprint* 17, no. 14 (21 July 2017).

I will argue that Descartes does give us a helpful analogy to try and aid our understanding of the union (the analogy with language). Simmons argues that we best understand the union through ‘internal’ senses (e.g. of hunger, fear, etc.).

Others agree that the union is something sensed, rather than metaphysically understood. See:

Lilli Alanen, ‘Reconsidering Descartes’s Notion of the Mind-Body Union’, *Synthese* 106, no. 1 (1996): 3–20.

Carriero, *Between Two Worlds: A Reading of Descartes’s Meditations*. 2009.

John Cottingham, *Cartesian Reflections: Essays on Descartes’s Philosophy*, Illustrated edition (Oxford ; New York: OUP Oxford, 2008).

²⁵ Gassendi. Fifth Objections. AT VII 340, CSM II 236.

nerves converge. How, then, could the mind be present in the brain in a way that allowed it to have sensory perceptions?²⁶

Descartes responds:

Your comments on the union of the mind with the body are similar to what you have said earlier. At no point do you produce objections to my arguments; you merely put forward doubts that you think follow from my conclusions, though in fact they merely arise from your desire to call in the imagination to examine matters which are not within its proper province.²⁷

Again, Descartes responds by saying that Gassendi has made a mistake in pursuing a kind of understanding of the mind-body relation that, Descartes thinks, it is not possible to have. In this case, he accuses Gassendi of having a “desire” to be able to *imagine* the way in which the mind and the body interact. As we have seen from his response to Elisabeth, Descartes thinks that the imagination is useful for understanding the notion of extension, but it is not appropriate to use the imagination to reach an understanding of the union of mind and body.

Descartes goes on to clarify that the intermingling of mind and body is *different in kind* from the intermingling of two bodies:

Thus when you try and compare the intermingling of the mind and body with the intermingling of two bodies, it is enough for me to reply that we should not set up any comparison between such things, because they are quite different in kind; and we should not imagine that the mind has parts on the grounds that it has an understanding of parts in the body.²⁸

Descartes doesn't acknowledge that his account of mind, body, and the interaction between them faces metaphysical problems of the sort described by Gassendi. In fact, he says explicitly that Gassendi hasn't produced objections to his arguments (quoted above). He holds that Gassendi has simply made an assumption – that, since mind and body are different, they cannot interact – which is false. To both Elisabeth and Gassendi, Descartes seems to want to explain that a metaphysical understanding of the relation between the mind and the body cannot be reached – and so their attempts to reach one are mistaken. His responses to them point out that they must aim for a kind of understanding that is different in kind from the understanding they have of body-body relations, or their understanding of the pure soul.

As far as Descartes is concerned, he has provided robustly metaphysical explanations where possible, and so his account is not lacking. His task in responding to these objections is to point out what *kind* of knowledge (or knowledge in which domain) one is pursuing.²⁹ Knowledge and understanding of the relation and interaction between the mind and the body is in the domain

²⁶ Ibid.

²⁷ Descartes. Fifth Replies. AT VII 390, CSM II 266.

²⁸ Descartes. Fifth Replies. AT VII 390, CSM II p.266.

²⁹ We also see Descartes making distinctions between kinds of knowledge or domains of understanding in the *Comments on a Certain Broadsheet*. Here, he distinguishes between matters of faith alone, matters of natural reason that have something to do with faith, and matters which are solely to do with human reasoning. See: Descartes. *Comments on a Certain Broadsheet*. AT VIII B 353, CSM I 300.

of the senses. To the extent that we can improve our understanding of the interaction between the mind and the body in the case of sensation – beyond simply feeling pain when we stub our toes – we must reflect upon Descartes’ remarks on the nature of sensory experience.

So, what does Descartes tell us through these exchanges with Elisabeth and Gassendi? He tells us that we can understand the union of mind and body through the senses, the passions, and the experience of voluntary actions. This thesis is concerned with the case of sensation, so that is what I will focus on moving forward. The next task is to look at what Descartes says about the process of sensation. I argue here that he gives us a very helpful analogy, through which our practical, sensory understanding of the union can be improved – even if a robustly metaphysical understanding of it is not possible.³⁰

3. The Language Analogy and Body-Mind Interaction: Enhancing our Understanding

First, a recap of Descartes’ view of the process of sensory perception. As explained in Chapter Three, Descartes describes three ‘grades’ of sensation: (1) the physiological, (2) the ‘immediate effects’ in the mind (our sensory experience), and (3) the judgments that we make regarding external objects on the basis of that sensory experience. Physical objects impact upon the body, creating motions in the nerves. These motions ultimately make their way to the brain, creating a pattern of motion in the nerves in the brain. This pattern of motion then occasions or stimulates a sensory experience within the mind. From these sensory experiences, we are inclined to make judgements about objects and features in the world. For example, we might attribute redness and sweetness to an apple.

This description provokes the question that we have been exploring: how do the motions in the nerves of the brain bring about non-physical effects in the mind? Descartes, as I have suggested, doesn’t provide a properly metaphysical answer to this question. However, he does draw an analogy multiple times across his corpus that aids us in understanding the relation between the body and the mind during sensory experience. This is the analogy with language. In Chapter Three, I presented several passages from various works in which Descartes uses this analogy. I include them again here:

Words, as you well know, bear no resemblance to the things they signify, and yet they make us think of those things, frequently even without our paying attention to the sound of the words or their syllables. Thus it may happen that we hear an utterance whose meaning we understand perfectly well, but afterwards we cannot say in what language it was spoken. Now if words, which signify nothing except by human convention, suffice to make us think of things to which they bear no resemblance, then why could nature not also have established some sign which would make us

³⁰ When I use the term ‘practical’ (as in ‘practical understanding’) I mean to contrast this with a ‘theoretical’ or ‘intellectual’ understanding. A practical understanding is an understanding rooted in our sensory experience. My view that we have a practical understanding of our embodiment, rather than an intellectual or properly metaphysical understanding is in line with Simmons’ reading (Simmons. 2017.). However, here I do not focus internal bodily phenomenology, as Simmons does. Instead, I explore the analogy with language that Descartes offers us. I think that the language analogy reveals something about the way we understand our embodiment, since language is something experienced – but also something that connects two different domains (meanings and words).

have the sensation of light, even if the sign contained nothing in itself which is similar to this sensation? [...] by the same token it is our mind which represents to us the ideas of light each time our eye is affected by the action which signifies it.³¹

We must take care not to assume – as our philosophers commonly do – that in order to have sensory perceptions the soul must contemplate certain images transmitted by the objects to the brain; or at any rate we must conceive the nature of these images in an entirely different manner from that of the philosophers. [...] We should, however, recall that our mind can be stimulated by many things other than images – by signs and words, for example, which in no way resemble the things they signify.³²

It can also be proved that the nature of our mind is such that the mere occurrence of certain motions in the body can stimulate it to have all manner of thoughts which have no likeness to the movements in question. This is especially true of the confused thoughts we call sensations or feelings. For we see that spoken or written words excite all sorts of thoughts and emotions in our minds.³³

Every time this part of the brain is in a given state, it presents the same *signs* to the mind, even though the other parts of the body may be in a different condition at the time. [...] For example, when the nerves in the foot are set in motion in a violent and unusual manner, this motion, via the spinal cord, reaches the inner brain, and there gives the mind its sign for having a certain sensation, namely the sensation of pain in the foot.³⁴

[A]lthough nature seems to have joined every movement of the gland to certain of our thoughts from the beginning of our life, yet we may join them to others through habit. Experience shows this in the case of language.³⁵

From these passages across these major works, it is clear that Descartes thought that this analogy with words and signs was useful for explaining the relation between the body and the mind during sensory experience. The patterns of movement in the nerves in the brain (brain figures) are like signs or words. These brain figures are “ordained by nature” to stimulate the corresponding sensory ideas within the mind.³⁶ We’re encouraged to understand the relation between brain figures and sensory ideas to be akin to the relation between words of a language and their meanings: sensory ideas should be thought of as the *meanings* of brain figures.

Descartes thinks that the connection between brain figures and sensory ideas is instituted by God (or nature). He uses this phrase “ordained by nature” multiple times to describe how the

³¹ Descartes. *The World*. AT XI 4, CSM I 81.

³² Descartes. *Optics*. AT VI 112, CSM I 165.

³³ Descartes. *Principles* §4.197. AT VIII A 320-321, CSM I 284.

³⁴ Descartes. *Sixth Meditation*. AT VII 86 (My translation).

³⁵ Descartes. *Passions of the Soul* §1.50. AT XI 369, CSM I 348.

As previously stated, this passage makes a slightly different use of the language example. Here, words are compared to sensory ideas, and their meanings are compared to passions. The relation between sensory ideas and passions is like the relation between words and their meanings in that these relations are formed through habit and can be changed. This is, of course, a different use of the language example. The only point I wish to highlight is simply that Descartes says that the movements in the brain are “ordained by nature” to give rise to certain sensory perceptions.

³⁶ Descartes repeatedly uses this phrase “ordained by nature” – see: *Optics* (AT VI 130, CSM I 167), *Passions of the Soul* (AT XI 368-369, CSM I 348), *The World* (AT XI 4, CSM I 81).

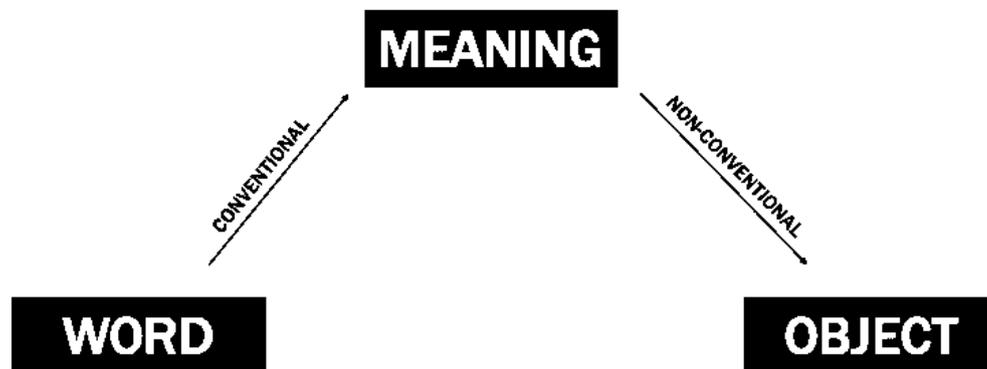
motions in the brain give rise to the sensory ideas in the mind. By ‘nature’, Descartes means that God has set things up this way. In the *Sixth Meditation*, he explains:

[T]here is no doubt that everything I am taught by nature contains some truth. For if nature is considered in its general aspect, then I understand by the term nothing other than God himself, or the ordered system of created things established by God.³⁷

Now arises the question of why God would create such a system, whereby motions in the brain are connected to sensory ideas in a way similar to the way that words are connected to their meanings. The answer, as I suggested in Chapter Three, is almost identical to the one that we see from Berkeley. God has devised such a system – the best possible system – for preserving the health and wellbeing of the mind-body composite.³⁸ In the *Sixth Meditation*, Descartes writes:

For the proper purpose of the sensory perceptions given me by nature is simply to inform the mind of what is beneficial or harmful for the composite of which the mind is a part; and to this extent they are sufficiently clear and distinct.³⁹

In Chapter Four, I argued that Descartes held to an ideational theory of meaning. For Descartes, words mean what they mean because they are conventionally associated with ideas, which are intrinsically (non-conventionally) representative.



So how does this theory of language apply to Cartesian sensory perception? Descartes suggests that the nerve patterns in the brain (brain figures) are analogous to words. The ‘meanings’ of these brain figures are sensory ideas, and sensory ideas intrinsically represent objects and features of the external world.⁴⁰

4. What can the Language Analogy tell us?

³⁷ Descartes. *Sixth Meditation*. AT VII 80, CSM II 56.

³⁸ Descartes. *Sixth Meditation*. AT VII 87, CSM II 60.

³⁹ Descartes. *Sixth Meditation*. AT VII 81, CSM II 57.

⁴⁰ In Chapter Seven, I will argue that God ensures that sensory ideas represent what they represent.

As we have seen, Descartes repeatedly uses this analogy in his explanations of the process of sensory perception. The next thing that we must think about is what we should take from it. Descartes has a serious metaphysical problem on his hands. Can this analogical explanation help to ‘solve’ it?

My short answer is yes; the analogy with language absorbs some of the mystery generated by the interaction problem. My longer answer is: first, Descartes gives no indication that he thinks that he has a very serious metaphysical problem to solve, and second, if his account does have a serious metaphysical problem, then a metaphysical ‘solution’ is not possible. I want to reiterate that I don’t think that the language analogy is intended to help to provide a robustly philosophical, properly metaphysical, or purely intellectual understanding of the relation between the body and the mind. Descartes makes it quite clear in his letters to Elisabeth that it is not possible to have this kind of understanding of the union of body and mind. Nevertheless, in the spirit of Descartes’ account, I think that we can use the analogy with language to get closer to a practical kind of understanding of the relation between the body and mind that is rooted in our experience. I also think that this analogy can shed light on aspects of the process of sensory perception that seem the most mysterious. These are: the problem of body-mind causation and the problem of sensory representation. I will look at each of these in turn in chapters six and seven.

The role played by the appeal to language is not to give a metaphysical explanation of sensation but rather to put us in mind of something else we understand *practically*, through our sensory experience. As mentioned in earlier chapters, language is so familiar to us that we often forget how mysterious it is. Without needing a detailed metaphysical explanation of *how* language works, we know *that* it works and how to use it. Our intuitive understanding is perfectly adequate for practical purposes, which is all we require. By drawing an analogy between language and sensation, Descartes is able to use this tacit, practical understanding to bring out a like understanding of sensation, without having to provide the sort of metaphysical theory he regards as impossible.

I take a practical understanding, in Cartesian terms, to be an understanding that is not ‘pure’ or grounded in clear and distinct ideas, but rather rooted in our experience.⁴¹ That is, an understanding that does not fall under the first or second primitive notions that Descartes describes to Princess Elisabeth.⁴² Descartes tells Elisabeth that our understanding of the relation between the body and the mind is not something that can be accessed via the pure understanding,

⁴¹ Spinoza makes a distinction between kinds of explanations: one in terms of ‘natural principles’ and another in terms of familiarity. This seems to me to be similar to Descartes’ distinction between understanding something via the ‘pure understanding’ and understanding something practically through the senses.

“I could, of course, say that a miracle is something whose cause cannot be explained according to the principles of natural things known to the natural light. But since miracles have occurred according to the power of understanding of the common people, who were, in fact, completely ignorant of the principles of natural things, it is certain that the ancients took for a miracle what they could not explain in the way the common people are accustomed to explain natural things, viz. by falling back on memory to recall some other similar thing they are accustomed to imagine without wonder. For the common people think they understand a thing well enough when they do not wonder at it.”

Benedictus De Spinoza and Edwin Curley, *The Collected Works of Spinoza: Volume II* (Princeton (N.J.): Princeton University Press, 2016). p.155.

⁴² Descartes. S. p.69.

but rather that it can be practically understood by the senses. Descartes tells Elisabeth that “metaphysical thoughts” are the ones that “exercise the pure understanding”.⁴³ These thoughts make clear the notion of the soul and the body (sometimes aided by the imagination). But we cannot have clear metaphysical thoughts about the union of mind and body.⁴⁴

5. Making too much of the Language Analogy?

I have suggested that the language analogy can shed light on some of the metaphysical problems born out of Descartes’ account of body-mind interaction. Nevertheless, I’d like to distance myself from the stronger claim that the analogy can be taken as an account of the metaphysical details of sensory perception.⁴⁵

Chignell presents such an account.⁴⁶ He argues that Descartes’ position is that the relevant part of the brain produces signs for the mind (what I have called brain figures), and that the mind is “equipped to notice and respond to these signs”.⁴⁷ As evidence for this position (beyond the passages I have noted in which Descartes uses the analogy), he describes all the places where Descartes uses active verbs to explain the relation between the mind and the brain. For example, that the mind “contemplates”, “views”, “considers”, and “applies itself” to the brain.⁴⁸

According to Chignell’s model: there is an X-Y sequence (where X is a pattern of nerve motion in the brain (brain figure) and Y is a sensory idea within the mind). X and Y bear a sign-signified

⁴³ Ibid.

⁴⁴ Marcel makes a distinction between a ‘problem’ and a ‘mystery’ that I take to be similar to Descartes’ distinction here.

Grimsley describes a problem thus: “A problem is in some way outside us, something apart from our intimate experience and something towards which we adopt a merely impersonal attitude. Hence it can become an object of general knowledge and public inquiry.” (Ronald Grimsley, *Existentialist Thought* (University of Wales, 1955). (p.197). Marcel tells us that a mystery is a “problem which encroaches upon its own data”. In other words, a mystery is in some way inside us and a part of our intimate experience. Marcel describes this distinction between a mystery and a problem as a “distinction between what is ‘in me’ and what is ‘beyond me’”. (p.9). And he describes the union of the mind and the body as a mystery (p.8).

(Gabriel Marcel, *The Philosophy of Existence*, trans. Manya Harari (New York: Books for Libraries Press, 1949).).

⁴⁵ In the literature, scholars discuss the ‘linguistic’ or ‘semantic’ model. I don’t think that this model should be taken as a way to understand the metaphysical details of sensory perception.

See, for example: Stephen Gaukroger, *Descartes - An Intellectual Biography*, First Edition (Oxford: OUP Oxford, 1995). Gaukroger, *Descartes’ System of Natural Philosophy*.

John W. Yolton, *Perceptual Acquaintance: From Descartes to Reid*, First Edition (Minneapolis: University of Minnesota Press, 1984).

Some scholars suggest that the language analogy ought not to be taken very seriously as a tool for the explanation of the mind-body problem. See:

Raffaella De Rosa, *Descartes and the Puzzle of Sensory Representation* (Oxford: OUP UK, 2010).

Wilson, ‘Descartes on the Origin of Sensation’. 1991.

Bennett, *Learning from Six Philosophers: Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume*. 2001.

I suggest that it should be taken seriously as a tool for explanation, but not as a model for a metaphysical explanation.

⁴⁶ Andrew Chignell, ‘Descartes on Sensation: A Defence of the Semantic-Causation Model’, *Philosopher’s Imprint* 9, no. 5 (2009).

⁴⁷ Chignell. 2009. p.7.

⁴⁸ For a list, see: Chignell. 2009. p.7.

relation. The mind has an innate ability, preserved by God, to read and interpret these signs.⁴⁹ Chignell describes this model as a cogent account of the details of sensory perception that is “philosophically more attractive” and “compatible with Descartes’s overall metaphysical picture” than rival accounts.⁵⁰

Whilst I agree that there is significance in these passages on the mind’s active nature,⁵¹ I worry that this interpretation takes the analogy too literally, and that it is not consistent with Descartes’ claims elsewhere that a properly metaphysical explanation of the body-mind relation is not possible.

If we attempt to take the language analogy as an account of the details of the metaphysics of sensory perception, we simply shift the problems back a step. Say we accept this model as an account of the metaphysical details of sensory perception. We have a particular pattern of motion in the nerves in the brain (X). God gives us the ability to read and interpret X and, in doing so, entertain the associated sensory idea (Y). We are to understand the connection between X and Y in terms of sign and thing-signified. At least in principle, we can metaphysically understand the patterns of motion of nerves in the brain. Further, insofar as we can consider sensory ideas simply as ‘thoughts’, we might be able to have some sort of metaphysical understanding of them too.⁵² However, the problem comes when we try to metaphysically understand the relation between them. Chignell tries to explain this in terms of the ‘active’ power of the mind to read and interpret brain figures, but he himself acknowledges that Descartes at least seems to deny that the mind can ‘read’ the brain.⁵³ So, the problem is simply reintroduced: how do brain and mind successfully interact?

Chignell accepts that this is the biggest problem for his view.⁵⁴ He answers to it by suggesting that, because Descartes only denies the existence of eyes within the *brain* and not explicitly about

⁴⁹ This kind of view is described by Simmons as ‘intriguing’ but ‘implausible’, for reasons mentioned later. See: Simmons. 2003. p.561.

⁵⁰ Chignell. 2009. p.2. Note that Chignell doesn’t explicitly cash this out in terms of clear and distinct ideas as I have, but I am taking his account as the one that comes closest to achieving this.

⁵¹ I come to this point in the next chapter.

⁵² Although, of course, sensations are not clear and distinct in the way that purely intellectual ideas are. Nevertheless, if we consider sensations simply as thoughts (without referring them at all to the body or external world), then a metaphysical understanding is possible.

I am thinking here of Descartes’ claim:

“*Thought*. I use this term to include everything that is within us in such a way that we are immediately aware of it.

Thus, all the operations of the will, the intellect, the imagination and the senses are thoughts.” (AT VII 160, CSM II 113).

Anscombe and Geach translate ‘*cogitatio*’ as ‘consciousness’ rather than ‘thought’ – partly because of this passage. (Rene Descartes, *Descartes: Philosophical Writings*, trans. Peter Geach and G. E. M. Anscombe (London: Thomas Nelson and Sons LTD, 1954).)

Cottingham has argued that this is to neglect the intellectualistic tone that is intended to be present in the term. See: John Cottingham, ‘Descartes on “Thought”’, *The Philosophical Quarterly* (1950-) 28, no. 112 (1978): 208–14.

I am inclined to agree with Cottingham here, although I think that Cottingham’s account of thought (as something more narrowly intellectual) represents the conception held by the meditator at least at the Second Meditation.

Anscombe and Geach might represent the conception held by meditator’s position at the end of the Meditations.

⁵³ Descartes. Optics. AT VI 130, CSM I 167.

⁵⁴ Rozemond also thinks this is big problem for the view. She uses Descartes’ apparent commitment to the transparency of the mind to argue against the idea that we could ‘read’ brain states. See: Rozemond. 1999. p.463.

De Rosa also thinks the ‘eyes within the brain’ passage rules out the semantic model. See: De Rosa. 2010. p.176-177.

the *mind's* ability to 'read' the brain, it might not be so damning for his view.⁵⁵ Nevertheless, it seems to me that even if we accept this, there is still a problem – at least if we want to take this as a metaphysical account. Understanding the union in terms of the sign-signified relation still does not provide us with a model of the metaphysics of sensory perception, because our knowledge of the sign-signified relation is also not properly metaphysical. Our understanding of the sign-signified relation is practical and rooted in our experience. I suggest instead that we must treat it as what it is: an analogy that is intended to give us a better practical understanding rooted in our experience.⁵⁶

6. Descartes, Hobbes, Berkeley, and Appealing to Language

In chapters one and two, I argued that both Hobbes and Berkeley make appeals to language to solve metaphysical problems. Hobbes, as we've seen, appeals to language to explain the characteristics of human thought that cannot otherwise be explained on his strict materialist picture. Berkeley appeals to language in order to account for the structure of the world of pure ideas. Descartes appeals to language in order to give the best explanation of sensory perception – a relation between two totally different substances.

For Hobbes, I suggested that the appeal to language is like an appeal to a kind of unanalysed miracle. His explanation works because language, though it can seem supernatural when we try to explain it, is extremely familiar to us. For Berkeley, I suggested that we needn't take his description of the language of nature literally in order to feel the explanatory force of it. Again, I think this is because language is so familiar to us: we don't need much help when it comes to thinking about something else in terms of it. Descartes' appeal is just the same. Descartes helps us to understand the relation of the mind and the body in sensory perception by drawing our attention to something else (crucially, something else that connects two distinct domains) that we understand intimately through experience: language.⁵⁷

In the last two chapters, I look at two major aspects of Descartes' problem of sensory perception. The first aspect is the causation problem. How can we make sense of a causal relation between the body and the mind in sensory perception? I'll argue that the linguistic interpretation manages to make sense of both the passage from the Sixth Meditation (wherein Descartes tells us

⁵⁵ Chignell, 'Descartes on Sensation: A Defense of the Semantic-Causation Model'. 2009. p.19-20.

Vinci also gives a similar defence. See:

Thomas Vinci, 'Reason, Imagination, and Mechanism in Descartes' Theory of Perception', in *Oxford Studies in Early Modern Philosophy Volume 2*, ed. Daniel Garber and Steven Nadler (Oxford University Press, 2005).

⁵⁶ Descartes appeals to many analogies in his explanations of various things. See, for example:

Analogy between eyes and blind man and sticks (Optics. AT VI 89, CSM I 155).

Analogy between animals and clocks (AT IV 575, CSMK III 304).

Analogy between corporeal memory and paper folds (AT III 20, CSMK III 143).

Analogy between heaviness as a real quality and mind/body (AT III 667, CSMK III 219 [also 226 and 358]).

Analogy between human body and machine (AT V163, CSMK III 346).

Analogy with a mountain/valley and extension/divisibility (AT III 476-477, CSMK III 202).

⁵⁷ This relates to Descartes' description to Elisabeth: "those things which pertain to the union of the soul and the body are known only obscurely by the understanding alone [...] but they are known very clearly by the senses." Descartes. S. p.69.

that our sensory ideas have to come from things outside of us) and the passage in the *Comments on a Certain Broadsheet* (wherein Descartes tells us that all of our sensory ideas are innate). If we understand the causal relationship between the world and our sensory ideas as akin to that between words and meanings, we can make sense of this apparent discrepancy.

The second aspect is the problem of representation. In the final chapter, I argue that the linguistic interpretation means that we can make sense of the idea that our sensory ideas represent objects and features of the external world. Since sensory ideas are not properly caused (as in brought into existence) by external things, and since they do not resemble those things, it's hard to account for how they can successfully represent those things – since most accounts of representation rely on causation, resemblance, or a combination of the two. Again, the linguistic interpretation provides an answer here. Bodily signs, sensory meanings and external objects are bound by conventional relations, underpinned by God.

Chapter Six

Occasional Causation, Cartesian Sensory Ideas & the Language Analogy

“For how can motion, being no substance, but only a mode, quit one body, and pass into another?”

Margaret Cavendish

In the previous chapter, I argued that we can use the analogy with language to gain a practical understanding of the relation between the body and mind that is rooted in our experience, although we should not use it to try and gain a properly metaphysical understanding. I have suggested that, like Hobbes and Berkeley, Descartes makes the appeal to language because language is something that is intimately familiar to us. Descartes uses our familiarity with language to make something that is difficult or impossible to grasp – the relation between two distinct substances – into something recognisable. In the following two chapters, I’ll argue that the analogy with language illuminates aspects of the process of sensory perception that seem the most mysterious. These are: the problem of body-mind causation and the problem of sensory representation. In this chapter, I’ll focus on the problem of body-mind causation.

In the *Comments on a Certain Broadsheet*, Descartes claims that “there is nothing in our ideas which is not innate to the mind” and that sensory ideas, “ideas of pain, colours, sounds and the like”, are “all the more innate”.¹ At least at first glance, this seems like a radical claim.² If our sensory ideas are innate, it seems to follow that objects and features in the external world cannot be responsible for causing them to exist, since they already exist in the mind.³ However, as we see

¹ Descartes. *Comments on a Certain Broadsheet*. AT VIIIB 358-359, CSM I 304.

² Sometimes, this position is called ‘hyper-nativism’ or ‘universal innateness’. See:

Geoffrey Gorham, ‘Descartes on the Innateness of All Ideas’, *Canadian Journal of Philosophy* 32, no. 3 (2002): 355–88.

³ Many have argued (in one way or another) that Descartes’ arguments for the innateness of all ideas is a key part of his anti-scholastic theory of sense perception. For claims like this, see:

Wilson, ‘Descartes on the Origin of Sensation’. 1991.

Simmons, ‘Descartes on the Cognitive Structure of Sensory Experience’. 2003.

Rosa, *Descartes and the Puzzle of Sensory Representation*. 2010.

in the Sixth Meditation, Descartes certainly does not want to deny that the material body and material world have a crucial causal role in sensory perception.⁴ So, what is that role? This is the question that I will focus on here.

In this chapter, I'll draw attention to the distinction that Descartes makes between two different kinds of causes: "proximate and primary" causes and "remote and accidental" causes.⁵ I argue that this distinction can help us to make sense of the causal role that bodies play in Descartes' account of sensory perception. External things are the remote and accidental causes – or occasional causes – of our sensory ideas. This means that they do not cause our sensory ideas to exist, but only bring them to the forefront of our minds for consideration. I explain how this distinction helps to solve the apparent tension between the passages in the *Comments on a Certain Broadsheet* and the Sixth Meditation.

I argue here that Descartes' analogy with language further illuminates this species of causation.⁶ He tells us that words and signs are capable of 'occasioning' ideas in the mind, even though they are not responsible for causing the existence of those ideas.⁷ In the second part of this paper, I draw again on the Cartesian theory of language to help explicate the quasi-causal role of words and signs. I argue, in line with the previous chapter, that the language analogy gives us a *practical* way of understanding the occasional-causal process that leads to the stimulation of sensory ideas.

1. What Role do Bodies Play in Sensory Perception?

The question that I am concerned with here is this: what role do bodies play in the production of our sensory ideas for Descartes? By 'bodies' I mean all extended bodies, including our own bodies and the brain. By 'sensory ideas' I mean experiences of pains, sounds, colours, textures, shapes, tastes, and so on; anything that we usually think reaches us through the sensory organs. I use 'sensory ideas' to refer to all of these conscious experiences – so we might just as well refer to them as 'sensations' or 'sensory experiences'. This is to say that I'm going to treat these terms as interchangeable, as I think Descartes does.

Deborah A. Boyle, *Descartes on Innate Ideas* (London ; New York: Continuum International Publishing Group Ltd., 2009).

And: Chignell, 'Descartes on Sensation: A Defense of the Semantic-Causation Model'. 2009.

⁴ For accounts that attempt to reconcile the existence of 'adventitious' ideas with universal innateness, see for example:

Rozemond, 'Descartes on Mind-Body Interaction: What's the Problem?' 1999.

Tad M. Schmaltz, 'Descartes on Innate Ideas, Sensation, and Scholasticism: The Response to Regius', in *Studies in Seventeenth-Century European Philosophy*, ed. M. A. Stewart (Clarendon Press, 1997).

⁵ Descartes. *Comments on a Certain Broadsheet*. AT VIIIIB 360, CSM I 305.

⁶ Descartes draws this analogy in several of his works, including the *Optics*, the *Meditations*, and the *Principles*.

⁷ This is in contrast to Behan, who argues that a 'semantic' model essentially excludes causation. See: David Behan, 'Descartes and Formal Signs', in *Descartes' Natural Philosophy*, ed. Stephen Gaukroger, John Schuster, and John Sutton (Routledge, 2000).

I am not necessarily endorsing the 'semantic model' he has in mind, but even so I believe that a species of causation does exist between the mind and the body – which I explore in this chapter.

In this first section, I'll consider whether bodies play a causal role in sensory perception. I will argue that they do play a causal role but not an *efficient* causal role.

1.1. Do Bodies Play a Causal Role in Sensory Perception?

I will begin with a passage from Descartes' *Comments on a Certain Broadsheet*. The *Comments* was written in response to a pamphlet, written by Henricus Regius, which contained a general, empiricist claim: the mind has no need for innate ideas, and our ideas (including the 'common notions') "have their origin in observation of things or in verbal instruction."⁸ The passage below is Descartes' response:

[I]f we bear well in mind the scope of our senses and what it is exactly that reaches our faculty of thinking by way of them, we must admit that in no case are the ideas of things presented to us by the senses just as we form them in our thinking. So much so that there is nothing in our ideas which is not innate to the mind or the faculty of thinking, with the sole exception of those circumstances which relate to experience, such as the fact that we judge that this or that idea which we now have immediately before our mind refers to a certain thing situated outside us. We make such a judgement not because these things transmit the ideas to our mind through the sense organs, but because they transmit something which, at exactly that moment, gives the mind occasion to form these ideas by means of the faculty innate to it. Nothing reaches our mind from external objects through the sense organs except certain corporeal motions [...] But neither the motions themselves nor the figures arising from them are conceived by us exactly as they occur in the sense organs [...] The ideas of pains, colours, sounds and the like must be all the more innate if, on the occasion of certain corporeal motions, our mind is to be capable of representing them to itself, for there is no similarity between these ideas and the corporeal motions.⁹

In this passage, we find Descartes' somewhat radical claim that our sensory ideas – in fact, *all* of our ideas – are innate to the mind. On the face of it, this is an extreme view. If our sensory ideas are innate to the mind, then it seems to follow that objects and features of the external world cannot be responsible for causing them to exist, since they *already* exist in the mind. Even our *sensory* ideas, which we might think are the most likely candidates to be produced by external bodies, are innate to the mind. Further, we have "all the more" reason to think that they're innate, according to Descartes.¹⁰

The view expressed in this passage in the *Comments* may seem to go against the taxonomy of ideas that Descartes presents in the *Meditations*. In the Third Meditation, we find the following categorisation of ideas: "Among my ideas, some appear to be innate, some appear to be adventitious, and others appear to have been invented by me." On adventitious ideas, Descartes expands: "my hearing a noise, as I do now, or seeing the sun, or feeling the fire, comes from things which are located outside me, or so I have hitherto judged."¹¹ So, here we seem to find Descartes

⁸ Descartes. *Comments on a Certain Broadsheet*. AT VIII B 345, CSM I 295.

⁹ Descartes. *Comments on a Certain Broadsheet*. AT VIII B 358-359, CSM I 304.

¹⁰ "Ac tanto magis innatae esse debent..." – *all the more those ideas should be innate*. That is, we have more *reason* to consider these ideas as innate.

¹¹ Descartes. Third Meditation. AT VII 37-38, CSM II 26.

denying that sensory ideas, like noises and feelings, belong to the ‘innate’ category. Rather, they belong to a different category of ideas: adventitious ideas. So, before we consider Descartes’ reasons for supposing that sensory ideas are innate, what can we say to settle this apparent contradiction between the *Meditations* and the *Comments*?

First, these distinctions between kinds of ideas in the Third Meditation seem tentative. The most that Descartes says is that they ‘appear’ to fall into these categories – and we only have brief and cautious descriptions of what these categories involve. Further, a sentence or two later Descartes concludes: “But perhaps all my ideas may be thought of as adventitious, or they may all be innate, or all made up; for as yet I have not clearly perceived their true origin.”¹² We, along with Descartes, can conclude that we needn’t be set on these categories. Since the *Comments* was written several years later, it is plausible to think that Descartes had simply become clearer about the origin of ideas, and determined that there is nothing in them “which is not innate to the mind”.¹³

However, we cannot disregard the Third Meditation categorisation of ideas entirely. There does seem to be *some* important difference between an idea of, say, a triangle and a sensory experience of feeling a fire.¹⁴ In the Third Meditation, Descartes is picking up on this difference and, indeed, he picks up on it again in the *Comments* passage above. One difference that we can be quite sure about is that we have a strong inclination to think that sensory ideas come from things situated outside of the mind, whereas this is not the case for ideas of things like numbers.

So, given that we have a strong inclination to believe that our sensory ideas come to us from external things, what reasons do we have to suppose that they are, in fact, innate? In the *Comments* passage above, Descartes gives us one reason for thinking that these ideas must be innate, and that is that there is *no similarity* between them and the objects and features of the external world that seem to bring them about. The suggestion is that these ideas could not have come from things external to the mind, because they are not at all similar to things external to the mind. Descartes tells us that he has explained this “at length” in his *Optics*, so in the next section I will briefly return to the account of sensory perception that Descartes gives there in the hope that it will help us to answer our present question.¹⁵

1.2. The Optics

By now, we are familiar with Descartes’ account of sensory perception in the *Optics*:

1. First, external objects impact upon the body and set up motions in the nerves of the body. For example, when we see something, the nerves in our eyes are moved in a particular way, and when we touch something, the nerves in our hands are moved in a particular way, and so on.

¹² Descartes. Third Meditation. AT VII 38, CSM II 26.

¹³ Descartes. Comments on a Certain Broadsheet. AT VIII B 358, CSM I 304.

¹⁴ Schmaltz suggests that they are “innate in different ways”. Tad M. Schmaltz, *Descartes on Causation* (Oxford: Oxford University Press, 2007), p.150.

¹⁵ Descartes. Comments on a Certain Broadsheet. AT VIII B 359, CSM I 304.

2. Second, these motions in the body create a ‘figure’ in the nerves in the brain – they produce what I will call a brain figure.
3. Third, this brain figure ‘occasions’ a sensory idea in the mind.¹⁶

In order to explain this, Descartes gives the example of the blind man and his stick. When the blind man’s stick touches different bodies, it moves in different ways depending on the composition of the bodies it touches. For example, if it touches something rigid, it will move in a certain way and if it touches something flexible then it will move in another way, and so on. The movements in the stick then move his hands and arms in particular ways, thereby causing movements in his nerves which find their origin in his brain. The particular movements create a particular pattern of motion in the nerves in his brain. Descartes refers to these patterns of motion as “images formed in the brain”, but it is unnecessarily confusing to refer to them as ‘images’, since this implies that they are depictive in nature.¹⁷ I have chosen instead to call them ‘brain figures’. The brain figures are “what occasions his soul to have sensory perceptions”.¹⁸

In discourse four of the *Optics*, Descartes makes it clear that brain figures need not resemble the objects and features of the external world that cause them. He writes:

We must take care not to assume [...] that in order to have sensory perceptions the soul must contemplate certain images transmitted by objects to the brain; or at any rate we must conceive the nature of these images in an entirely different manner from that of the philosophers. For since their conception of the images is confined to the requirement that they should resemble the objects they represent, the philosophers cannot possibly show us how the images can be formed by the objects, or how they can be received by the external sense organs and transmitted by the nerves to the brain.¹⁹

As Descartes makes clear in his blind man example, all that reaches the brain is the nerve motions that arise from the movements of the nerves in the body, and so no likeness or image of the object in question is transmitted to the brain from the sense organs.

Descartes also makes it clear that our sensory ideas need not resemble the brain figures. He writes: “[b]ut in all this there need be no resemblance between the ideas which the soul conceives and the movements which cause these ideas.”²⁰ So, there need be no resemblance between the external world objects and brain figures, and there need be no resemblance between brain figures and sensory ideas.

Since there need be no resemblance at either of these stages, there’s no reason to expect any resemblance between sensory ideas and external objects. Indeed, Descartes gives us reason to think that there need be no resemblance here either. In the *Principles*, Descartes tells us that “the

¹⁶ Descartes. *Optics*. AT VI 109-112, CSM I 164-165.

¹⁷ Later, I will discuss the status of the figures in the brain. Descartes claims that they need not *resemble* their causes in order to stimulate sensory ideas. This is another reason why I think it is confusing to refer to them as images – since they need not possess a likeness to their causes, or the ideas that they give rise to.

¹⁸ Descartes. *Optics*. AT VI 114, CSM I 166.

¹⁹ Descartes. *Optics*. AT VI 112, CSM I 165. I acknowledge that Descartes uses the term ‘cause’ (causent) here, but I will come to explore why we have reason to think that this cannot be a case of efficient causation.

²⁰ Descartes. *Optics*. AT VI 131, CSM I 167.

nature of matter [...] consists not in its being something which is hard or heavy or coloured, or which affects the senses in any way, but simply in its being something which is extended in length breadth and depth.”²¹ That is to say, there’s nothing that resembles our sensory experiences of weight, colour, heat, etc. that inheres in material objects.

The only properties that properly inhere in material objects are length, breadth and depth. In other words, the true nature of a material object is simply to be extended in space. Descartes “freely acknowledge[s]” that he “recognise[s] no matter in corporeal things apart from that which the geometers call quantity, and take as the object of their demonstrations”.²² According to their true nature, material bodies are analysable in terms of geometry, as I explained in Chapter Three. This leaves no room for anything resembling our sensations of colour, heat, etc. to inhere in material bodies, since these sensations cannot be analysed in terms of geometry.

As explored in Chapter Three, even as we perceive *shapes* of bodies, our ideas might not resemble the true shapes of the bodies themselves. In the *Optics*, Descartes tells us that “It is obvious too that we judge shape by the knowledge or opinion that we have of the position of the various parts of an object, and not by the resemblance of the pictures in our eyes. For these pictures usually contain only ovals and rhombuses when they make us see circles and squares.”²³ *Even* for shape, then, there is no necessary chain of resemblance between object, brain figure and sensory idea.

1.3. Causal Similarity

So, Descartes denies that there need be any resemblance between sensory ideas and the objects and features of the external world that *seem* to cause them. In this section, we will come to understand why a lack of resemblance excludes the possibility that bodies are the proper causes of our sensory ideas.

In the Third Meditation, Descartes outlines the central tenet of his theory of causation. Essentially, he claims that an effect cannot contain anything that was not present in the cause.²⁴ This, he says, is ‘manifest by the natural light’.²⁵ Cottingham interprets this to mean:

[A] similarity relation is [...] required between the causes and effects: causes and effects cannot be utterly heterogeneous, since for any explanandum *Fa* (i.e. where we are required to explain *a*’s possession of some feature *F*), the cause must itself be the kind of thing to which *Fness* can be attributed.²⁶

²¹ Descartes. Principles §2.4. AT VIII A 42, CSM I 224.

²² Descartes. Principles §2.64. AT VIII A 78-79, CSM I 247.

²³ Descartes. Optics. AT VI 140-141, CSM I 172.

²⁴ Descartes says that the cause must contain at least as much *reality* or *perfection* as the effect. I cannot do justice to this detail here. As stated earlier, I intend to follow Cottingham’s line – that suggests that Descartes’ notion of causation requires that there is similarity between cause and effect.

²⁵ Descartes. Third Meditation. AT VII 40, CSM II 28.

²⁶ John Cottingham, ‘Descartes on Colour’, *Proceedings of the Aristotelian Society* 90 (1989): p.235–36.

In a letter to Hyperaspistes in 1641, Descartes makes this principle explicit: “there can be nothing in an effect which was not previously present in the cause”.²⁷ Once we understand that Descartes is committed to this ‘Causal Similarity Principle’ (CSP), it becomes clear that bodies cannot be the proper causes of our sensory ideas.²⁸

To make this clear, I turn to an example from Cottingham. Let’s imagine that sensory qualities – like yellowness and hardness – could inhere in external objects. Now, we could only become aware of these qualities if they had the power to set up movements in the nerves, since we know that the movements of the nerves are all that reaches the brain, which is the “principal seat of the soul”.²⁹ But how could a quality like yellowness move the nerves? If yellowness were able to cause movement in the nerves, then we would have a strange looking causal chain: Q→M (where ‘Q’ stands for the sensory quality of yellowness and ‘M’ stands for motions in the nerves).³⁰ Since Descartes subscribes to the CSP, he simply cannot allow for a causal chain like this one, since there is no similarity between Q and M. They have completely different natures.

Descartes clarifies in part four of the *Principles*. He writes:

We understand very well how the different size, shape and motion of the particles of one body can produce various local motions in another body. But there is no way of understanding how these same attributes (size, shape and motion) can produce something else whose nature is quite different from their own – like the [...] real qualities which many <philosophers> suppose to inhere in things; and we cannot understand how these qualities [...] could have the power subsequently to produce local motions in other bodies. [...] In view of all this we have every reason to conclude that the properties in external objects to which we apply the terms light, colour, smell, taste, sound, heat and cold – as well as the other tactile qualities [...] – are, so far as we can see, simply various dispositions in those objects which make them able to set up various kinds of motions in our nerves.³¹

Here, then, we see that colours etc. *as we experience them* – i.e. as sensory qualities – *do not* inhere in objects. Perhaps we could say that colours etc. in so far as they are *dispositions* of objects (in virtue of the arrangement of their matter) to cause certain kinds of movements in the nerves (and thus occasion certain sensory ideas) *do* inhere in objects.³² However, here we are concerned with the role of bodies in the production of our *sensory experiences* themselves, rather than the dispositions of objects, so we can leave this thought to one side.

It cannot be that sensory qualities or anything like them inhere in material bodies. This means, given the CSP, that material bodies *cannot* be the proper causes of our sensory ideas. However, this leads to tension. In the next section, we will consider Descartes’ proof for the existence of the corporeal world. It seems that this proof relies on the existence of some kind of

²⁷ Descartes. Correspondence. AT III 428, CSMK III 192.

²⁸ Cottingham, ‘Descartes on Colour’, 1989, p.236.

²⁹ Descartes. Correspondence. AT III 19, CSMK III 143.

³⁰ Cottingham, ‘Descartes on Colour’, 1989, p.236.

³¹ Descartes. Principles §4.198. AT VIII 322-323, CSM I 285.

³² The properties of objects can be explained by appealing to the shape, size, and motion of microparticles. See: Gaukroger, *Descartes’ System of Natural Philosophy*. 2002. p.171. See also: Cottingham, *Descartes Dictionary*. 1993. p.61.

causal relation between external objects and our sensory ideas. For this reason, the Sixth Meditation is difficult to reconcile with the accounts that we have seen in the *Comments* and the *Optics*.

1.4. The Proof of the External world in the Sixth Meditation

Descartes' proof for the existence of the corporeal world in the Sixth Meditation seems to require that bodies play a causal role in the production of our sensory experiences.³³ I quote the key passage in full:

I find in myself faculties for certain special modes of thinking, namely imagination and sensory perception. Now I can clearly and distinctly understand myself as a whole without these faculties; but I cannot, conversely, understand these faculties without me, that is, without an intellectual substance to inhere in. This is because there is an intellectual act included in their essential definition [...] Now there is in me a passive faculty of sensory perception, that is, a faculty for receiving and recognising the ideas of sensible objects; but I could not make use of it unless there was also an active faculty, either in me or something else, which produced or brought about these ideas. But this faculty cannot be in me, since clearly it presupposes no intellectual act on my part, and the ideas in question are produced without my cooperation and often even against my will. So the only alternative is that it is in another substance distinct from me – a substance which contains either formally or eminently all the reality which exists objectively in the ideas produced by this faculty (as I have just noted). This substance is either a body, that is, a corporeal nature, in which case it will contain formally everything which is to be found objectively in the ideas; or else it is God, or some creature more noble than a body, in which case it will contain eminently whatever is to be found in the ideas. But since God is not a deceiver, it is quite clear that he does not transmit the ideas to me either directly from himself, or indirectly, via some creature which contains the objective reality of the ideas not formally but only eminently. For God has given me no faculty at all for recognising any such source for these ideas; on the contrary, he has given me a great propensity to believe that they are produced by corporeal things. So I do not see how God could be understood to be anything but a deceiver if the ideas were transmitted from a source other than corporeal things. It follows that corporeal things exist. They may not all exist in a way that exactly corresponds to my sensory grasp of them, for in many cases the grasp of the senses is very obscure and confused. But at least they possess all the properties which I clearly and distinctly understand, that is, all those which, viewed in general terms, are comprised within the subject-matter of pure mathematics.³⁴

Here, Descartes gives his argument for the existence of corporeal bodies. He argues that corporeal bodies must formally exist (that is, that they must exist outside of the mind), since our ideas of those bodies must have derived their objective reality (that is, their existence inside the mind, as representational objects) from the bodies themselves. He rules out the possibility that he (as a pure mind) is the author of his own sensory ideas for two reasons: 1. There is no intellectual

³³ Tad Schmaltz also draws attention to the difficulty in reconciling the story being told in the *Comments* with the story told in the Sixth Meditation. See: Schmaltz, *Descartes on Causation*, 2007. p.151.

³⁴ Descartes. Sixth Meditation. AT VII 78-80, CSM II 54-55.

act presupposed in the occurrence of sensory ideas. 2. The ideas come about without cooperation, and sometimes against the will – that is, we do not will to have sensory ideas or even allow them to happen; they simply occur whether we want them to or not. Descartes then rules out God as the transmitter of sensory ideas, since God could be nothing other than a deceiver if he were the source of sensory ideas – and we know for certain that God is not a deceiver.³⁵ God has given us a ‘great propensity’ to believe that those ideas are transmitted to us from corporeal things and it would be deceiving if we had a ‘great propensity’ to believe a falsehood. Since God is not a deceiver, Descartes concludes: “It follows that corporeal things exist” on the grounds that they are the proper sources of our sensory ideas.³⁶

The tension between the *Comments* and the Sixth Meditation is clear. In the *Comments*, Descartes tells us that sensory ideas are formed innately in the mind and that this process is merely ‘occasioned’ by corporeal bodies, since they cannot be said to properly cause it. In the *Sixth Meditation*, the suggestion is that sensory ideas are somehow emitted or transmitted from the corporeal bodies, rather than being formed by an innate mental faculty. Further, our sensory ideas provide the *evidence* for the existence of corporeal bodies. The way that sensory ideas occur leads us to infer the existence of corporeal bodies as their source. This strongly implies that corporeal bodies have a *causal* role to play in the production of our sensory ideas.

In the next section, we will dive deeper into Descartes’ account of causation. I will suggest, in line with Nadler, that Descartes attributes an *occasional* but not efficient causal role to bodies. I propose that this eases the tension between the *Comments*, the *Optics*, and the Sixth Meditation.

1.5. Efficient Causation and Occasional Causation

In both the *Comments* and the *Optics*, as well as other passages, Descartes uses terms like ‘occasion’ (*occasion*), ‘stimulate’ (*agitantur*) and ‘excite’ (*excitant*) to describe the role of bodies in the production of sensory ideas.³⁷ For example, in the *Comments* Descartes tells us that bodies give “the mind *occasion* to form [sensory] ideas by means of the faculty innate to it”.³⁸ In the *Optics*, Descartes tells us that the motions in the nerves of the brain are “what *occasions* [the] soul to have sensory perceptions”.³⁹ The role of the corporeal brain, then, seems to be reduced to an *occasional* causal role. To explain what this means, we will look at the distinction between efficient transeunt causes and occasional causes, as clarified by Nadler.

Nadler claims that Descartes subscribes to a notion of occasional causation in order to explain the body-mind relation and the production of sensory ideas. Occasional causation, as Nadler defines it, is like this: “a relationship of occasional causation exists when one thing or state of affairs brings about an effect by inducing (but not through efficient causation [...]) another

³⁵ Descartes. Comments on a Certain Broadsheet. AT VIII A 16, CSM I 203.

³⁶ Descartes. Sixth Meditation. AT VII 80, CSM II 55.

³⁷ See: Descartes. Optics AT VI 113, CSM I 166 and Principles. AT VIII A 318, CSM I 282.

³⁸ Descartes. Comments on a Certain Broadsheet. AT VIII B 358-359, CSM I 304.

³⁹ Descartes. Optics. AT VI 114, CSM I 166.

thing to exercise its own efficient causal power.”⁴⁰ So, *A* is the occasional cause of *C* if *A* induces *B* to bring about *C* through *B*’s own power. For example, a red traffic light is an occasional cause of my pressing the brake pedal in my car because the traffic light induces me to exercise my own efficient causal power to press the brake pedal.

Nadler then proposes that brain figures are the occasional causes of our sensory ideas.⁴¹ We are told in the *Comments* that the motions in the brain occasion the mind to form sensory ideas.⁴² The brain figure is like the traffic light (*A*), the mind is like my foot (*B*), and the car’s stopping is like the sensory idea (*C*). I will show that, in introducing the notion of occasional causation, we ease the tension between the passages in the *Comments* and the Sixth Meditation. We can claim a causal role for bodies (and so preserve the proof for the existence of the corporeal world), whilst evading the problem posed by the causal similarity principle.

Efficient transeunt causation is defined by Nadler as follows:

[O]ne substance, event, or state of affairs, *A*, is the efficient cause of another substance, event, or state of affairs, *B*, if *A* is the immediate and direct (or proximate), primary agent of change with respect to *B*, and is responsible for bringing about *B* through its own inherent efficacy or causal power.⁴³

To say that *A* is the ‘immediate and direct’ cause of change in *B* means that nothing intermediary takes place in between *A* and the change in *B*. To say that *A* is the ‘primary’ cause of change in *B* is to say that *A* brings about the change in *B* completely and by itself, and is not a partial cause.⁴⁴ Note that Descartes himself uses this terminology – “proximate and primary” – to describe one notion of causation in a later passage from the *Comments*.⁴⁵ I will return to this point below.

During the 17th century, the notion of efficient transeunt causation was generally understood to involve something literally passing from cause to effect.⁴⁶ Either the cause gives up some property to the effect, or it multiplies a property it possesses in order to share it with the effect.⁴⁷ This process requires that there be some likeness between cause and effect, so that cause and effect are both the kinds of things that can possess the property that passes between them. For example, if a marble hits another marble and causes it to move, the motion of the first marble is literally passed on to the second. For this to happen, both marbles need to be the kinds of things to which motion can be attributed.⁴⁸

⁴⁰ Steven Nadler, ‘Descartes and Occasional Causation’, *British Journal for the History of Philosophy* 2, no. 1 (1994): p.39.

⁴¹ *Ibid.* p.49.

⁴² Descartes. Comments on a Certain Broadsheet. AT VIII B 358-359, CSM I 304.

⁴³ Nadler, ‘Descartes and Occasional Causation’, 1994. p.36.

⁴⁴ Nadler, ‘Descartes and Occasional Causation’, 1994. p.37.

⁴⁵ Descartes. Comments on a Certain Broadsheet. AT VIII B 360, CSM I 305.

⁴⁶ See e.g. Eileen O’Neill, ‘Influxus Physicus’, in *Causation in Early Modern Philosophy: Cartesianism, Occasionalism, and Preestablished Harmony*, ed. Steven Nadler (University Park: Pennsylvania State University Press, 1993), pp. 27–56.

⁴⁷ Nadler, ‘Descartes and Occasional Causation’, 1994. p.38.

⁴⁸ Nadler, ‘Descartes and Occasional Causation’, 1994, p.38.

Nadler cites the Second Replies to show that Descartes too is committed to the notion that efficient causation involves something passing from cause to effect:

The fact that ‘there is nothing in the effect which was not previously present in the cause, either in a similar or higher form’ is a primary notion which is clear as any that we have; it is just the same as the common notion ‘Nothing comes from nothing.’ For if we admit that there is something in the effect that was not previously present in the cause, we shall also have to admit that this something was produced by nothing. And the reason why nothing cannot be the cause of a thing is simply that such a cause would not contain the same features as found in the effect.⁴⁹

Any feature that comes about within the affected body must have been previously possessed by the cause, otherwise, as Descartes says here, we have to conclude that this feature has come from nothing, which goes against the clear and distinct notion that “nothing comes from nothing”. The implication is that if there is some feature in the affected body that was not in the supposed efficient cause, then that is enough reason to rule out the supposed cause as the *efficient* cause.

We have good reason to believe that Descartes had *efficient* and *total* causation in mind in advancing the CSP. In a letter to Mersenne, Descartes tells us: “it is certain that there is nothing in an effect which is not contained formally or eminently in its *efficient and total* cause” and he clarifies: “I added these two words [efficient and total] on purpose”.⁵⁰ In this letter, Descartes is referring back to the passage in the Third Meditation where he outlines his view of causation. It is important to him that he clarifies which kind of causation he is talking about – in this case, efficient and total causation. I propose that this is because the CSP only applies in the case of efficient and total causes.

We find further evidence for this view in the *Conversation with Burman*. Here, Burman questions Descartes on his reasons for believing that he is made in the image of God. Descartes responds with the following argument: “It is a common axiom and a true one that the effect is like the cause. Now God is the cause of me, and I am an effect of him, so it follows that I am like him.”⁵¹ Burman responds with an example: a builder is the cause of the house, but the house is not like the builder. Descartes clarifies:

He is not the cause of the house, in the sense in which we are taking the word here. He merely applies active forces to what is passive, and so there is no need for the product to be like the man. In this passage, however, we are talking about the *total* cause, the cause of being itself. Anything produced by *this* cause must necessarily be like it.⁵²

Here, Descartes is talking about the total cause, or the cause of being. It seems as though ‘efficient’ and ‘total’ go hand in hand in Descartes’ writings. In another letter to Mersenne,

⁴⁹ Descartes. Second Replies. AT VII 135, CSM II 97.

⁵⁰ Descartes. Correspondence. AT III 274, CSMK III 166.

⁵¹ Descartes. Conversation with Burman. AT V 156, CSMK III 339-340.

⁵² Ibid.

Descartes clarifies that God is the “efficient and total cause” of all created things, since he is the “author of the essence of created things no less than of their existence”.⁵³

As we have it here, efficient and total causes have two characteristics. First, some quality or trait is passed between them and the things they affect – so there must be similarity between them and the things they affect. Second, they are the causes of being: they are responsible for bringing the effect into existence. For the reasons we have discussed, corporeal bodies cannot be the efficient and total causes of sensory ideas. This is because there is no similarity or resemblance between corporeal bodies and sensory ideas. Additionally, they cannot be the cause of the being of the sensory ideas, since we are told in the *Comments* that the *mind* forms the ideas “by means of the faculty innate to it.”⁵⁴

Nadler points out that occasional causation does *not* require this condition of similarity between occasional cause and effect, and it does not involve anything literally passing from cause to effect. Occasional causes are also not the proper causes of the existence or being of some effect. Nevertheless, occasional causation is a genuine kind of causation, and does not merely describe a coincidental sequence of events. In the traffic light case, we can truly say that the red light makes some real causal contribution to the car’s braking. If the red light hadn’t shown, then I would not have pressed the brake pedal (all else being equal). The red light provides the occasion for me to stop the car – at that particular time and location rather than another.

Nadler carefully distinguishes the theory of occasional causation from the doctrine of occasionalism, claiming that the latter is a particular species of the former.⁵⁵ Occasionalism is the view, most commonly associated with Malebranche, that God is the *only* agent with any efficient causal power, and that occurrences in minds and bodies only ever provide occasions for God to exercise his causal power. In using the terms ‘occasion’ and ‘occasional cause’ I am not suggesting that Descartes was an occasionalist. That is, I am not suggesting that God is the efficient cause of everything for Descartes.⁵⁶ I am also not suggesting that he wants to make God the efficient cause of our sensory ideas. In fact, in the Sixth Meditation, we are told that God cannot be the cause of our sensory ideas, lest he be a deceiver.⁵⁷ Since I am concerned with the reconciliation of the passages in the *Comments* and the Sixth Meditation, I mean to make my account consistent with both. See also the *Principles*: “if God were himself immediately producing in our mind the idea of such extended matter, or even if he were causing the idea to be produced by something which lacked extension, shape and motion, there would be no way of avoiding the conclusion that he should be regarded as a deceiver.”⁵⁸

I have suggested here, in line with Nadler, that Descartes employs a notion of occasional causation in order to explain the relation between the body and the mind in sensory perception.

⁵³ Descartes. Correspondence. AT I 152, CSMK III 25.

⁵⁴ Descartes. Comments on a Certain Broadsheet. AT VIII B 359, CSM I 304.

⁵⁵ Nadler, ‘Descartes and Occasional Causation’, 1994. p.41.

⁵⁶ See Garber for a discussion of occasionalism in Descartes. Daniel Garber, ‘Descartes and Occasionalism’, in *Causation in Early Modern Philosophy: Cartesianism, Occasionalism, and Preestablished Harmony*, ed. Steven Nadler (University Park: Pennsylvania State University Press, 1993), pp.9–26.

⁵⁷ Descartes. Sixth Meditation. AT VII 80, CSM II 55.

⁵⁸ Descartes. Rules for the Direction of the Mind. AT VIII A 40–41, CSM I 40.

For the reasons we have seen, bodies cannot be the efficient and total causes of our sensory experiences, and yet they must play a causal role in order to make sense of the proof for the corporeal world in the Sixth Meditation. We need a way to explain the constant and harmonious link between brain and mind. Any account of causation that we attribute to Descartes must be able to make sense of this.

This occasional-casual account does make sense of it. Bodies (in particular, brains) do play a *causal* role in the occurrence of sensory ideas within the mind, which means that Descartes' argument for the existence of the corporeal world in the Sixth Meditation is preserved. Further, we can also preserve the claim from the *Comments* that sensory ideas are innate to the mind, because their occasional causes (brain figures) are not responsible for bringing them into existence.

To provide further support for this interpretation, it should be noted that Descartes himself describes a distinction between two different kinds of causes later in the *Comments*. Although Descartes does not explicitly distinguish between efficient causes and occasional causes in the way that Nadler does, he makes an explicit distinction between proximate and primary causes and remote and accidental causes, which he describes in very similar terms to the way he describes the process of sensory perception.⁵⁹ Descartes identifies the proximate and primary cause as the cause without which the effect would not exist.⁶⁰ A remote and accidental cause, by contrast, "gives the primary cause occasion to produce its effect at one moment rather than another."⁶¹ Notice that the way that Descartes describes remote and accidental causes is almost exactly the same as the way that he describes what happens in sensory perception: "they transmit something which, at exactly that moment, gives the mind occasion to form these ideas by means of the faculty innate to it."⁶² This gives us some ground to conclude that Descartes is thinking about brain figures as remote and accidental causes of sensory ideas. If sensory ideas are innate to the mind, then it seems reasonable to conclude that they exist before they are occasioned by brain figures. So, in Descartes' terms, it is implied that brain figures cannot be the proximate and primary causes of sensory ideas, since those ideas are not brought into existence by brain figures but rather already exist in the mind innately.

The second part of this chapter aims to illuminate the nature of an occasional causal relationship further. As explained in Chapter Five, I don't think that a properly metaphysical explanation of the relation between body and mind in sensory perception can be given, and so it is not my intention to defend 'occasional causation' as a phenomenon we can have a metaphysical understanding of. Nevertheless, I argue that Descartes offers a paradigm example of an occasional causal relationship when he makes the analogy with language. This is a kind of occasional-causal relationship that we already have a practical understanding of, since we experience it all the time. I argue that the language analogy enhances our understanding of the kind of causal relationship

⁵⁹ Schmaltz discusses whether bodies are the remote and accidental causes of our sensory ideas. He does not note that the phrase Descartes uses here is nearly identical to the phrase he uses earlier in the *Comments*. See: Schmaltz, *Descartes on Causation*, 2007. p.151.

⁶⁰ Descartes. Comments on a Certain Broadsheet. AT VIII B 360, CSM I 305.

⁶¹ Descartes. Comments on a Certain Broadsheet. AT VIII B 360, CSM I 305.

⁶² Descartes. Comments on a Certain Broadsheet. AT VIII B 359, CSM I 304.

that exists between brain and mind by drawing our attention to another causal relationship: the relationship between words and their meanings.

2. Bodies as Occasional Causes of Sensation: The Analogy with Language

As we've seen, Descartes draws an analogy with language in his descriptions of sensory perception. In this (now familiar) passage from the *Optics*, Descartes tells us: "our mind can be stimulated by many things other than images – by signs and words, for example, which in no way resemble the things they signify."⁶³ Again, in the *Principles*: "we see that spoken or written words excite all sorts of thoughts and emotions in our minds".⁶⁴ The implication in these passages, as I've stated, is that brain figures are like words in so far as they 'stimulate' the mind to think of various things, without bearing any resemblance to those things.

As explored in Chapter Four, Descartes does not offer a fully fleshed out theory of language, although we have ample evidence to suggest that he held to the ideational theory of meaning. As we've seen, other Cartesians said more about language and how it works. In this chapter, I'll look back at Meyer's theory in particular. Meyer outlines the traditional three-part theory of language, distinguishing carefully between concepts, words, and objects. On Meyer's theory, words signify concepts. Concepts represent objects. So, the same word may be used to denote the concept – say the concept 'ball' – and the object – a particular ball. But words are only really *signs* for concepts. It is only in their 'second place' that they denote things outside of the mind.⁶⁵

Meyer offers two ways to understand words.⁶⁶ First, we may understand them through themselves as real entities – as marks on a page, or vocal sounds in the air. Second, we may understand them as entities of *reason* – as *signs* for other things. If we are to understand them in this second sense, we must also understand the things that they are signs *of* – that is, the concepts for which they stand. Only when we understand the concept *and* the word as the sign for the concept *simultaneously* do we understand words in the second sense: as entities of reason or *signs*. Descartes and Meyer would agree that language is a convention amongst human beings, set up for convenience, so that they may reveal their thoughts to each other. It is nothing more than a system of signs, that may well have been an entirely different system of signs: just as long as it enables communication.

2.1. Drawing the Analogy with Sensory Perception

⁶³ Descartes. *Optics*. AT VI 112, CSM I 165.

⁶⁴ Descartes. *Principles* §4.197. AT VIII A 320-321, CSM I 284.

⁶⁵ Lodewijk Meyer, *Philosophy as the Interpreter of Holy Scripture*, trans. Samuel Shirley (Milwaukee: Marquette University Press, 2005), 38.

⁶⁶ Meyer, 2005. p.236.

Now let's map this back on to Descartes' account of sensory perception. Brain figures are analogous to words. Consequently, we can understand them in two ways. First, we can understand them through themselves – as mere movements of the nerves in the brain. Second, we can understand them as *signs* – signs for sensory ideas in the mind and, *in their second place*, signs for external objects and properties. We can only understand brain figures in this second way if we understand the corresponding sensory ideas at the same time. That is, we only understand the brain figure *as a sign* if we take it together with the sensory idea it signifies. Furthermore, it is *only* when we understand brain figures as signs that we can understand how they denote features and objects in the external world. Understanding brain figures alone as mere movements of the nerves in the brain does not give us an understanding of their signification at all.

As explained in Chapter Four, Meyer concludes that a word understood in the first sense – through itself as a real entity – has no power to produce an idea in the mind.⁶⁷ Understanding a word in the first sense would be like reading a word written in a language you did not understand: the marks on the page would produce no ideas in you by themselves. Brain figures *alone* (as movements of the nerves in the brain) cannot produce ideas in the mind. When the brain figures are considered in isolation, they are just like words of an unknown foreign language. It is *only after* they derive their significance from elsewhere – from our ideas – that they become meaningful as signs.

2.2. The Causal Role of Words

Meyer makes it very clear that words in themselves cannot *cause* ideas in the mind. Rather, they *incite* or *occasion* the ideas so that they are brought to the forefront of consciousness for further consideration.⁶⁸ We can think about brain figures in the same way. They do not cause sensory ideas in the sense of bringing them into existence. They are not the efficient and total causes of our sensory ideas. Rather they *occasion* or *incite* them, just as words are the occasional cause of our considering some particular idea at some particular time.

Meyer tells us that words “inspire the reader to think and they urge him towards ideas which he *already possesses* in his mind”.⁶⁹ Words do not bring ideas into existence. Rather, they bring existing ideas to the forefront of the mind for consideration at that moment. In terms of causation, we can say that words are not the efficient causes of our ideas, since they are not responsible for causing their existence. Rather, we can say that words are the occasional causes of our ideas because, upon the occasion of hearing or reading them, the relevant ideas are brought to the forefront of our minds.

Meyer tells us that words function to “provide occasion and material for our thinking” – nothing more.⁷⁰ The ideas, Meyer claims, are *already* in the mind before the use of language. In the

⁶⁷ Meyer, 2005. p.237.

⁶⁸ Meyer, 2005. p.238. (My emphasis.).

⁶⁹ Meyer, 2005. p.238. (My emphasis.).

⁷⁰ Meyer, 2005. p.239.

same way, Descartes tells us that our sensory ideas *already* exist (at least in potential) in our minds.⁷¹ In the *Comments*, Descartes writes: “ideas of pains, colours, sounds and the like must be *all the more innate*”.⁷² Further, just as the *Comments* denies that objects “transmit” sensory ideas to the mind, Meyer denies that ideas can be transmitted to the mind by words.⁷³

As explained in chapter four, Meyer presents a plausible theory of language, and, since he was a devout Cartesian, we have good reason to think that it falls in line with Descartes’ other philosophical commitments. His theory also matches the intuition that the meanings we assign to words have to be ideas already existing in our minds (which words then come to occasion).⁷⁴ Since we naturally accept this kind of occasional causal relationship in the case of words and ideas, the analogy with language makes Descartes’ story of sensory perception clearer. The analogy, once informed by this Cartesian theory of language, illuminates the account of causation in sensory perception that seemed difficult to grasp at the outset.

The relationship between words and meanings is an example of an occasional-causal relationship. We experience this kind of occasional-causal relationship all the time. It is so familiar to us, that it almost becomes invisible, just as the process of sensory perception is invisible to us. But it should be noted that these are ‘invisible’ in different ways. Of course, there is a very significant dissimilarity between brain figures and words. We are able to become aware of words (in Meyer’s first sense) in a way that we are not able to become aware of the various patterns of nerves in our brains. We are not *conscious* of the patterns of motion in our brains – there are no “other eyes” within our brains to see them, as Descartes says.⁷⁵ We are simply conscious of our sensory perceptions.⁷⁶

As Chignell notes, this dissimilarity between brain figures and words is a significant problem for views that take the language analogy as explanations of sensory perception.⁷⁷ Hatfield even uses this “other eyes” passage from the *Optics* as a reason why we ought to reject this kind of

⁷¹ Descartes. *Comments on a Certain Broadsheet*. AT VIIIIB 361, CSM I 305-306.

⁷² Descartes. *Comments on a Certain Broadsheet*. AT VIIIIB 359, CSM I 304. (My emphasis.)

⁷³ Descartes. *Comments on a Certain Broadsheet*. AT VIIIIB 359, CSM I 304.

⁷⁴ There is a parallel here with the Fodorian view: It’s because the ideas have their content that they are triggered, and not the triggering that gives them their content. On this, see: Jerry A. Fodor, *The Language of Thought* (Cambridge, Mass: Harvard University Press, 1980). p.94.

⁷⁵ Descartes. *Optics*. AT VI 130, CSM I 167.

⁷⁶ There is a point of comparison here with Margaret Cavendish. She held that the causal relationships between all bodies were occasional causal relationships. We might describe her as a kind of panpsychist, who held that all matter possessed some degree of rationality and sensitivity (i.e. all matter was conscious in some sense). She believed that, when bodies interact, they *perceive* and rationally respond to each other. She gave the example of the hand and the ball. Upon the occasion of the motion of the hand, the ball perceives the hand and rationally responds to it by altering its motion so as to accord with the motion of the hand. So, the hand does not efficiently cause the motion of the ball, but only provides the occasion for the ball to produce its own motion. Of course, as I’ve said here and in the previous chapter, Descartes does not seem to believe that the soul is *conscious of or perceives* the brain figures – so this is a significant difference between his account and Cavendish’s account (along with the key difference that Cavendish isn’t thinking about a body-soul relation). Nevertheless, I think that Cavendish and Descartes may have similar aims in mind: they are both aiming to explain the harmony in nature. Cavendish wants to explain the harmony between bodies. Descartes wants to explain the harmony between the mind and the body. See: Margaret Cavendish, *Philosophical Letters, or, Modest Reflections upon Some Opinions in Natural Philosophy Maintained by Several Famous and Learned Authors of This Age, Expressed by Way of Letters* (London, 1664).

⁷⁷ Chignell. 2009. P.20.

view on Descartes' behalf.⁷⁸ However, I suggest that while this may be a significant problem if one is trying to use the language model as an explanation of the *metaphysics* of sensory perception (as I have argued that Chignell is), it doesn't mean that we ought to rule that the language analogy offers us no explanatory light. Although words are not entirely invisible to us, when we are reading the pages of our favourite novels we are conscious of the meanings of the words, rather than the marks on the page – although upon reflection we are, of course, aware that the words are there in order to occasion these ideas. Language, therefore, gives us an example in our practical experience of the kind of causal relationship Descartes' theory posits in the case of body-mind relations.

3. Mind Independence

I end this chapter with a thought that requires further development. I think that the notion of occasional causation, as it features in Descartes' account, has great explanatory power. As we have seen, introducing a notion of occasional causation eases the tension between the passages in the *Comments*, the *Optics*, and the Sixth Meditation. Here I propose that it might more generally explain the kind of relationship we see between the body and the mind.

We see, for the most part, regular correlations between brain figures and sensory ideas. However, in some cases, this regularity breaks down. Descartes tells us in the *Optics*: “[W]hen the soul is distracted by an ecstasy or deep contemplation, we see that the whole body remains without sensation, even though it has various objects touching it.”⁷⁹ Here, Descartes is saying that, in some cases, no sensory ideas arise even if the nerves of the body are set in motion by various external objects, presumably causing a brain figure. There's something that Descartes needs to explain, and that is why the sensory ideas in the mind are not entirely determined by the body. The body can be in a certain state that might, in most cases, be responsible for bringing about a certain sensory perception, but in some cases it doesn't. Descartes needs to account for that infrequent irregularity, and it cannot be accounted for if we say that the brain figures are the efficient and total causes of sensory ideas.

If particular brain figures were the efficient and total causes of particular sensory ideas, then it would be the case that every time the body is in state X, sensory idea Y would arise. This is because, if brain figures are the total causes, and if causation is deterministic, then it would not be possible for one and the same brain figure to produce different ideas. This is not what we see. In cases where the mind is in a deep distraction, the body might be in state X, but sensory idea Y does not arise.

Occasional causes do not bind us in this way. The A-B-C structure of occasional causation allows us an additional degree of freedom. If A occurs, this might not necessarily lead to C, since B might not bring C about through its own power. Recall the traffic light example. Whilst it might be the case that the red light very regularly occasions me to stop my car, there might be a situation

⁷⁸ See: Gary Hatfield, 'Descartes' Physiology and Its Relation to His Psychology', in *Cambridge Companion to Descartes*, ed. John Cottingham (Cambridge University Press, 1992), 335–70. p.354.

⁷⁹ Descartes. *Optics*. AT VI 109, CSM I 164.

wherein the red light shows but I do not stop my car – perhaps because I am deeply distracted. If the red traffic light were the efficient and total cause of the car's stopping, then it would never be the case that red lights were run. In subscribing to a notion of occasional causation to explain the relation between the body and the mind, we can account for the usual regularity in the occurrence of sensory ideas, but also the infrequent irregularity.

I'd like to suggest that, far from being an ad hoc solution to the body-mind problem, the idea of distinguishing between two kinds of causation – efficient and occasional – actually gives us the best explanation for types of cases that Descartes observed.

4. Conclusion

In this chapter, I have attempted to show that, according to Descartes, patterns of motion in the nerves of the brain serve as the occasional causes for sensory ideas within the mind. As we have seen, there's a convergence between the causal story Descartes tells in the case of sensory perception and the Cartesian theory of how words and meanings are connected. I have argued that Descartes' appeal to language gives us a good example of the kind of causal relationship that exists between the body and the mind in sensory perception. The problem of body-mind causation is one of the key aspects of the mind-body problem that plagues substance dualists. I believe that the language analogy sheds valuable light and aids us in our practical understanding of this kind of causation – and thus serves to deepen our existing understanding of the relation between the mind and the body.

An objector might interject that all I have done here is replace one mystery with another. Is it really any easier to understand how brain figures are the *occasional* causes of sensory ideas? To this objector, I reply that it depends what kind of understanding we are aiming for. If we are aiming for an intellectual understanding of the metaphysical 'how' question – how do brain figures occasionally-cause sensory ideas? – then no. Thinking about occasional causation still leaves this question unanswered. However, if we are aiming for a practical understanding, I think that the notion of occasional causation and the language example does help us. The language case is a case that we already intuitively understand because we experience it, and so leads us to think about the relation between body and mind in the same way as the way we already think about the relation between words and meanings.

In the next chapter (the final chapter) I look at another key aspect of the body-mind problem: the problem of sensory representation. I argue that the language analogy can offer valuable insight here too. Again, as I have argued, Descartes does not intend to give a properly metaphysical explanation of the process of sensory perception – so it is not my intention to try to give one on his behalf. Rather, I intend to show that the language analogy can offer us a better practical understanding of the process of sensory perception, including how we can make sense of the system of representation that is the mind-body composite or the Cartesian human being.

Chapter Seven

The Problem of Representation in Cartesian Sensory Ideas

‘Nature also teaches me, by these sensations of pain, hunger, thirst and so on, that I am not merely present in my body as a sailor is present in a ship, but that I am very closely joined and, as it were, intermingled with it, so that I and the body form a unit.’

René Descartes

In this final chapter, I’ll explore another significant problem for Cartesian Dualism: the problem of representation in sensory ideas.¹ I will suggest that the language analogy can also shed explanatory light on this problem. When we have a practical understanding of Cartesian sensory ideas as meanings of bodily signs, we understand the entire system (mind and body together) as a system of representation underpinned by nature (or God).

First, I will outline the problem of representation in sensory ideas. I turn, again, to two key claims that Descartes makes: the claim from the *Comments on a Certain Broadsheet*, that all of our ideas are innate to the mind, and the claim that our sensory ideas do not resemble objects and features of the external world. This leaves us with a problem: if sensory ideas are innate to the mind (that is, not efficiently caused by objects/features of the external world) and also do not resemble objects/features of the external world, then it’s hard to understand how they *represent* objects/features of the external world – since representation is usually underpinned by causation or resemblance.

I suggest that Descartes’ answer to this problem, in essence, is that God secures the representational content of our sensory ideas. Nevertheless, I think that he gives us more than just this simple answer. I will argue that the analogy with language presents us with a way of understanding the Cartesian human being as a representational system, thus connecting mind, body, and world.

¹ Of course, this problem has been explored by numerous scholars. For different solutions, see De Rosa for a ‘descriptivist causal account’ (De Rosa. 2010) and Simmons for a ‘teleofunctional account’ (Simmons. 2003).

In order to explain this idea, I'll discuss what 'representation' means for Descartes. I begin with his account of ideas and spend some time discussing the ambiguity in the word 'idea' that he mentions in the preface to the *Meditations*. Here, he distinguishes between ideas taken in the material sense and ideas taken in the objective sense. I argue that this helps to uncover an ambiguity in the word 'representation' for Descartes. Sometimes, Descartes seems to understand 'representation' as a notion of *presentation*.² Understood in this sense, representation is not a relation between the mind and external objects, but rather a kind of presentational event that takes place in the mind. At other times, Descartes seems to use 'representation' in a sense more familiar to us: that is, as a relationship between ideas and external features or objects.

I'll look at a different interpretation from Keating, who suggests that sensory ideas are non-representational for Descartes.³ She argues for this on the basis that the movements in the nerves of the body (which give rise to sensory ideas) do not correspond perfectly and regularly to specific external objects and properties. For Keating, it is only possible to make sense of the idea that sensory ideas represent objects/features of the external world if there is a perfect, regular connection between the external object/feature, the nerve patterns in the body and brain, and the sensory idea in the mind. Since these perfect, regular connections do not hold, she denies that sensory ideas can be said to represent the external world for Descartes.

I turn then to look at another position on the same material from Ben-Yami, who also focuses on the causal connections between the nerve patterns in the brain and the sensory ideas in the mind. He claims that Descartes' language analogy does not tell us anything about representation, but rather that it merely serves as an example of a causal relationship between non-resembling things.

I argue that both Keating and Ben-Yami overlook the involvement of God in the process of sensory perception. Since the occurrence of sensory ideas is "ordained by nature" (i.e. by God), it is not necessary that the movements in the nerves of the body correspond *exactly* to specific objects and features in order for sensory ideas to represent them.⁴ It is also not true that the figures in the brain *only* have a causal role to play. They also have *derived representative power* in virtue of their position in the representative system of mind and body (that is underpinned by God).

1. The Problem of Representation in Sensory Ideas

I will begin with the (now familiar) passage from the *Comments on a Certain Broadsheet*. In this passage, we find Descartes' radical claim: "there is nothing in our ideas which is not innate to the mind" and "[t]he ideas of pains, colours, sounds and the like must be all the more innate if, on the

² Wilson (1991) adopts presentation model. See too:

Schmaltz, 'Descartes on Innate Ideas, Sensation, and Scholasticism: The Response to Regius'. 1997.

³ Other scholars who take a non-representationalist view include:

Richard W. Field, 'Descartes on the Material Falsity of Ideas', *The Philosophical Review* 102, no. 3 (1993): 309–33.

Margaret Dauber Wilson, *Descartes*, ed. Ted Honderich, 1st edition (London New York: Routledge, 1978).

Thomas C. Vinci, *Cartesian Truth* (New York: Oxford University Press, 1998).

⁴ Descartes. Optics. AT VI 130, CSM I 167.

occasion of certain corporeal motions, our mind is capable of representing them to itself, for there is no similarity between these ideas and the corporeal motions.”⁵

Even our sensory ideas, which we might think are the most likely candidates to be produced by external bodies, are innate to the mind. Further, we have “all the more” reason to think that they’re innate, according to Descartes, because the *content* of those ideas could not have been caused by corporeal motions on account of the lack of similarity between that content and those motions.⁶

Our problem, then, is this. If sensory ideas are innate to the mind and bear no resemblance to objects/features of the external world, then it’s hard to understand how we could say that they *represent* objects/features of the external world. Descartes has ruled out two ways in which we might make sense of representation in sensory ideas: causation and resemblance.

We can understand quite clearly how pictures represent their objects. A picture represents by *resembling*. For example, a painting of Queen Elizabeth successfully represents Queen Elizabeth when it *looks like* her: when her hair is the right colour, her nose the right shape, and so on. Likewise, we might say that a map successfully represents some particular terrain when it resembles that terrain (when the hills and rivers are in the right places relative to each other, etc.). Crane calls this position the ‘resemblance theory’.⁷ Some philosophers, like Berkeley, have taken resemblance to be the sole condition for mental representation (although there are significant problems for this kind of view).⁸ As we have seen, Descartes denies that sensory ideas resemble the things in the external world that occasion them, which means that resemblance cannot be the condition responsible for ensuring that those ideas represent those external things. So, the resemblance theory is a dead-end for our explaining the representationality of sensory ideas in Descartes.

Another seemingly straightforward way to make sense of representation is to hold some kind of causal theory. One popular version of this theory says that A represents B if and only if there is a reliable causal connection between A and B.⁹ So, we can say that my idea of a horse represents horses since it is reliably caused by the presence of horses.

In the previous chapter, I argued that, for Descartes, sensory ideas (with their contents) cannot be *efficiently caused* by motions in the nerves of the brain because of the CSP. According to Descartes, the ideas exist innately in the mind *with their content*, so the external world can play no role in explaining how they *get* their content. So, it can’t be that our sensory ideas represent objects

⁵ Descartes. Optics. AT VIIIB 358-359, CSM I 304.

⁶ “Ac tanto magis innatae esse debent...” – *all the more those ideas should be innate*. That is, we have more *reason* to consider these ideas as innate.

Schmaltz argues that representational content cannot be identified with physical causes. See:

Schmaltz, ‘Descartes on Innate Ideas, Sensation, and Scholasticism: The Response to Regius’. p.34.

⁷ Tim Crane, *The Mechanical Mind: A Philosophical Introduction to Minds, Machines and Mental Representation*, 3rd edition (London ; New York: Routledge, 2015). p.11.

⁸ See Berkeley’s likeness principle. Berkeley. 2009. PHK §8. p.85.

For a discussion of some of the problems, see: Peter West, ‘Why Can An Idea Be Like Nothing But Another Idea? A Conceptual Interpretation of Berkeley’s Likeness Principle’, *Journal of the American Philosophical Association* 7, no. 4 (2021): 530–48.

⁹ Crane. 2015. p.117.

because they are caused, or even just occasioned, by those objects (as in a causal account of representation), since they must already exist *with* their representative content before external objects have affected the mind at all.¹⁰

But perhaps the causal theory is not so straightforward to reject on Descartes' behalf, since there does seem to be some at least semi-reliable sort of causal connection between sensory ideas and external world objects/features. One might reply: couldn't we have a kind of reliable-causal account whereby the reliable connections underwrite representation? For example, my idea of a horse is reliably occasioned by the presence of horses – so we can say that it represents horses for this reason?

Still, even this weaker theory is unavailable to Descartes. If sensory ideas are innate to the mind then they must exist prior to *any* influence of external objects. It is perhaps possible that sensory ideas could be innate but only come to represent their objects when external things affect the mind, but this conflicts with Descartes's claim that "there can be no ideas which are not as it were of things".¹¹ The ideas are innate to the mind *with* their representative content included. The occasional cause is not making any contribution to the idea's representative content. Moreover, as explained in the last chapter, the occasional cause does not bring anything into existence. The only kind of cause that might contribute to an idea's content would be an efficient cause – since this involves something passing from cause to effect. But, as we've seen, Descartes cannot hold that corporeal motions are efficient causes of sensory perceptions – and, therefore, corporeal motions cannot be causally responsible for the representative content of sensory ideas.

So, a Cartesian explanation of the representationality of sensory ideas cannot depend on either resemblance or causation. In order to give such an explanation, we need first to look at what representation means for Descartes. From there, we can further explore the connections between sensory ideas and the external world and work out a more satisfying account of the representationality of Cartesian sensory ideas.

2.What Does 'Representation' Mean for Descartes?

Before offering a positive account of the representationality of sensory ideas, I will first look carefully at what Descartes understands representation to be. To understand what 'representation' might mean for Descartes, we must first look at his account of ideas. Descartes offers his description of ideas in the Third Meditation as the foundation for his proof of the existence of God. He says of ideas: "Some of my thoughts [*cogitationes*] are as it were the images of things [*tanquam rerum imagines*], and it is only in these cases that the term 'idea' is strictly appropriate".¹² So ideas, for Descartes, are thoughts that are "as it were the images of things". If we ignore the "*tanquam*" as merely rhetorical and take Descartes to be speaking quite literally, we might conclude that ideas are mental images – and perhaps this is, at least sometimes, correct. However, Descartes

¹⁰ There is a parallel here with the Fodorian view: It's because the ideas have their content that they are triggered, and not the triggering that gives them their content. On this, see: Fodor, *The Language of Thought*. p.94.

¹¹ Descartes. Third Meditation. AT VII 44, CSM II 30.

¹² Descartes. Third Meditation. AT VII 37, CSM II 25.

mentions some ideas that don't seem to be capturable in mental images. For example, he says that we have ideas of "duration and number" – and it's difficult to see how we could have mental images of those things.¹³ Later, Descartes mentions the example of the chiliagon. Although he understands what the chiliagon is, he cannot mentally picture it – he does not "imagine the thousand sides or see them as if they were present".¹⁴ At the very least, these examples suggest that Descartes did not adhere to the notion that *all* ideas are mental images.

As we have seen, Descartes explicitly questions the notion that ideas must *resemble* the things that they are ideas of, later on in the Third Meditation (and elsewhere).¹⁵ He compares the two ideas we may have of the sun: one "acquired from the senses"¹⁶ – of a small, bright disc in the sky – and one "based on astronomical reasoning", which presents facts about the size of the sun in relation to the earth, and so on. Descartes thinks that it cannot be that *both* of these ideas resemble the sun. Nevertheless, they are both ideas *of* the sun. He also notes that the idea that seems to come most directly from the sun through the senses "has in fact no resemblance to it at all".¹⁷ He concludes that ideas – even if some of them are image-like – need not bear resemblance to their objects in the world.

Furthermore, Descartes calls into doubt his former belief that ideas are caused by the transmitting of "ideas or images" from external objects to the mind. He asserts: it is merely "some blind impulse that has made me believe up till now that there exist things distinct from myself which transmit to me ideas or images of themselves through the sense organs or in some other way".¹⁸ Here, Descartes raises doubt that ideas are transmitted to us from external objects. This is significant because (as previously explained) efficient causes, for Descartes, involve some property being transmitted from cause to effect (and, therefore, cause and affected thing must both be the kinds of things that can possess that property – they must bear similarity in that respect).

So, in the first part of the Third Meditation we find Descartes a) claiming that ideas are "as it were the images of things", b) seeming uncommitted to the notion that all ideas must be mental images, c) explicitly denying that ideas must resemble the things that they are ideas of, and d) doubting that external objects 'transmit' their own images into the mind.

Since Descartes doesn't seem to hold that ideas are simply mental images, what are we to make of Descartes' claim that ideas are "as it were the images of things"? We must try to extract a subtler meaning. Descartes gives a formal definition of 'idea' in the Second Replies:

Idea. I understand this term to mean the form of any given thought, immediate perception of which makes me aware of the thought. Hence, whenever I express something in words, and understand what I am saying, this very fact makes it certain that there is within me an idea of what is signified by the words in question. Thus it is not only the images depicted in the imagination

¹³ Descartes. Third Meditation. AT VII 45, CSM II 31.

¹⁴ Descartes. Sixth Meditation. AT VII 72, CSM II 50.

¹⁵ I will return to this point later on. (For an explicit denial of the 'resemblance condition' see Discourse 4 of the *Optics* (AT VI 109, CSM I 164).

¹⁶ Descartes uses 'tanquam' – as if from the senses.

¹⁷ Descartes. Third Meditation. AT VII 39, CSM II 27.

¹⁸ Descartes. Third Meditation. AT VII 40, CSM II 27.

which I call 'ideas'. Indeed, in so far as these images are in the corporeal imagination, that is, are depicted in some part of the brain, I do not call them 'ideas' at all; I call them 'ideas' only in so far as they give form to the mind itself, when it is directed towards that part of the brain.¹⁹

Here, Descartes explains that an idea is a *form* of a given thought. We can try to make sense of this with an example. When I think of something (say, a square) my thought or consciousness – my *mind* – is altered in a particular way. The idea, as Descartes says in the passage here, *gives form* to the mind. Cottingham draws the conclusion: ideas “turn out to be a way of talking about the formal or representational aspects of my thought.”²⁰ Ideas are like images in so far as they have representative content.

Wilson concurs: “when Descartes speaks of ideas being ‘*tanquam rerum imagines*’, he does *not* mean that every idea involves a mental picture with visual properties: an idea, in other words, can purport to bring something into cognitive ken without purporting to represent it visually.”²¹ She concludes that when Descartes speaks about ideas being “as it were” images, he is talking about the representational character of ideas. We have also seen that representation cannot be understood in terms of mere resemblance, but then what is it for Descartes?

I have suggested in line with Wilson and Cottingham that, in saying that ideas are “as it were the images of things”, Descartes seems to be telling us not only that ideas have *objects* – that there are things that ideas are about (e.g. God, the earth, the stars) – but also something about *how* the mind has ideas. If ideas are somehow like images, this suggests that they have a kind of *presentational* or *exhibitional* quality. In fact, there are points at which Descartes seems to use ‘represent’ [*representare*] and ‘exhibit’ [*exhibere*] interchangeably. For example, in the Third Meditation: “but, in so far as one [idea] *represents* one thing, and another another, it is clear that they are greatly different from each other. For indubitably those [ideas] which *exhibit* substances to me are something more, and, so to speak, have more objective reality contained in them than those which *represent* only modes or accidents.”²²

We may take from this that ‘representation’, for Descartes, is a notion much closer to ‘presentation’. Rather than ‘representation’, which we might typically understand to be a special relation between ideas and objects outside of the mind, ‘presentation’ seems to capture an event – an occurrence in the mind having an idea. Ideas present their content, and this is what it means to give form to the mind. If we think about it in this way, then it seems as if ideas are mental ‘vehicles’, carrying their objects and presenting them to the mind.

¹⁹ Descartes. Second Replies. AT VII 160, CSM II 113.

²⁰ Cottingham, ‘Intentionality or Phenomenology? Descartes and the Objects of Thought’ in *Cartesian Reflections: Essays on Descartes’s Philosophy*. (Oxford: Oxford University Press 2008), p.132.

²¹ Wilson, *Descartes*.p.102.

²² Descartes. Third Meditation. AT VII 40-41 (my translation). CSM translates ‘*exhibere*’ as ‘represent’ instead of ‘exhibit’. Latin: ‘*sed, quatenus una unam rem, alia aliam repraesentat, patet easdem esse ab invicem valde diversas. Nam proculdubio illae quae substantias mihi exhibent, majus aliquid sunt, atque, ut ita loquar, plus realitatis objectivae in se continent, quam illae quae tantum modos, five accidentia, repraesentant.*’

At this stage, it is useful to explore a duality in the word ‘idea’ that Descartes acknowledges in the preface to the *Meditations*. I believe an examination of this brings to light the dual sense of the word ‘representation’ for Descartes. He writes:

[T]here is an ambiguity here in the word ‘idea’. ‘Idea’ can be taken materially, as an operation of the intellect, in which case it cannot be said to be more perfect than me. Alternatively, it can be taken objectively, as the thing represented by that operation; and this thing, even if it is not regarded as existing outside the intellect, can still, in virtue of its essence be more perfect than myself.²³

In this passage, we have a distinction between ideas taken materially, and ideas taken objectively. Chappell helpfully abbreviates these to ideas_M and ideas_O.²⁴ It is worth taking the time to clarify ideas_M and ideas_O and properly understand the distinction between them, as well as how they are related.

Ideas_M are “...just the ideas themselves simply as modes of my thought”.²⁵ Chappell describes ideas_M as “temporary modifications of Cartesian substances” – i.e. temporary modifications of the mind – and, in this sense, “not only are all ideas_M like one another, but ideas_M as a class do not differ from thoughts of all other kinds.”²⁶ This is how Descartes is using the term ‘idea’ when he says, for example: “In so far as the ideas are <considered> simply <as> modes of thought, there is no recognizable inequality between them: they all appear to come from within me in the same fashion.”²⁷ Ideas in this sense – the ideas_M sense – might be described as vehicles for representations.

This leads nicely on to ideas_O. The idea_O is the thing that is represented by the idea_M – that is, its object or *representatum*.²⁸ There are a few important things to note here. Firstly, for Descartes, the idea_O is the thing that the thinker is thinking of or is conscious of. An idea_M is a conscious *event* in the mind, and the idea_O is the thing presented in the mind during the event. The thinker is not conscious of the idea_M, but rather of the idea_O carried by it. This brings us to the second important thing: an idea_M is necessarily partnered with an idea_O. This is because, for Descartes, every idea_M has representational content, as I explained above. To say that every idea_M represents something is just to say that every idea_M has an idea_O.

What is the nature of an idea_O? When I have an idea of the earth, for example, is the idea_O the actual earth, as it exists outside of me? Is that what I am conscious of in having that idea? Or is the idea_O some item that exists only within my mind? For Descartes, it is the latter. This is brought to light from the example of the two ideas of the sun that I briefly explained above. It follows from that example that the two ideas_O – small bright disc in the sky and astronomical body several times larger than the earth – cannot both *be* the real sun, if for no other reason, there are two ideas_O and only one sun.²⁹ This isn’t to say that ideas_O do not correspond to external objects,

²³ Descartes. Preface. AT VII 8, CSM II 7.

²⁴ Vere Chappell, ‘The Theory of Ideas’ in Amélie Oksenberg Rorty, ed., *Essays on Descartes’ Meditations* (London: University of California Press, 1986). pp.177-198 (p.178).

²⁵ Descartes. Third Meditation. AT VII 38, CSM II 26.

²⁶ Chappell 1986, p.183.

²⁷ AT VII 40, CSM II 27-28.

²⁸ Chappell. 1986, p.185.

²⁹ Chappell (1986) discusses this point at greater length (pp.185-187).

or that they do not bear significant relations to them. It simply means that ideas_O are not identical to the external objects.

I have said that an idea_M *must* have an idea_O: an idea_M is a thought that necessarily has content – the content is the idea_O. Descartes makes this explicit, as mentioned above: “there can be no ideas which are not as it were of things”.³⁰ An idea_M *represents* – or, more straightforwardly – *presents* an idea_O in the mind. A useful analogy is that of the wax and the seal. The ideas_M (the mental events making up the mind) are the wax, and the ideas_O are the shapes that the wax takes on when seals are pressed on to it (we needn’t worry too much about what is analogous to the seals for now).³¹ So the idea_M, as I have said, is like a vehicle for the idea_O.

Now, what can the distinction and relation between ideas_O and ideas_M tell us about the notion of representation for Descartes? I propose that we can understand two different senses of ‘representation’ based on Descartes’ discussion of ideas. First, there is representation as *presentation* or *exhibition*: representation_P. Descartes uses ‘representation’ in this sense – the representation_P sense – when he speaks about ideas_M representing things (ideas_O), for example, when he speaks about “ideas that represent finite substances”.³² This is to say: ideas_M *present* or *exhibit* ideas_O (in this case, finite substances as they exist objectively within the intellect) in the mind. In summary, ideas_M represent_P ideas_O.

Second, there is representation as we might usually understand it – as a kind of relation between ideas (ideas_O) in the mind and things in the external world: the representation_R sense. Descartes does not say much explicitly about representation_R. In the passages I have quoted up until this point, Descartes is using ‘representation’ in the representation_P sense. Nevertheless, there are places where he seems to be talking about representation_R. For example, in the *Principles*: “universals arise solely from the fact that we make use of one and the same idea for thinking of all individual items which resemble each other: we apply one and the same term to all the things which are *represented* by the idea in question, and this is the universal term.”³³ Here, Descartes must be using ‘represented’ in the representation_R sense, since, for a given universal, we have *one* idea (one idea represented_P in the mind) that denotes (or represents_R) many things.

Now that I have clarified the dual sense of ‘representation’ for Descartes, it’s time to look at whether we can make sense of a representation_R relation between sensory ideas and objects and features of the external world.

3. Do Cartesian Sensory Ideas Represent_R Objects/Features of the External World?

³⁰ Descartes. Third Meditation. AT VII 44, CSM II 30.

³¹ Descartes uses this analogy in Rule 12, *Rules for the Direction of the Mind* (AT X 414, CSM I 41). However, when Descartes uses the analogy there, it is in relation to the bodily senses and the mind. The ‘common sense’ works like the seal, fashioning the mind – which is like the wax. This will be discussed later on.

³² Descartes. Third Meditation. AT VII 40, CSM II 28.

³³ Descartes. Principles §1. AT VIII A 27, CSM I 212 (italics added). Latin: ‘*Fiunt haec universalia ex eo tantum, quod una & eadem idea utamur ad omnia individua, quae inter se similia sunt, cogitanda: ut etiam unum & idem nomen omnibus rebus per ideam istam repraesentatis imponimus; quod nomen est universale.*’

Some interpreters deny that representation_R is a feature of Descartes's account at all. In this section, I look at an argument from Keating who argues that the account Descartes gives in the *Optics* does not support a 'representationalist' interpretation – an interpretation according to which sensory ideas represent_R features and objects in the external world. She claims that Cartesian sensory ideas are non-representational_R.³⁴ That is, sensory ideas – like ideas of yellowness or hardness – do not represent_R external objects/properties. I argue that she has neglected to properly understand the role of God in Descartes' account of sensory perception.

By now, we are now very familiar with the passages from the *Optics* in which Descartes describes the process of sensory perception – but here's a brief reminder. Descartes' account of sensory perception has three stages. First, the external object makes an impression on the body by causing particular movements in the nerves. Second, these movements in the nerves compose a figure in the brain. Third, these brain figures act upon the soul and give rise to sensory perceptions.³⁵

As noted, Descartes stresses that we are not to think of brain figures in the way “philosophers commonly do”.³⁶ That is, we needn't suppose that the soul is really looking at images in the brain that “resemble the objects they represent”.³⁷ In line with the passages mentioned earlier, Descartes fervently denies that resemblance is necessary for representation. He regularly reminds us of this, using the analogy with language: “our mind can be stimulated by many things other than images – by signs and words, for example, which in no way resemble the things they signify.”³⁸

Now, having briefly reminded ourselves of Descartes' account of sensory perception, let's return to Keating's interpretation. As I said above, Keating is happy to dispense with the notion of representation_R in Descartes altogether. She assumes that a causal account of representation_R is the only kind available to Descartes, but that this kind of account will not work for him. I'll propose that there is an alternative account available to Descartes, whereby God secures the representational_R content of sensory ideas (the ideas_O). But first, let's explore Keating's position.

Her central argument goes like this. She claims that if Descartes was trying to give a representationalist account, we would expect him to show how particular external causes of particular brain figures regularly give rise to particular sensory ideas in the soul. In virtue of these relations, those sensory ideas would be representative_R of those external causes. Descartes does not do this. Rather, he speaks only of the movements in the nerves, *not* the external causes. Indeed, in some cases different external causes might cause the same motions in the nerves, and thus give rise to the same sensory ideas. For example, a person suffering an eye injury may see flashes of light, even if she is in a dark room.³⁹ The eye injury is responsible for moving the nerves in the same way as a flashing torch might. Further, Descartes writes that the same force in the nerves that results in the sensory perception of a bright light, “might make us hear a sound if it affected

³⁴ Laura Keating, 'Mechanism and the Representational Nature of Sensation in Descartes', *Canadian Journal of Philosophy* 29, no. 3 (1999): 411–29. (p.412).

³⁵ Descartes. *Optics*. AT VI 130, CSM I 164-167.

³⁶ Descartes. *Optics*. AT VI 112, CSM I 165.

³⁷ Descartes. *Optics*. AT VI 112, CSM I 165 (My emphasis.).

³⁸ Descartes. *Optics*. AT VI 112, CSM I 165.

³⁹ Descartes. *Optics*. AT VI 131, CSM I 167-68.

the ears, or feel pain if it affected some other part of the body.”⁴⁰ The content of the sensory idea seems, then, to depend only on the motion of the nerves and thus to have no connection to any specific type of external object.

On the basis of these passages, Keating states: “according to this account, the sensory ideas produced depend *solely* on which nerves are set in motion, and the nature of the motion.”⁴¹ But, according to Keating, the “representational model [...] requires [...] a regular connection between the brain image and a particular kind of external feature”. Since Descartes gives no account of any such regular connection, the model he offers in the *Optics* does not seem to be a representational model at all.⁴²

However, I question Keating’s claim that sensory ideas are *solely* dependent on the motions of the nerves. For one thing, this claim is inconsistent with what Descartes tells us in the *Optics*. Descartes writes that “it is the movements composing the picture” – that is, the brain figure, or what Keating calls the ‘brain image’ – “which, acting directly upon our soul in so far as it is united to our body, are *ordained by nature* to make it have such sensations.”⁴³ It seems that Keating overlooks a crucial part of the process. It is not the movements of the nerves *on their own* that determine which sensory ideas arise in the soul, but rather the relation between the movements of the nerves and the sensory ideas as it is *ordained by nature*.⁴⁴

If we leave ‘nature’ (or, more accurately, God) out of the picture, then we can see how Keating’s diagnosis might seem correct.⁴⁵ We might think that, without God/nature’s ordination, only a regular connection could explain the representational_R relation between idea and object, and this would require regular correspondence between sensory ideas, precise kinds of motion in the nerves, and external objects/properties. Since Descartes admits that there is only a very imperfect correspondence between objects and the ideas that represent them – ideas can in fact be occasioned by many other external causes besides their objects – Keating concludes that sensory ideas are not representational_R. However, if we bring God into the frame, regular correspondence becomes unnecessary. A sensory idea X could be connected with an external object O because God/nature had ordained such a connection rather than because O is regularly connected with

⁴⁰ Descartes. *Optics*. AT VI 131, CSM I 168.

⁴¹ Keating (1999), p.420. (My emphasis.).

⁴² Keating (1999), p.421.

⁴³ Descartes. *Optics*. AT VI 130, CSM I 167 (My emphasis).

⁴⁴ It does seem to be true that sensory ideas as a *type* or *class* depend on the motions of the nerves in the body. In the Sixth Meditation, Descartes makes it quite clear that sensory perception depends on the body as well as the mind. If we were minds without bodies, then we would not experience sensory perceptions (AT VII 78-79, CSM II 54-55.). However, it is not true that *which* sensory idea you have is determined only by which particular motions occur in your nerves.

⁴⁵ When Descartes says ‘ordained by nature’ he essentially means that God set it up to be that way. Descartes speaks about nature with regard to sensation elsewhere. For example, in *The World*, he speaks of ‘signs established by nature’ (AT XI 4, CSM I 81). Again, I take this to mean ‘established by God’. In the *Treatise on Man*, he explicitly speaks about God’s role in sensory perception: ‘I maintain that when God unites a rational soul to this machine [the body] [...] he will place its principal seat in the brain, and will make its nature such that the soul will have different sensations corresponding to the different ways in which the entrances to the pores in the internal surface of the brain are opened by means of the nerves’ (AT XI 143, CSM I 102). Further, in the *Principles*, Descartes refers to ‘God or nature [Deus aut natura]’ (AT VIII A 15, CSM I 202). The ‘aut’ here implies this sense: ‘God or, if you’d rather, nature’.

the motion in the nerves associated with X. If we examine what Descartes says carefully, we can explain the representationality_R of sensory ideas without relying on a regular correlation between external objects/features, nerve motions and sensory ideas. Representation_R can instead be explained in terms of God/nature’s ordination. Regular or mostly-regular correlation might play a role in the explanation of the representationality of sensory ideas, but need not be the whole story.

Crucially, Descartes’ language analogy sheds explanatory light here. Words do not need to perfectly causally correspond with the objects/features they name. The word ‘cow’ only refers to what it refers to because of conventions that have been established by language users. *Within* this system, the word ‘cow’ is connected to cows, and it successfully signifies cows, even if, due to poor judgement, the use of the word ‘cow’ is not perfectly connected with the presence of cows, or perhaps the word ‘cow’, for some hearers, does not successfully provoke the idea of a cow. In the same way, brain figures are not perfectly correlated with particular external objects/features – they may have been produced by different motions in the nerves – but within God’s natural system, this does not matter. God has decided which sensory ideas these brain figures should give rise to *because* he has secured the representational_R content of those sensory ideas.⁴⁶

Figure 1 clarifies the language analogy. Words signify or represent external objects and features – they provide triggers for the mind to think of those objects/features (because language users established conventions). In the same way, brain figures signify/represent external objects and features, triggering representational_R sensory ideas in the mind (because God established this). Now, words only signify/represent external things because of the meanings/ideas they are conventionally associated with. In the same way, brain figures only signify/represent external things because of the sensory ideas that they are associated with, by natural/divine ordination. The brain figures are merely signs *by way of* representational_R sensory ideas, just as words are signs by way of ideas in the mind. The connections between sensory ideas and brain images are established by God (or ordained by nature), just as the connections between meanings and words are established by language users.

External Objects/Features	Words	Ideas/Meanings
... are equivalent to ...		
External Objects/Features	Brain Figures	Sensory Ideas

Figure 1.

⁴⁶ This is not the only instance in which Descartes appeals to divine ordination to explain something. In his 1630 letter to Mersenne, he writes: ‘The mathematical truths which you call eternal have been laid down by God and depend on him entirely no less than the rest of his creatures. [...] Please do not hesitate to assert and proclaim everywhere that it is God who has laid down these laws in nature just as a king lays down laws in his kingdom. [...] It will be said that if God had established these truths he could change them as a king changes his laws’ (AT I 145, CSM III 23). Mathematical truths and logical truths are not arbitrary, but they would be if God had not made mathematical and logical laws.

Let's remember the problem I outlined in section one. In summary: sensory ideas do not bear resemblance to, and are not efficiently and regularly caused by objects and features of the external world – so how can we make sense of the idea that those sensory ideas *represent_R* those objects/features? Put simply, I propose that the answer to this problem is that God is responsible for securing the representative_R content of Cartesian sensory ideas. Minds, with their innate, contentful, sensory ideas, are created by God, and God ordains the occasional-causal connections between those sensory ideas and the brain figures (which are caused by objects and features of the external world that the sensory ideas represent_R).

One possible objection here is that this view creates a vast chasm between immaterial minds and the external world. If God determines the content of our innate sensory ideas, prior to any connection with the world, then how could we make sense of the relations between minds, bodies, and world in the case of sensory perception? How could we make sense of the notion that our sensory ideas are the result of our being embodied? Note the quote at the very beginning of this chapter; Descartes tells us that we are not present in our bodies like sailors in ships but rather “*intermingled*” with them.

In the next section, I attempt to answer to this objection. I will show that, through the language analogy, we gain a picture of the Cartesian human being as *a system of representation*. I will argue that brain figures also have a kind of derived representationality_R through their associations with sensory ideas. The connections between sensory ideas, brain and external world naturally follow from the representational_R content that God has given sensory ideas.

As I have explained, I think Keating makes some wrong turns in her interpretation of the *Optics*. Crucially, she misses Descartes' claim that the brain figures are “ordained by nature” to occasion certain sensory ideas within the mind. Nevertheless, she strikes upon an idea worth exploring. She writes: “the notion of ‘signifying X’ or ‘representing X’ that is operative in the analogies” – the analogy of the blind man, the analogy with language, etc. – “is that of making the mind think of X, for example, making the mind have an idea of red, rather than that of standing for or referring to some object or aspect of the world.”⁴⁷ This is true, although I believe her to be wrong in drawing the conclusion that representation_R has no place in Descartes's theory. I propose here, on the contrary, that ideas_O represent_R objects, just as meanings of words represent_R objects. Further, I'll propose that the language analogy indicates that brain figures, like words, have a derived representationality_R. Ben-Yami, however, reads the references to language in a different way, which does not involve representation_R. I will now turn to his arguments.

In responding to Ben-Yami, I will show how Descartes can account for the representational_R nature of the whole Cartesian human being (mind and body) without depending on either resemblance or causation. The crucial feature of language, which Descartes believes brain figures share, is their being *ordained* or *instituted* to signify or represent their objects. This is the feature that allows them to represent_R their objects *derivatively*. Since sensory ideas *intrinsically* represent_R their objects, and since God ordains connections between brain figures and sensory ideas, we can say that the brain figures have a kind of derived representationality_R (derived from the intrinsically

⁴⁷ Laura Keating, 1999. p.422.

representational_R sensory ideas). I suggest, in contrast to Ben-Yami, that world, brain and mind are all connected in a system of representation_R for Descartes.

4. Brain Figures and derived Representationality_R?

In ‘Word, Sign and Representation in Descartes’, Ben-Yami argues that Descartes’ use of the language example in his explanations of perception is not intended to provide support for a representational model of perception. Instead, Ben-Yami claims, Descartes does not ascribe a representational role to words, and his reason for introducing the analogy with language was merely to give an example of something that can cause thoughts without resembling the thoughts they cause.⁴⁸

I agree with Ben-Yami that one of Descartes’ purposes in making the language analogy was to press the point of non-resemblance between our sensory ideas and the material motions that give rise to them. Descartes repeats this key point about the language analogy and causation each time he draws the analogy – and I explored this in the previous chapter. However, I believe that Descartes wants to make an additional point when he uses the analogy with language: the language analogy helps us to understand that world, brain and mind are connected in an essentially representational_R system. The nerve patterns in the brain can be compared to words because they are conventionally associated with meanings (representational_R ideas) in the mind – and this means that they have *derived representationality_R*. For this reason, we cannot separate representation_R from the sign-signified relation (that Ben-Yami deems purely causal). Here, I will argue that the language analogy helps us to understand how representation_R fits into Descartes’ theory of perception, and that brain images do have representative_R power (albeit a derived representative_R power).

First of all, we must determine how Ben-Yami understands the notions of ‘representation’ and ‘sign’. He states that “I use ‘representation’ with our sense of the term.”⁴⁹ However, he doesn’t tell us what that sense – ‘our’ sense – is. I take it that Ben-Yami is thinking about representation in the representation_R sense – as a relation between an idea in the mind and external world objects, since he describes the connection between ideas and the external world as a “relation” in a previous work.⁵⁰

In investigating what Descartes might have meant by ‘sign’, Ben-Yami looks back to Aristotle and Augustine. For Aristotle, spoken words are signs of affections of the soul, and written words are the symbols for spoken words. Ben-Yami suggests that this should be understood causally.⁵¹ Since words, in Aristotle’s time, were read aloud, the written words *cause* us to articulate them correctly.

⁴⁸ Hanoch Ben-Yami, ‘Word, Sign and Representation in Descartes’, *Journal of Early Modern Studies* 10, no. 1 (10 December 2021): 29–46.

⁴⁹ Ben-Yami, 2021. p. 33.

⁵⁰ H. Ben-Yami, *Descartes’ Philosophical Revolution: A Reassessment*, 2015 edition (Houndmills, Basingstoke, Hampshire; New York, NY: Palgrave Macmillan, 2015). p. 15.

⁵¹ Ben-Yami, 2021. p.34.

Ben-Yami then moves on to discuss Augustine’s conception of ‘sign’; as “a thing which in addition to its image which it impresses on the senses, makes something other than itself come into the mind”.⁵² Augustine gives examples like a footprint, which is the sign of the animal that made it. Ben-Yami highlights that, for Augustine, the sign-to-signified relation is purely causal. The footprint of the animal doesn’t *represent_R* the animal, but rather *causes* us to think of the animal when we see it. The footprint, in this case, is a sign of the animal but not a *representation_R* of the animal. In our terms, the sign can *represent_P* the thing signified, causing us to think of it and to that extent *presenting* it to our mind, but it does not *represent_R* the thing signified; it does not stand for it within a *representative_R* system.

Ben-Yami notes that Aristotle and Augustine serve as the departure point for the Medieval and Early Modern discussions of signs. He asserts that the dominant view at Descartes’ time (although it’s noted that we cannot be sure of what he actually read) was essentially the Augustinian view: “the sign is a sign because it makes the mind think of some thing, in this consists its signification; it might be related to that thing in a causal or some other way, but not through a system of representation in our sense; and it signifies that thing in the sense that it makes us entertain the concept of the latter.”⁵³ Again, the distinction made here seems to line up with the one I have made between *representation_P* and *representation_R*: the sign “makes the mind think of some thing” or “makes us entertain the concept of” it, i.e. it presents it, but it does not *represent_R* it (in the way that, presumably, the concept of it does).

Ben-Yami goes on to apply this notion of a sign back to a passage from *The World*. The motions in matter that we call ‘light’ are a sign for the idea or sensation of light because they cause it – and this is why we call those motions in matter ‘light’.⁵⁴ The analogy with words merely serves to show that something (e.g. a word) can cause us to think of something that doesn’t resemble it at all (e.g. an idea). *Representation_R* is out of the picture, and the story is a purely causal one.

I think that Ben-Yami has overlooked an important distinction between ‘natural’ signs (like smoke as the sign of fire, or a footprint as the sign of an animal) and conventional or instituted signs (like words of a language). Whilst it might be plausible to hold his view when comparing brain figures to *natural signs*, it seems significantly less plausible to hold this kind of view when comparing them to *conventional* or *instituted signs*. I’ll now explore this distinction between natural and ordained signs in more detail.

In his *Opus Maius* (1267), in the section entitled *On Signs*, Bacon identifies one of the key differences between ‘natural’ signs and ‘constituted’ or ‘ordained’ signs. Natural signs, like smoke as the sign of fire, are signs for any one of three reasons; 1) because they imply something else (e.g. a lion’s large limbs imply strength), 2) because they configure or share a likeness with something else (e.g. a painting signifies its subject), and 3) because they are effects with respect to their causes (e.g. the smoke is a sign of the fire since it is caused by the fire). By contrast, words of

⁵² Ben-Yami, 2021. p.34.

⁵³ Ben-Yami, 2021. p. 37.

⁵⁴ Ben-Yami, 2021. p.33.

a language, a species of *constituted* sign, are signs because they are chosen at will for pleasure or *for a purpose* [ex proposito].⁵⁵

Augustine also draws this distinction between ‘signa naturalia’ (natural signs) and ‘signa data’ (given signs). A natural sign is anything that ‘goes with’ the thing it is a sign for – “without any desire on anybody’s part of signifying”.⁵⁶ For example, smoke is a sign of fire, since smoke makes known the presence of fire without anybody intending it to. A natural sign might depend on its significatum, as smoke depends on fire or as the footprint depends on the animal that left it. Augustine says that he is not very concerned with this kind of sign except to distinguish it from ‘signa data’ or given signs. A given sign is a sign which a being makes to another being in order to communicate something. Given signs owe their significance to the sign-maker only. Words of a language are examples of given signs, since they are made with the intention to communicate.⁵⁷

One key distinction between natural signs and given/ordinated signs is that causal relations do not underpin the relation between sign and thing-signified in the case of given signs, whereas the causal relations do underpin the sign-signified relation in many cases of natural signs. Markus notes this key difference in his discussion of Augustine. He writes: “nor is there a causal relation between [given signs and what they signify] on which an inference could be based on the occurrence of the one from the other.”⁵⁸ So, a word is not causally connected to the thing that it signifies. A dog does not naturally cause the word ‘dog’. It is unlike smoke and fire in this sense. The word gets its significance from the intentions of its users only.

Of course, I don’t mean to imply that words have nothing to do with causation. It’s true that words as signs do play a role in bringing ideas to mind. If you read or hear someone utter the word ‘dog’ then that may well cause you to think of a dog. It is true that, for both natural and given signs, the presence of the sign causes (or occasions) the perceiver of the sign to think of the thing that is signified by that sign. The perceiver of the smoke might think of the fire just as the perceiver of the word ‘dog’ might think of a dog. But the Augustinian point, which Markus highlights, is that causation is not what gives a given sign its *significance*. Smoke is *only* a sign of fire because it is caused by fire. What underpins its power as a sign is a causal relation to fire. Words, and other given signs gain significance in another way: by *institution*.

This opens the possibility that given signs, as opposed to natural signs, do in fact represent_R their objects rather than only representing_P them. To see if this possibility is taken up by Descartes, we should pay careful attention to his references to language in describing the process of sensation. Ben-Yami focuses only on the causal features of signs. He wants to say that Descartes chose to draw the analogy with words purely because words cause us to think of things that they bear no resemblance to. But, as I argued above, this seems to be a feature common to both natural signs and given/constituted signs. The smoke, while it bears little or no resemblance to the fire, does

⁵⁵ Roger Bacon, *On Signs*, trans. Thomas S. Maloney, Translation edition (Toronto: Pontifical Institute of Mediaeval Studies, 2013). p.37-40.

⁵⁶ St Augustine, *On Christian Teaching*, trans. R. P. H. Green (Oxford ; New York: OUP Oxford, 2008).§II.1.2.

⁵⁷ For a helpful discussion of this distinction, see: R. A. Markus, ‘St. Augustine on Signs’, *Phronesis* 2, no. 1 (1957): 60–83.

⁵⁸ Markus, 1957. p. 73.

cause us to think of the fire. In the same way, the motions in the material world that we call ‘light’ are a sign for the sensation of light in the mind, since they bring it about that we have this sensation (which bears no resemblance to the motions in the material world). However, to focus solely on this causal (or causal-ish) aspect of signs is to neglect the special characteristics of given/constituted signs.

It is significant, therefore, that Descartes always draws the analogy with *words* in his account of perception. He never draws an analogy with natural signs (like smoke as the sign of fire).⁵⁹ If the only point he was trying to make was about causation between non-resembling things, we might expect him to have used a variety of examples. He may even have used the smoke and fire example, since smoke bears little resemblance to fire. Yet, he consistently uses the example of words. His consistent choice of the example of words, I propose, communicates something in addition to the point about causal relations between non-resembling things. It tells us that the motions in matter are chosen or instituted with purpose (by God). It also tells us that, in virtue of their conventional associations with ideas/sensations in the mind, the nerve patterns in the brain and the motions in the material world have derived *representationality*_R. I will explore these points in turn, and show how they together support the view that the Cartesian human being is a representative_R system in Descartes’s theory.

4.1. Nature’s Ordination: Signs Instituted by God

By now, we are familiar with the multiple passages in which Descartes draws the analogy with language. In a particularly important passage from *The World*, Descartes writes:

Words, as you well know, bear no resemblance to the things they signify, and yet they make us think of these things, frequently even without our paying attention to the sound of the words or to their syllables. Thus, it may happen that we hear an utterance whose meaning we understand perfectly well, but afterwards we cannot say in what language it was spoken. Now if words, which signify nothing except by human convention, suffice to make us think of things to which they bear no resemblance, then why could nature not also have established some sign which would make us have the sensation of light, even if the sign contained nothing in itself which is similar to this sensation?⁶⁰

In this passage, it seems particularly important to Descartes that words “signify nothing except by human convention”, and goes on to rhetorically ask: “why could nature not also have *established* some sign?”⁶¹ Here, the suggestion is that nature/God establishes these signs, much as human beings do when they establish words that signify/represent particular things. Descartes chooses to use the example of words, rather than other kinds of signs, because words are *established* signs – and Descartes wants to say that the same is true of the motions in the material world: they are *established* (or given/constituted) signs for the sensory ideas that we experience.

⁵⁹ He does draw the analogy with engravings & with facial expressions – but, in these places, he also draws the analogy with words.

⁶⁰ Descartes. *The World*. AT XI 4, CSM I 81.

⁶¹ *Ibid.*

After Descartes draws on the language example to explain perception in the *Optics*, he writes:

Now, when this picture [on the back of the eye] thus passes to the inside of our head, it still bears some resemblance to the objects from which it proceeds. As I have amply shown already, however, we must not think that it is by means of this resemblance that the picture causes our sensory perception of these objects [...] Instead we must hold that it is the movements composing this picture which, acting directly upon our soul insofar as it is united to our body, are *ordained by nature* to make it have such sensations.⁶²

The ‘pictures’ Descartes is talking about here are those that exist on the backs of the eyes when we see something. According to him, the movements in the nerves in the eyes that compose these pictures cause movements in the nerves of the brain which then bring about our sensory perception of the object in the mind. The crucial detail in this passage is that the nerve movements are “ordained by nature” to make us have the sensory perceptions that we have.⁶³ Again, Descartes is keen to emphasise that the motions in the matter have been *ordained or established*.

Descartes repeats this phrase “ordained by nature” in part one of the *Passions of the Soul*. In this passage, Descartes is talking about the mind’s control over the body through habit forming, rather than about how sensory perception works. I quote the passage:

It is useful to note here [...] that although nature seems to have joined every movement of the [pineal] gland to certain of our thoughts from the beginning of our life, yet we may join them to others through habit. Experience shows us this in the case of language. Words produce in the gland movements which are *ordained by nature to represent* to the soul only the sounds of their syllables when they are spoken or the shape of their letters when they are written, [but nevertheless]⁶⁴ we have acquired the habit of thinking of this meaning when we hear them spoken or see them written.⁶⁵

The comparison with language could be misleading here since Descartes is making a slightly different point, so I will clarify. The relevant detail here is that movements in the brain (movements of the pineal gland) are “ordained by nature” to give rise to sensory ideas (sounds or visual shapes). From these sensory ideas, the meanings of the words (spoken or written) come to mind. Note that Descartes is not comparing the relation between pineal gland movements and sensory ideas to words and their meanings here. Instead, he is making a different point about the connections that we make between our sensory perceptions and our passions.⁶⁶

⁶² Descartes. *Optics*. AT VI 130, CSM I 167.

⁶³ *Ibid.*

⁶⁴ My translation.

⁶⁵ Descartes. *Passions of the Soul* §1.50. AT XI 369, CSM I 348. (My emphasis.).

⁶⁶ Connections (between the sounds/visual perceptions of words and the meanings of words) are formed through habit – i.e. when we learn a language. Descartes’ point here is that the passions we feel are connected (through habit/experience) to our sensory perceptions. He goes on to give an example: when you’re eating a nice meal and unexpectedly taste something very unpleasant, you might then feel repulsed by those foods even though you enjoyed them before. The taste/smell/sight of the food is the same (that is, the sensory ideas you have are the same), but your passionate response to that food has changed because of that previous experience. In this way, it is like language. We come to associate words (sensory perceptions of sounds/visual shapes) with meanings so that those meanings immediately come to mind when we have the relevant sensory perceptions – but those associations might change. Through habit, we might come to form new associations. For example, the word ‘terrific’ was once

In these passages from *The World*, the *Optics* and the *Passions of the Soul*, Descartes makes it clear that material motions are ‘ordained’ or established by nature/God to be signs for sensory ideas. Since they are *established* signs, they fit into Bacon’s category of ‘constituted signs’ and Augustine’s category of ‘given signs’, rather than the ‘natural signs’ category. That means that the material motions are signs *through purpose*. The purpose, as mentioned earlier in this thesis, is to keep the union of mind and body (the Cartesian human being) safe.

4.2. The Derived Representationality_R of Material Motions.

There is another important point about words as signs. Words, in virtue of the ideas that they are associated with, are *meaningful*. Words have a kind of secondary or derived representative_R power in virtue of the fact that they are tied to ideas that have representative_R power. The word ‘dog’, in virtue of the fact that we have attached it to the dog idea (which intrinsically represents_R dogs), represents_R dogs. It does not simply cause the mind to think of dogs; it *means* dogs in a representative_R sense.

Now, we can apply this back to the case of material motions and sensory ideas. If we think about it in this way, we can say that the motions in the body (brain figures) have some meaning in virtue of their connection with the sensory ideas that arise in the mind as a result of them. The brain figures are meaningful to us because they occasion our sensory perception of light, just as the word ‘dog’ is meaningful to us because it gives rise to our dog idea (i.e., it makes us think of dogs). See figure two for an illustration of this.

used to describe something that filled one with terror. Now, we use it to express that something was excellent or very good.

This is a different use of the language example. Here, words are compared to sensory ideas, and their meanings are compared to passions. The relation between sensory ideas and passions is like the relation between words and their meanings in that these relations are formed through habit and can be changed. This is, of course, a completely different use of the language example. The point I wish to highlight in the above passage from the *Passions of the Soul* is simply that Descartes says that the movements in the brain are “ordained by nature” to give rise to certain sensory perceptions.

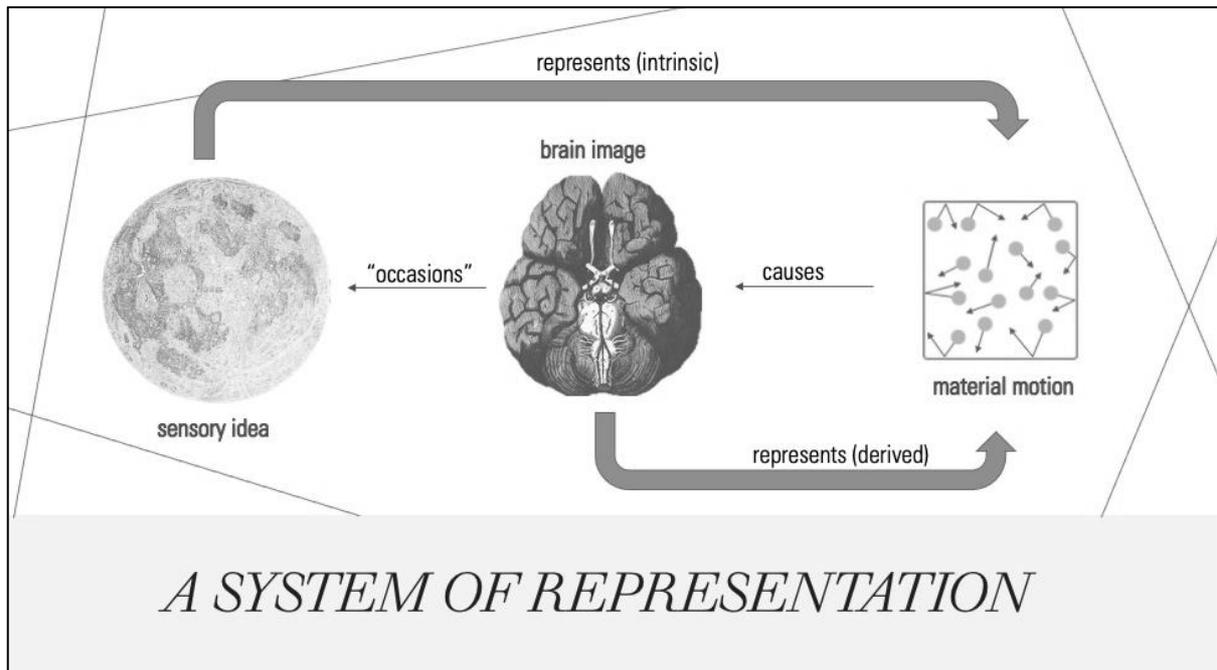


Figure 2.

Ben-Yami is keen to deny that Descartes' use of the language analogy tells us anything about representation_R, but I believe that it does tell us something. It tells us that the motions in our bodies have a kind of secondary or derived representative_R power in virtue of their connections to our sensory ideas.⁶⁷ The motions in our eyes and brain when we perceive light do represent_R or *mean* light (as it exists in the material world): it gives rise to our sensory idea of light, which intrinsically represents_R light as it exists in the material world.

Of course, it is true that Descartes wants to say that the motions in the brain occasionally-cause sensory ideas – in the same way that words occasionally-cause us to think of ideas. But I argue that he *also* wants to highlight that there is significance and meaning in the motions in our brain in virtue of their giving rise to these ideas. These nerve patterns are the 'words' that God (or nature) has chosen to use in this representative_R system.

5. An Ordinated System of Representation

I have suggested, in this chapter, that an understanding of the Cartesian human being as a kind of linguistic system – where sensory ideas are analogous to word meanings, and brain figures are analogous to words (ordinated signs) – gives us a way of understanding the connection between the mind, the brain/body, and the external world. I have suggested that these are connected through a system of representation_R that is analogous to a language.

At first glance, Descartes' claims that (1) sensory ideas are innate ideas and (2) sensory ideas bear no resemblance to the material world as it actually is, seem to cut the mind off from the

⁶⁷ For how this works in the language case, refer back to the discussion of Meyer in Chapter Four.

material world. The linguistic model makes sense of the connection between them. God has created a system – a kind of special language – so that the mind can know the material world. The mind can know external objects through innate sensory ideas that represent_R them, and be connected to the external world through the body, which derivatively represents_R the objects present to it.

Descartes' language analogy has given us a new way to understand one of the most significant problems with mind-body dualism: the problem of representation in sensory ideas. I don't mean to suggest that this is a proper metaphysical understanding, as I said in Chapter Five, although I do think that it gives us a working understanding of the relation between mind and body in the case of sensory perception.

Conclusion

In this thesis, I have aimed to show firstly that Descartes fits into a pattern of explanation in the Early Modern period by making an appeal to language in order to shed light upon a metaphysical problem and, secondly, that Descartes' analogy with language is offered as an illuminating although not properly metaphysical explanation of Cartesian sensory perception.

I began this project by looking at the positions of Hobbes and Berkeley. I argued that both of these philosophers appeal to language in order to address their distinctive metaphysical problems: the problem of active and abstract thought in Hobbes' mechanist materialism, and the problem of structure in Berkeley's idealism. It was not my aim to argue for the explanatory success of these appeals, but I did argue that these explanations are intuitively powerful because they are appeals to something in common experience. I have argued that Descartes too makes an appeal to language in order to resolve or reinterpret his own distinctive metaphysical problem: the problem of body-mind connection in the case of sensory perception. I showed that the appeals of these three philosophers have something in common: Hobbes, Berkeley, and Descartes, I argued, aim to relate a puzzling phenomenon to something that – even if still ultimately unanalysable – is very familiar.

I have drawn attention to the often-overlooked links between these appeals to language in the Early Modern period. Further, I have drawn attention to different, pre-Lockean views of and approaches to language, many of which have not, at least to my knowledge, been explored in depth. Not only are these theories interesting in their own right, but they have extra importance given the way that Early Modern philosophers appealed to some background understanding of *how language works* in order to explain other features of their metaphysics. This makes it especially important to know how they believed language to work.

My second aim in this thesis was to show that Descartes' appeal to language is successful in that it truly illuminates the problem of the body-mind connection in sensation. Even though Descartes cannot offer a properly metaphysical explanation of this connection (the kind of explanation that is reducible to clear and distinct ideas), he offers us, through the analogy with language, a *practical* way to understand two key aspects of the body-mind problem in the case of sensory perception (an understanding that falls under the third primitive notion). Descartes' language analogy, I have argued, provides a practical way of illuminating both the issue of body-mind causation and the issue of the representationality of sensory ideas and brain states.

Others have argued that Descartes' language analogy ought not to be taken too seriously as an explanation of sensory perception. For example, some take it to be merely a figure of speech.¹ Alternatively, some have argued that the language analogy can provide the grounds for an explanatory model that has much more metaphysical significance.² I have argued for an alternative position that is situated somewhere in the middle. Descartes' language analogy is truly illuminating, but it does not provide any basis for a metaphysical understanding of the mind-body union in terms of clear and distinct ideas. Instead, it gives us

¹ See, for example: Wilson 1991 and Gaukroger 1995.

² See, for example: Chignell 2009 and Ben-Yami 2021.

a kind of explanation under the third primitive notion: a way of practically understanding Cartesian sensory perception.

In writing this thesis, I have noticed that my research has opened up avenues for further explanation. Much more could be said about the different kinds of explanation that exist in Early Modern philosophy, developing the distinction made here between a properly metaphysical and a practical type of explanation. Further, much more could be said about the relations between metaphysical positions and different theories of language. For example, there is a striking connection between monist metaphysical positions (like those of Hobbes and Berkeley), empiricism, and meaning-as-use theories of language, whereas Cartesian dualism – or a less straightforwardly monistic metaphysics like that of Aristotle – appears to connect more naturally with the traditional ideational theory of meaning. It would be very interesting to examine the possible reasons for these positions lining up. These opportunities for investigation reveal the prevailing importance of the history of philosophy for understanding deep connections among philosophical positions that might not be obvious on the surface.

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Acknowledgements

I'd like to thank my supervisor, Sarah Patterson, for all of her careful comments on this thesis. Our conversations over the last four years have been so helpful and stimulating. I'd also like to thank my secondary supervisor, Susan James, for taking the time to read my work each year. I have felt at home in the Birkbeck Philosophy Department, and I feel incredibly lucky to have enjoyed such expert supervision during my PhD.

Huge thank you to Alicia Huertas, Ellie Robson, Peter West, Manuel Fasko, Gaby Wyer, Ariane Schneck, Anna Ortin Nadal, Clare Moriarty, Alex Grzankowski, Hanoch Ben-Yami, Andrew Chignell, John Carriero, Nick Shea, and many others at Birkbeck and beyond who listened to me speak about this material and offered helpful thoughts.

Thank you to my parents for offering their unwavering love and support. Thank you to my many dear friends who provided light relief along the way. Thank you most especially to Alex Douglas for his patience, wisdom, kindness, and love throughout this entire process. Without these remarkable people, this project would not have come to fruition. Thank you.