

## Withdrawal from the Senses and Cartesian Physics in the *Meditations*

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Descartes's *Meditations* have a covert aim: they are intended to promote the principles of his physics. He wrote in a letter to Mersenne:

...I may tell you, between ourselves, that these six Meditations contain all the foundations [*fondemens*] of my physics. But please do not say so, because those who favour Aristotle would perhaps have more difficulty in approving them. I hope that those who read them will imperceptibly [*insensiblement*] become accustomed to my principles, and recognise the truth in them before they notice that they destroy those of Aristotle. (AT III 297-8, CSMK 172, translation altered)<sup>1</sup>

Descartes's assertion that the *Meditations* contains the foundations of his physics echoes the opening paragraph of the work itself, in which he says that he must start afresh from the first foundations if he is to establish anything lasting in the sciences (AT VII 17, CSM II 12).<sup>2</sup> Doubt about the senses figures prominently in Descartes's quest for the foundations of Cartesian physics. His first step in undermining the old foundations underpinning his existing beliefs is to launch a sceptical attack on the senses. He writes in the Synopsis:

In the first [meditation], reasons are given for which we can doubt about all things, especially material things; that is, as long as we have no other foundations for science than those we have had so far. Although the utility of so great a doubt is not apparent at first sight, nonetheless it is of the greatest utility in liberating us from all prejudices and laying down the easiest way to withdraw the mind from the senses [*ad mentem a sensibus abducendam*]; and finally it brings it about that we can have no further doubts about what we afterwards discover to be true. (AT VII 12, CSM II 9, translation altered)

Here Descartes identifies withdrawal of the mind from the senses as one of the greatest benefits of the First Meditation doubt. But how does this withdrawal serve Descartes's anti-Aristotelian goal of using the *Meditations* to lay the foundations of his physics? Several commentators have rightly pointed out that in Descartes's view, uncritical reliance on the senses leads us to a false 'sensory image' of the world, one which conflicts with the view required by his physics, and that withdrawal from the senses is needed to enable us to correct this false view.<sup>3</sup> The most obvious way in

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<sup>1</sup> 'AT' citations refer by volume and page number to *Oeuvres de Descartes*, edited by C. Adam and P. Tannery (revised edition, Paris: Vrin/CNRS, 1964-76). 'CSMK' citations refer by page number to *The Philosophical Writings of Descartes* Vol. III, translated by J. Cottingham, R. Stoothoff, D. Murdoch and A. Kenny (Cambridge: Cambridge University Press, 1991).

<sup>2</sup> 'CSM' citations refer by volume and page number to *The Philosophical Writings of Descartes*, translated by J. Cottingham, R. Stoothoff and D. Murdoch (Cambridge: Cambridge University Press, 1984-5).

<sup>3</sup> See Daniel Garber, 'Semel in vita: The Scientific Background to Descartes' *Meditations*' in A. Rorty (ed.), *Essays on Descartes' Meditations* (Berkeley: University of California Press, 1986), p. 92; Gary Hatfield, 'The Senses and the Fleshless Eye' in A. Rorty (ed.), *Essays on Descartes' Meditations*

which the two views differ is that the naïve (and Aristotelian) view credits objects with sensible qualities resembling our sensory ideas, while the Cartesian view does not. Cartesian physics, like the corpuscularianism of Locke and Boyle, posits a world of objects possessing only qualities such as shape, size and motion—the mechanistic or primary qualities. Our sensations or sensory ideas of colour, heat and other sensible qualities are caused by the motions of particles of matter; objects do not have sensible or secondary qualities resembling our sensations. Hence, withdrawing sensible qualities from the world serves the cause of Cartesian physics.

Given that Descartes wants to undermine the assumption that objects have sensible qualities resembling our sensory ideas, how is the withdrawal from the senses prompted by the First Meditation doubt supposed to achieve this? The most explicit account of this process has been offered by Rozemond. On her reading, the First Meditation brings about withdrawal from the senses by forcing us to set aside familiar sense-based beliefs, including the belief that objects have sensible qualities and the belief that physical objects exist.<sup>4</sup> The belief in sensible qualities suspended by the First Meditation doubts is never subsequently restored. The Third Meditation argues that mechanistic qualities are clearly and distinctly perceived, while sensible qualities are not. Since we should believe only what we clearly and distinctly perceive, Descartes concludes that we can be certain that bodies have mechanistic qualities, but that we are not justified in ascribing sensible qualities to them.<sup>5</sup> Rozemond calls this the “skeptical strategy” for using withdrawal from the senses to remove sensible qualities from the world.<sup>6</sup>

It is certainly true that Descartes seeks to undermine the view that objects have sensible qualities resembling our sensory ideas, and it is surely right to say that the sceptical arguments of the First Meditation are important in achieving this goal. But certain aspects of the *Meditations* suggest that the sceptical strategy does not tell the whole story about how withdrawal from the senses is supposed to pave the way for Cartesian physics.

According to the sceptical strategy, the arguments of the First Meditation suffice for withdrawal from the senses, and ultimately provide the motive force for the removal of sensible qualities from the world. But the meditator’s own assessment of the force of these doubts is more modest. Having run through the Dreaming and Deceiving God arguments, she is satisfied that ‘there is not one of my former beliefs about which a doubt may not be properly raised’ (AT VII 21, CSM II 14). Despite this, she finds that her former beliefs keep returning; she says that she will ‘never get out of the habit of confidently assenting to these opinions, so long as I suppose them to be *what in fact they are, namely highly probable opinions*—opinions which, despite the fact that they are *in a sense* doubtful, as has just been shown, it is still much more reasonable [*rationali consentaneum*] to believe than to deny’ (AT VII 22, CSM II 15; emphasis added). The belief that objects have the kinds of qualities they present to our senses, including sensible qualities, is surely a prime example of a habitual opinion. If the meditator continues to regard such opinions as highly

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(Berkeley: University of California Press, 1986), pp. 46, 56, Gary Hatfield *Routledge Philosophy Guidebook to Descartes and the Meditations* (London: Routledge, 2000), p. 80; Marleen Rozemond, ‘The First Meditation and the Senses,’ *Brit. J. Hist. Phil.* 4 (1996), p. 24, and Marleen Rozemond, *Descartes’s Dualism* (Cambridge, MA: Harvard University Press, 1998), p. 67; and Margaret D. Wilson, *Descartes* (London: Routledge & Kegan Paul, 1978), pp. 39 and 104.

<sup>4</sup> *Descartes’s Dualism*, pp. 65-67.

<sup>5</sup> ‘The First Meditation and the Senses’, p. 24; *Descartes’s Dualism*, p. 68.

<sup>6</sup> *Descartes’s Dualism*, p. 66; see also ‘The First Meditation and the Senses’, p. 24.

probable, more reasonably believed than denied, *despite* the arguments of the First Meditation, then this suggests that it is only *after* the First Meditation that the meditator discovers that such habitual beliefs are ungrounded.

This suggestion is borne out by the fact that the Third Meditation contains an explicit attack on the meditator's 'habitual belief...that there were things outside me which were the sources of my ideas and which resembled them in all respects' (AT VII 35, CSM II 25). The upshot of this attack is that the meditator concludes that 'it is not reliable judgement but 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' (AT VII 40, CSM II 27). This conclusion represents a strong indictment of the naïve-cum-Aristotelian assumption that when we sense, we receive resemblances transmitted from external objects. It is certainly stronger than the First Meditation conclusion that such habitual beliefs are 'in a sense doubtful' (AT VII 22, CSM II 15). The appearance in the Third Meditation of this explicit attack on the assumption that objects resemble sensory ideas is difficult to reconcile with the idea that '[t]he sceptical arguments question assumptions on which our belief in such [sensible] qualities is based, and the upshot of the rest of the *Meditations* is *merely* that we are not justified in claiming that there are [such qualities]', as Rozemond suggests.<sup>7</sup>

In light of these points, there is reason to seek a fuller account of what withdrawal from the senses involves, and of the way in which Descartes uses it to promote the cause of his physics. The account developed in this paper emphasises the role of the Second Meditation in the process of withdrawing the mind from the senses, and locates Descartes's attack on the naïve-cum-Aristotelian view of the senses in the Third Meditation, rather than in the First. I argue that the main goal of Descartes's anti-Aristotelian, pro-physics campaign is to persuade the meditator of his anti-Aristotelian account of the way in which the senses and the intellect contribute to knowledge of the physical world. The abandonment of sensible qualities is a corollary of the achievement of this goal, rather than the goal itself.

## 2      **Withdrawing the Mind from the Senses and the First Meditation**

Many commentators equate withdrawing the mind from the senses with giving reasons to doubt the senses, as Descartes does in the First Meditation.<sup>8</sup> The passage from the Synopsis (quoted earlier) seems at first to support this reading, since it explicitly associates withdrawal from the senses with the First Meditation doubt. But what the passage says is that the First Meditation doubt 'lays down *the easiest way* [*viam facillimam sternat*] to withdraw the mind from the senses' (AT VII 12, CSM II 9; emphasis added). The doubt gives us a way or a method for withdrawing the mind from the senses; but a way must be followed, and a method must be applied. So the passage is consistent with, if not suggestive of, a view on which withdrawal from the senses is a process which begins with the First Meditation, rather than an argument which is concluded there. Several other passages provide support for this view.

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<sup>7</sup> *Descartes's Dualism*, p. 72, emphasis added; see 'The First Meditation and the Senses', p. 24.

<sup>8</sup> Rozemond, for example, holds that withdrawal from the senses is completed when the First Meditation arguments for doubting the senses have been given (*Descartes's Dualism*, pp. 22, 42, 51). Hatfield's *Guidebook* gives the title 'Withdrawing the mind from the senses' to the chapter on the First Meditation.

References to the process of withdrawing the mind from the senses appear within the first few lines of the Second, Third and Fourth Meditations. The second paragraph of the Second Meditation begins: ‘I will suppose, then, that everything I see is spurious [*falsa*]...*I have no senses*. Body, shape, extension, movement and place are chimeras’ (AT VII 24, CSM II 16; emphasis added). The first sentence of the Third Meditation reads, ‘I will now shut my eyes, stop my ears, and *withdraw* [*avocabo*] *all my senses*. I will eliminate from my thoughts all images of bodily things, or rather, since this is hardly possible, I will regard all such images as vacuous, false and worthless’ (AT VII 34, CSM II 24; emphasis added). The Fourth Meditation begins, ‘During these past few days I have accustomed myself to *leading my mind away* [*abducenda*] *from the senses*...The result is that I now have no difficulty in turning my mind away from imaginable things and towards things which are objects of the intellect alone and are totally separate from matter’ (AT VII 52-3, CSM II 37; emphasis added). Finally, there is a striking passage in the Second Set of Replies in which Descartes associates withdrawal from the senses with the *Second* rather than the First Meditation. He writes, ‘many people had previously said that in order to understand metaphysical matters the mind must be drawn away [*abducendam*] from the senses; but no one, so far as I know, had shown how this could be done. The correct, and in my view unique, way [*via*] of achieving this is contained in my Second Meditation’ (AT VII 131, CSM II 94).

These texts suggest that the process of withdrawing from the senses continues beyond the First Meditation. However, Descartes says that the First Meditation doubt lays down the way to this withdrawal. So how do the doubts of the First Meditation contribute to the process of withdrawing the mind from the senses? As we saw earlier, Descartes has the meditator set out to demolish all her opinions in order to start on fresh foundations. This demolition project does not require showing that each belief is false. The meditator finds that ‘reason now persuades’ her that she should withhold assent from doubtful beliefs as well as from false ones, if she is to find any certainty in the sciences; and whole structures of belief can be shown to be doubtful by casting doubt on the foundations on which they rest (AT VII 18, CSM II 17). Since the meditator holds the naïve-cum-Aristotelian view that most of her beliefs are based on the senses, she looks for reasons to doubt the senses (AT VII 18, CSM II 17). Having found them, she resolves ‘to withhold my assent from these former beliefs just as carefully as I would from obvious falsehoods, if I want to discover any certainty’ (AT VII 22, CSM II 15). But the former beliefs ‘keep coming back’; through habit, she continues to assent to them (AT VII 22, CM II 150). It is at this point that the meditator realises that she will never get out of this habit of assent as long as she continues to suppose them to be ‘what in fact they are’, highly probable opinions which are much more reasonably believed than denied (AT VII 22, CSM II 15). The reasons she has found for doubting her habitual opinions co-exist with what she still regards as good reasons for believing them.

As Descartes recognises, the meditator’s epistemic situation at this point is a psychologically awkward one. It is the fact that she aims to find new foundations for the sciences that makes it rational for her to withhold assent from opinions which she has seen reason to regard as doubtful; the reasons themselves need not compel a suspension of belief. The sceptical arguments show that her former opinions are in some way doubtful, but they do not suffice to induce the withholding of assent. Thus, the meditator continues to regard her opinions as ‘highly probable.’ This, coupled with the fact that she is accustomed to assent to them, makes it difficult for her to

withhold assent as her project requires. A new measure is needed; the meditator decides to ‘pretend for a time that these former opinions are utterly false and imaginary’ —to ‘deceive myself’, as Descartes puts it (AT VII 22, CSM II 15). This device counteracts both the meditator’s tendency to regard her opinions as probable and her habit of believing them; it counterbalances ‘the weight of preconceived opinion’ and corrects ‘the distorting influence of habit’ (AT VII 22, CSM II 15). Descartes compares this to bending a curved stick in the opposite direction in order to straighten it (AT VII 349, CSM II 242). Pretending that her habitual opinions are false helps the meditator to achieve her aim of withholding assent from them as carefully as if they were false.

The way in which the pretence is put into effect is important for the process of withdrawing the mind from the senses. The meditator decides to pretend that she is being deceived by a demon of the utmost power and cunning, who devises delusory experience as of ‘the sky, the air, the earth, colours, shapes, sounds and all external things’ and makes her falsely believe that she has hands, eyes, flesh, blood and senses (AT VII 22-3, CSM II 15). (Note that the pretended deception is focused wholly on the senses, though the sceptical arguments themselves were not.) Though the pretence is entered into in order to block assent to former opinions, its effect is far broader. It induces the meditator to discount the senses entirely, both as a basis for past and present belief and as a source of ideas. The opening paragraph of the Third Meditation illustrates this: the meditator resolves to eliminate from her thoughts all images of bodily things, or at least to treat such images as worthless (AT VII 34, CSM II 24).

Evidently finding reason to doubt the senses is not the same as withdrawing the mind from the senses, although the first motivates the second. The meditator finds reason to doubt the senses in the First Meditation, having run through the Dreaming and Deceiving God arguments. But she has not at this point begun to withdraw her mind from the senses. Withdrawing the mind from the senses requires breaking both the habit of assenting to former opinions based on sense experience, and the habit of relying on sensory ideas, including sensory images, as a basis for belief and a medium for thought. The withdrawal is a withdrawal of attention as well as credence from sensory ideas.<sup>9</sup> The pretence of deceit by a demon provides the meditator with a way of turning the mind away from sensory images and habitual sense-based judgements, and thus achieves an effect that the sceptical arguments alone cannot produce. In the next section we shall look at how Descartes uses this pretence of deceit to draw the meditator’s mind towards innate intellectual ideas.

### **3 Withdrawal from the Senses in the Second Meditation**

When Descartes describes the Second Meditation as containing the correct way of drawing the mind away from the senses, it is in the context of explaining ‘how the

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<sup>9</sup>There are several references in the *Meditations* and the *Replies* to shifting attention away from the senses to concentrate on intellectual matters. In the Second Replies Descartes alludes to ‘those who, following the way indicated by me, lay aside for a time whatever they have acquired from the senses, so as to attend to dictates of pure and uncorrupted reason’ (AT VII 154, CSM II 109). This process requires effort; ‘only those who really concentrate and meditate and withdraw their minds from corporeal things, so far as is possible,’ will achieve perfect knowledge of the primary notions (AT VII 157, CSM II 111). So in the Third Meditation, the meditator finds that ‘when I relax my concentration...my mental vision is blinded by the images of things perceived by the senses’ (AT VII 47, CSM II 32). She later recalls that she used to be ‘completely preoccupied with the objects of the senses’ (AT VII 65, CSM II 45).

properties or qualities of mind are to be distinguished from the qualities of body' (AT VII 131, CSM II 94, translation altered). He warns that 'protracted and repeated study is required to eradicate the lifelong habit of confusing intellectual things with bodily things, and to replace it with the opposite habit of distinguishing the two; this will take at least a few days to acquire' (AT VII 131, CSM II 94, translation altered). That, he says, is why he devoted the whole of the Second Meditation to the way of drawing the mind away from the senses to understand metaphysical matters (AT VII 131, CSM II 94).

The meditator resolves early in the Second Meditation to follow the way (*via*) embarked on in the previous Meditation, setting aside anything that admits of doubt. As decided in the First Meditation, she pretends that she has no senses, that external things are delusions, that no corporeal things exist (AT VII 22-3, 24, CSM II 15, 16). The value of this supposition, according to Descartes's Synopsis, is that 'it enables the mind to distinguish without difficulty what belongs to itself, i.e. to an intellectual nature, from what belongs to the body' (AT VII 12, CSM II 9). Still possessed by the lifelong habit of confusing mind and body, at first the meditator thinks, 'Am I not so bound up with a body and with senses that I cannot exist without them?' (AT VII 25, CSM II 16). But then she realises that even if she has convinced herself that nothing exists, and even if she is deceived by a demon, she herself must still exist. The pretence of deceit, prompted by doubt, has yielded its first certainty.

In the remainder of the Meditation, the I that now knows of its own existence explores its nature, correcting naïve-cum-Aristotelian confusions as it goes. These habitual confusions are excised using the pretence of deceit, which enables the meditator to withdraw her mind from the senses by setting aside all images of bodily things. She reflects that she knows for certain both that she exists, and that the images of corporeal things formed in the imagination could be mere dreams (AT VII 28, CSM II 19). She concludes that the images formed in her imagination cannot help her to understand what a mind is: 'none of the things that the imagination enables me to grasp is at all relevant to this knowledge of myself which I possess' (AT VII 28, CSM II 19).<sup>10</sup> And this provides fresh motivation for withdrawing the mind from images of sensible things: 'the mind must therefore be most carefully withdrawn [*avocandam*] from such things if it is to perceive its own nature as distinctly as possible' (AT VII 28, CSM II 19, translation altered).

Despite this resolution, old habits die hard: a paragraph later the meditator finds that she 'cannot stop thinking' that corporeal things which can be investigated with the senses and pictured in the imagination are known more distinctly than 'this I-know-not-what me [*istud nescio quid mei*]', which cannot be sensed or imagined (AT VII 29, CSM II 20, translation altered). Descartes has the meditator confront this naïve-cum-Aristotelian prejudice directly, by investigating the way in which she understands a particular body, the piece of wax. The investigation culminates in the realisation that the natures of wax and mind alike are perceived clearly and distinctly not by the senses or the imagination, as the meditator previously thought, but by the intellect (AT VII 34, CSM II 22-3). It is the intellect that understands that the wax persists through changes in the features grasped by the five senses, and that it can persist through more changes in extension than the imagination can encompass. Distinguishing what belongs to an intellectual nature from what belongs to body goes

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<sup>10</sup> Descartes wrote in the earlier *Discourse* that trying to use one's imagination in order to understand the idea of the soul is like trying to use one's eyes in order to hear sounds (AT VI 37, CSM I 129).

hand-in-hand with distinguishing the cognitive roles of the intellect, imagination and senses.

Descartes lays particular stress on the conclusion that the wax is perceived 'by the mind alone [*sola mente*]' (AT VII 31, CSM II 21). This realisation enables the meditator to correct her habitual misapprehension of the scope of the senses, her naïve belief that 'the wax is known by the vision of the eye, not solely by the inspection of the mind' (AT VII 32, CSM II 21, translation altered). She now knows that 'something which I thought I was seeing with my eyes is in fact grasped solely by the faculty of judgement which is in my mind' (AT VII 32, CSM II 21). This view reflects the conception of sense-perception outlined by Descartes in the Sixth Replies, where he distinguishes between three grades of sensing. The first grade is purely physical, consisting of motions in the bodily organs; the second is mental, consisting of perceptions of pain, hunger, colours, sound, heat and so on (AT VII 436-7, CSM II 294). Only these first and second grades belong to the senses; the third grade consists of judgements made by the intellect, but wrongly attributed to the senses. What Descartes calls 'ordinary ways of talking' reflect this common error; as he puts it in the Second Meditation, 'we say that we see the wax itself, if it is there before us, not that we judge it to be there from its colour and shape, and this might lead me to conclude...that knowledge of the wax comes from what the eye sees, not from the scrutiny of the mind alone' (AT VII 32, CSM II 21). In the Sixth Replies, Descartes explains that sensing proper ends with the perception of the colour and light reflected from a stick, or the wax; the judgement that a stick, or a piece of wax, of a certain colour, size and shape lies at a certain distance depends on the intellect, which makes use of the information provided by the perceptions of light and colour (AT VII 437, CSM II 294). The meditator is not yet in a position to perceive the details of this picture of what goes on when we see a body. But she has taken a significant step towards the reassessment of the roles of the senses and intellect which she will finally make in the Sixth Meditation.

This is not the only lesson that the meditator learns from the examination of the piece of wax. She also begins to appreciate the difference between a clear and distinct intellectual perception and an obscure and confused one. Her new judgement about the nature of the wax is clear and distinct, while her previous judgement was imperfect and confused (AT VII 31, CSM II 21). When she believed that she knew the wax by her external senses, and thought of it in terms of its colour, temperature, shape, size and other sensible properties, she did not grasp its nature distinctly; when she thinks of it as something extendable in more ways than she can imagine, she clearly and distinctly perceives what the wax is. Animals can perceive bodies through their senses, but 'when I distinguish the wax from its outward forms...then although my judgement may contain errors, at least my perception now requires a human mind' (AT VII 32, AT II 22).

Withdrawal from the senses, induced by the pretence of deceit, not only enables the meditator to realise what a mind is; it also enables her to realise what a mind can do. She begins the Second Meditation with the naïve-cum-Aristotelian belief that she is a corporeal being, animated by a soul which is responsible for nutrition, locomotion, sensing and thinking (AT VII 26, CSM II 17). She ends it with the Cartesian belief that she is a mind, an intellect, a thinking thing, which doubts, understands, wills, imagines and senses (AT VII 28, CSM II 19). She begins it with the naïve-cum-Aristotelian belief that corporeal things, which can be sensed and imagined, are known more distinctly than the mind itself, which cannot. She ends it

with the Cartesian belief that ‘even bodies are not strictly perceived by the senses or the faculty of imagination but by the intellect [*intellectu*] alone, and that this perception derives not from their being touched or seen but from their being understood [*intelligentur*]’ (AT VII 34, CSM II 22). The turn away from sensible images, reinforced at crucial points in the Meditation, has enabled her to perceive clearly and distinctly using the intellect alone. The meditator is now in a position to compare what she mistakenly took for the distinctness of sensory perception with the genuine clarity and distinctness of intellectual perception. As a result, she is also in a position to launch a critique of her habitual faith in the senses that is far harsher than any envisaged in the First Meditation.

### 3 Withdrawal from the Senses and the Third Meditation Critique

The Third Meditation opens with a fresh resolution to withdraw the mind from the senses, and a fresh exhortation to turn away from sensory images: ‘I will now shut my eyes, stop my ears, and withdraw all my senses. I will eliminate from my thought all images of bodily things...’ (AT VII 35, CSM II 24). This withdrawal is designed to enable the meditator to scrutinise herself, a thinking thing that cannot be perceived through the senses. The first fruit of this scrutiny is the proposal of a ‘general rule’: that whatever she clearly and distinctly perceives must be true. But there is a difficulty with the proposed rule. Many things she used to regard as wholly certain and evident have proved to be open to doubt (presumably, in the First Meditation). This difficulty is resolved with the realisation that these things were not clearly and distinctly perceived, and so do not provide a counterexample to the rule. Her previous claim that ‘there were things outside me which were the sources of my ideas and to which they were wholly similar’ was not in fact something she perceived clearly, although ‘through a habit of believing’ she thought she did so (AT VII 35, CSM II 25).

This discovery marks a significant step beyond the doubts about the senses aired in the First Meditation. There, the meditator was puzzled by the similarity between waking experience and dreaming experience, and could not see how to rule out the possibility that an omnipotent God or less powerful originating cause had given her a deceitful nature.<sup>11</sup> This showed her that doubts could be raised about something that she believed she perceived clearly. Here, the meditator realises that what she thought she perceived clearly was not so perceived at all. Two results of the Second Meditation contribute to this discovery.

Firstly, Descartes makes use of the distinction between sensory ideas and intellectual judgements, drawn in the discussion of the wax, to reframe the meditator’s previous belief in things apprehended through the senses. As the meditator now describes it, she clearly perceived that *ideas or thoughts* of ‘the earth, sky, stars, and everything else that I apprehended with the senses’ appeared before her mind (AT VII 35, CSM II 24). But she also *judged* that ‘that there were things outside me which were the sources of my ideas and to which they were wholly similar [*omnino similes*]’ (AT VII 35, CSM II 25, translation altered). This judgement is the

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<sup>11</sup> I mention this disjunction in order to reflect the argument by dilemma which terminates the meditator’s quest for reasons to doubt her former beliefs. The dilemma argument is used to show that even if we reject the possibility of an omnipotent creator who has created us such that we are constantly deceived, we must countenance the possibility that a less than omnipotent original cause has given us a nature that is imperfect and therefore deceitful (AT VII 21, CSM II 14).

work of the intellect, not the senses. Secondly, the meditator is now able to recognise that this judgement was not based on clear perception, because she now knows what a clear intellectual perception is like. The genuine clarity and distinctness of her perception that she is a thinking thing, achieved in the Second Meditation and reviewed at the start of the Third, enables her to expose the spurious clarity of her habitual belief that objects wholly resemble sensory ideas.

The realisation that this habitual, naïve-cum-Aristotelian belief is not based on clear perception is followed up by a detailed scrutiny of the grounds on which it is based. Tellingly, the critique is couched in the present tense: ‘what *is* my reason for thinking [my ideas] resemble [external] things?’ (AT VII 38, CSM II 26). Although she is pretending that it (and her other sense-based beliefs) is false, the meditator has not yet abandoned her habitual belief that bodies wholly resemble sensory ideas.

The meditator identifies two grounds for this habitual belief that ideas taken to be derived from external things resemble them. The first is that nature apparently teaches her this—that is, she has a spontaneous impulse to believe it. The second is that the ideas occur involuntarily, which suggests that they come from things outside her; and ‘the most obvious judgement for me to make is that the thing in question transmits to me its own likeness’ (AT VII 38, CSM II 26). Under scrutiny, each of these reasons is found wanting. Firstly, unlike the natural light of reason, natural impulse cannot be trusted, because it has proved unreliable in the past. Secondly, ideas that occur involuntarily might be produced by an unknown internal faculty, just as ideas are thought to be produced when we are dreaming. And even if an idea comes from an external object, it need not resemble that object (AT VII 39, CSM II 27). Here Descartes has the meditator contrast the sensory idea of the sun with an idea based on astronomical reasoning. The first represents the sun as very small, while the second represents it as many times larger than the earth. Since the idea derived from innate geometrical notions has a better claim to represent the sun’s size accurately, she concludes that ‘the idea which seems to have emanated most directly from the sun itself has in fact the least similarity to it’ (AT VII 39, CSM II 27).

This critique of the reasons for the habitual belief yields a damning verdict: it is ‘merely some blind impulse [that] has made me believe *up till now* [*hactenus*] that there exist things distinct from myself which transmit to me ideas or images of themselves’ (AT VII 40, CSM II 27; emphasis added). As ‘up till now’ indicates, it is at this point, rather than in the First Meditation, that the meditator is forced to give up her allegiance to the naïve-cum-Aristotelian conception of sense-perception. Her belief that sensory ideas come from objects which they wholly resemble is now shown to be not just open to doubt but unjustified, and not just unjustified but likely (as the sun example shows) to be false. The meditator can no longer describe her habitual belief as ‘highly probable’, more reasonably believed than denied, as she did following the sceptical arguments of the First Meditation. There, reasons for doubting her habitual opinions co-existed with what she still regarded as good reasons for believing them; now, her reasons for holding this habitual belief have evaporated under scrutiny.

We are now in a position to see how withdrawal from the senses, pursued in the Second and Third Meditation, enables Descartes to expose and criticize the grounds for the Aristotelian belief that objects transmit their likenesses to us when we sense them. However, the meditator has yet to be introduced to the Cartesian account of the way in which the senses contribute to our knowledge of the physical world. Earlier I claimed that the main goal of Descartes’s anti-Aristotelian, pro-physics

campaign is not to persuade the meditator to abandon sensible qualities, but to persuade her of his anti-Aristotelian account of the epistemic role of the senses. To see how this is achieved, we must turn to the Sixth Meditation.

#### 4 What Nature Teaches: The Epistemic Role of the Senses

Early in the Sixth Meditation, the meditator decides to consider the mode of thought she calls sensing, to see whether this can provide the basis for a ‘sure argument’ for the existence of material things (AT VII 74, CSM II 51). She reviews the Third Meditation critique, recalling that:

As for the reasons for my previous confident belief in the truth of things perceived by the senses, I had no trouble in refuting them. For since I apparently had natural impulses towards many things which reason told me to avoid, I reckoned that not much trust should be placed in what I was taught by nature. And despite the fact that the perceptions of the senses were not dependent on my will, I did not think that I should on that account infer that they proceeded from things distinct from myself, since I might perhaps have a faculty not yet known to me which produced them. (AT VII 77, CSM II 53-4)

In the Third Meditation, the meditator identified two reasons for her habitual belief that sense perceptions come from external things which they resemble: that nature teaches her to think this (she has a spontaneous impulse to believe it), and that the perceptions do not depend on her will (AT VII 38, CSM II 26). She rejected them for the reasons reviewed here: natural impulses are untrustworthy, and ideas not under the control of her will might yet originate in her. Now, in the Sixth Meditation, the involuntariness of sense perceptions and the natural impulse to believe in their external origin are put to work to produce a ‘sure argument’ for the existence of material things. This argument plays a significant role in advancing Descartes’s anti-Aristotelian account of the physical world and the way in which we know about it.

The ‘sure argument’ follows the well-known passage arguing that the mind is a substance that thinks and is not extended, while body is a substance that is extended and non-thinking. The meditator begins by reflecting that she can clearly and distinctly understand herself as a whole without the faculties of imagining and sensing. However, she cannot understand those faculties as existing except in an intellectual substance, because

intellection [*intellectionem*] is included in their essential definition [*formali conceptu*], from which I perceive that they are distinguished from me as modes are from a thing [*ut modos a re*]. (AT VII 78, CSM II 54, translation altered).

Sensing and imagining were conceived of as forms of thinking back in the Second Meditation (AT VII 28-9, CSM II 19). Since their essential definition or formal concept includes thought, they can be understood only as existing in a thinking substance. Descartes now has the meditator reason to the converse claim: that only faculties whose definition includes intellection or thought can exist in a thinking substance. She reflects that the faculties of changing shape or position cannot exist in an intellectual substance, only in an extended one, since the conception of these

includes extension, but nothing intellectual (AT VII 79, CSM II 54-5). This converse claim is now put to use in the argument for the existence of matter.

The meditator reflects that she has a passive faculty of sensing, of receiving and recognising ideas of sensible things; but this could have no use if there were not also some active faculty which brought about these ideas. In the Third Meditation, she could not see how to exclude the hypothesis that this faculty lay within herself. Now, equipped with a greater knowledge of her own nature, she rules this out on the grounds that the faculty of producing sensory ideas presupposes no intellection, and that the ideas in question are produced without her co-operation, and even against her will (AT VII 79, CSM II 55). Since the faculty of producing sensory ideas presupposes no intellectual or voluntary act on the meditator's part, it cannot exist in her as a thinking substance.

The meditator now knows that the faculty of producing sensory ideas lies in some substance distinct from herself. This substance can cause the ideas only if it contains, either eminently or formally, all the reality existing objectively in the ideas themselves. But this still leaves three alternatives. The cause might be corporeal substance, which would contain formally the reality present in sensory ideas, or it might be God himself, or some creature more noble than body, either of which would contain the requisite reality eminently (AT VII 79, CSM II 55). The second and third alternatives are ruled out on the grounds that God has given us a great propensity to believe that sensory ideas are sent from corporeal things, and no faculty for recognising God or something nobler than body as their source (AT VII 79-80, CSM II 55). Given this, God would be a deceiver if these ideas were sent from somewhere other than corporeal things (AT VII 80, CSM II 55). Since God is no deceiver, corporeal things must exist.

This argument appeals to a principle made explicit in the paragraph immediately following: the principle that since our creator is not a deceiver, there cannot be any falsity in our opinions 'which cannot be corrected by some other faculty supplied by God' (AT VII 80, CSM II 55-6). The veracity of our creator is not incompatible with our falling into error, as the Fifth Meditation makes clear, but it is incompatible with our falling into incorrigible error. However, the argument does not appeal to this principle alone; it also appeals to the fact that God has given us a positive inclination, a 'great propensity', to believe that sensory ideas come from bodies. The meditator could not trust her natural impulse towards this belief in the Third Meditation, before she knew her creator. Now that she knows God is not a deceiver, she can trust what her nature teaches.

But there is a caveat to be entered here. In the Third Meditation, the meditator described herself as having a spontaneous impulse to believe that sensory ideas came from external things '*to which they were wholly similar [omnino similes]*' (AT VII 35, CSM II 25, translation altered, emphasis added). The impulse to believe that sensory ideas *come from* external things has now been legitimized as a teaching of nature, a propensity bestowed and hence underwritten by God. But the impulse to believe that these external things are *wholly similar* to the ideas they cause has not so far been rehabilitated. As soon as he has argued that material things exist, Descartes warns that 'they may perhaps [*forte*] *not* all exist wholly [*omnino*] as they are grasped by the senses', for in many cases this grasp is very obscure and confused (AT VII 80, CSM II 55, translation altered, emphasis added). All the meditator can conclude at this point is that '*at least [saltem]* all the things that I clearly and distinctly understand

[*intelligo*] are in them, that is all those things, generally viewed, which are comprised in the objects of pure mathematics' (AT VII 80, CSM II 55, translation altered).

Clearly this conclusion takes the meditator a long way towards the mechanistic view of the world required by Cartesian physics. Indeed, if Descartes were pursuing the sceptical strategy outlined by Rozemond, it would take him all the way there. According to the sceptical strategy, withdrawing from the senses means coming to doubt the senses, and in particular to doubt that objects have the kinds of qualities they present to our senses. Once this is done, in the First Meditation, the meditator must find arguments for the existence and nature of the physical world. In the Third Meditation, she learns that one kind of qualities objects present to our senses (mechanistic qualities) are clearly and distinctly perceived, while the other kind (sensible qualities) are not; so when she argues for the existence of bodies in the Sixth Meditation, she only concludes that they exist insofar as they have first kind.<sup>12</sup> Thus the mechanistic conception of objects required by Descartes's physics is established.

However, it seems too strong to say that the purely mechanistic view of bodies is established at this point. The meditator's conclusion is tentative: *perhaps* the bodies that cause sensory ideas do not *wholly* resemble those ideas, though they have *at least* the mechanistic properties that we clearly and distinctly understand.<sup>13</sup> This wording seems specifically designed to leave open the possibility of some further resemblance between bodies and our ideas.<sup>14</sup> Moreover, such caution seems appropriate at this point in the meditator's progress. Firstly, our propensity to believe that sensory ideas are caused by corporeal things has just been used to support the conclusion that sensory ideas are caused by such things. The status of our impulse to believe that bodies *resemble* sensory ideas has not yet been determined. For all the meditator knows, this impulse might support the conclusion that bodies in some way resemble the ideas they cause; they might even have sensible qualities. Secondly, the meditator needs to know more about how the content of sensory ideas is related to their external causes. What she has learned so far is too general to enable her to determine the layout of the physical world. She knows that the corporeal things that cause her sensory ideas have properties such as extension, shape, size, number and motion, properties which she clearly and distinctly understands. In other words, her intellectual understanding of body as extended substance provides a blueprint for understanding the corporeal world. But the meditator does not yet know how to use sensory ideas to determine which shapes, sizes and motions to attribute to particular bodies. She does not know how to use the senses to discover the structure of the physical world as it actually exists.

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<sup>12</sup> See Rozemond, 'The First Meditation and the Senses', p. 24 and *Descartes's Dualism*, p. 68.

<sup>13</sup> For this reason, it seems too strong to say that the Fifth Meditation argument that extension constitutes the nature of body is intended to 'give us a definitive refutation of the commonsense claim...that bodies resemble our sensory ideas of them' (Garber, '*Semel in vita*', p. 103; see Hatfield, 'The Senses and the Fleshless Eye', p. 67, for a similar suggestion). Descartes, at least, thinks he still has to argue that we have no justification for attributing additional sensible qualities to bodies, and goes on to do so in the Sixth Meditation.

<sup>14</sup> I say 'further resemblance' because the argument for the existence of material things already exploits a claim of resemblance between sensory ideas and their causes: that all the reality existing objectively in sensory ideas must exist formally in the corporeal nature that causes them. Of course it is not immediately obvious how to read this claim; for discussion, see Kenneth Clatterbaugh, 'Descartes's Causal Likeness Principle', *Phil. Rev.* (1980) 89: 379-402.

Since her knowledge of bodies is incomplete in these two ways, the meditator goes on to ask, 'What of the other things which are either particular, for example that the sun has a certain size or shape, etc., or less clearly understood, such as light or sound or pain, and so on?' (AT VII 80, CSM II 55, translation altered). She has 'a sure hope' that she can attain the truth even here. Firstly, any falsity in her opinions must be corrigible by the use of another God-given faculty; she is incapable of incorrigible error. Secondly, since her nature is bestowed on her by a non-deceiving God, everything that she is taught by nature must contain some truth (AT VII 80, CSM II 55-6). This second point is particularly important, because it refutes her earlier thought that 'not much trust should be placed in what I was taught by nature' (AT VII 77, CSM II 53). She can put her trust in what is taught by the nature bestowed on her by God, but she must be careful to distinguish genuine from spurious teachings of nature, and to identify the truth contained in the genuine teachings.

The meditator immediately identifies some things that she is genuinely taught by nature: that she has a body with which she is intermingled; that other bodies exist in its vicinity; that these bodies are capable of affecting the mind-body unit in favourable and unfavourable ways; and that they differ in ways corresponding to the variations in her sensory ideas of colours, sounds, smells, tastes, heat and so on, though perhaps not in ways resembling these ideas (AT VII 81, CSM II 56). However, there are also

many other things which I may appear to have been taught by nature, but which in reality I acquired not from nature but from a habit of making ill-considered judgements; and it is therefore quite possible that these are false. (AT VII 82, CSM II 56).

The examples of habitual belief which Descartes goes on to give flow from the assumption identified in the Third Meditation, the assumption that sensory ideas wholly resemble their external causes. He cites the belief that spaces in which nothing stimulates our senses are empty, that heat in a body exactly resembles the sensation of heat, that the same whiteness or greenness we sense exists in white or green bodies, and that stars, towers and other distant objects have the same size and shape they present to the senses (AT VII 82, CSM II 56-7). It is evident from this list, as it is from the size of the sun example in the Third Meditation, that the assumption of resemblance that is Descartes's target is not simply the assumption that bodies have sensible qualities resembling sensory ideas. It is the assumption that they are exactly like the sensory ideas they cause; that bodies have the very shape and size they present to our senses, as well as the very greenness or whiteness they present to our senses. To assess this assumption, the meditator must clarify what is meant by saying that something is taught by nature. Descartes has her distinguish between the solely mental and solely physical aspects of her nature on the one hand, and her nature as a composite of mind and body on the other (AT VII 82, CSM II 57). The question is what her nature as a composite teaches her about things external to her body.<sup>15</sup> The

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<sup>15</sup>The meditator has earlier noted that she can clearly and distinctly understand herself as a whole without the faculties of sensation and imagination (AT VII 78, CSM II 54). She has also noted that her sensations of pain, hunger and thirst arise from the union of her mind and her body, and that the pleasantness and unpleasantness of her sensory perceptions of external bodies show that the union can be affected by those bodies. The idea that sensation (and imagination, see AT VII 73, CSM II 51) belongs to a mind insofar as it is combined with a body is thus present in the background.

answer is that it teaches her to pursue what induces pleasurable sensations and to avoid what induces painful sensations; these sensations show that the external objects which induce them are capable of affecting the mind-body composite in favourable and unfavourable ways. But it does not teach her to draw conclusions about external objects from sensory ideas before the intellect has examined the matter (AT VII 82, CSM II 57). (This is what happens in childhood, in Descartes's view.) Instead, the meditator reasons, 'knowledge of the truth about such things seems to belong to *the mind alone* [*ad mentem solam*]', not to the composite (AT VII 83, CSM II 57, emphasis added).

Descartes's wording here echoes the passage in the Second Meditation where the meditator discovered that the piece of wax is perceived not by the senses or imagination, but by 'the mind alone [*sola mente*]' (AT VII 31, CSM II 21). There she realised that her understanding of the wax as an extended body derived not from the senses or from the imagination, but from the intellect—the mind alone, as contrasted with the faculties belonging to the mind-body composite. It is the intellect that distinguishes the wax as extended thing from the outward forms it presents to the senses (AT VII 32, CSM II 22). In the Second Meditation, Descartes contrasted 'what the eye sees' with 'what the mind judges'; we judge that the wax is there from its colour and shape (which, presumably, we sense), we do not see that it is there with our eyes alone. He now exploits a similar contrast in examining the case of the distant star:

although a star has no greater effect on my eye than the flame of a small light, that does not mean that there is any real or positive propensity [*propensio*] in me to believe that the star is no bigger than the light; I have simply made this judgement from childhood onwards without any rational basis. (AT VII 83, CSM II 57, translation altered)

Knowledge of the underlying structure of the physical world, including the size and shape of external bodies, belongs to the mind or intellect alone. So although we have since childhood made the assumption that knowledge of this structure can simply be read off sensory ideas, we are wrong to do so. The impulse to affirm that bodies wholly resemble sensory ideas is not a real propensity ('*propensio*') bestowed by God, like the propensity to believe that sensory ideas are caused by bodies; it derives solely from habit. Doubtless it would be helpful if Descartes had said more about how cases of habitual belief are to be discriminated from cases of propensity to believe. But at least we can see how in the case of the size of the star, like the case of the size of the sun, we are able to correct our habitual error by the use of our faculty of reason. As Descartes noted in the Third Meditation, we can correct our habitual judgement about the size of the sun using astronomical reasoning (AT VII 39, CSM II 27).

The point Descartes seeks to emphasise through the examination of these cases is a point about the epistemic roles of the intellect and the senses. Sensory perceptions are given to us to inform the mind of what is beneficial or harmful for the mind-body composite. To use them as touchstones for immediate judgements about the essences of external bodies, to think that the underlying structure of the world can simply be read off sensory perceptions, is to misuse such perceptions (AT VII 83, CSM II 57-8). The naïve-cum-Aristotelian belief that external things are just as they appear to our senses, that they wholly resemble sensory perceptions, is a rationalisation of this habit of misusing sensory perceptions as touchstones for

immediate judgements. The beliefs that the sun is small, that heat in a body resembles the sensation of heat, that spaces in which nothing stimulates our senses are empty, are acquired through this habit of using sensory perceptions uncritically as a basis for rash judgements about external things. When the intellect—the mind alone—examines such habitual beliefs, we discover that there is no convincing argument for supposing that there is something in the fire that resembles the sensation of heat (AT VII 38, CSM II 26), any more than there is a convincing argument for supposing that distant stars are small or that spaces where nothing stimulates our senses are empty. A body which produces sensations of heat simply differs in some way from a body which does not; and a space in which nothing stimulates our senses is just that (AT VII 83, CSM II 57). To judge that the body differs by possessing a quality which resembles the feeling of heat, or that the space contains no body, is to make an ill-considered judgement which is not supported by reason.

We can now identify what Descartes regards as the mistake that is made by those who affirm that the world is just as it appears to our senses. Their fundamental error is not that of assenting to obscure and confused ideas of sensible qualities, but that of mistaking the epistemic roles of the senses and the intellect. The senses are given to us as guides to benefits and harms; they are not reliable guides to the essential natures of external bodies. Thus the naïve-cum-Aristotelian view that objects wholly resemble our sensory ideas is misguided not only because it leads to the attribution of sensible qualities to bodies, but also—and more importantly—because it stems from a false view of the epistemic role of the senses, one which assigns to them functions which properly belong to the intellect. It is by allowing the senses to usurp the functions of the intellect that the meditator is guilty of ‘perverting the order of nature’, as Descartes describes it (AT VII 83, CSM II 57, translation altered).

## **5 Withdrawal from the Senses and Cartesian Physics**

How does the withdrawal from the senses prompted by the First Meditation doubt help to lay the foundations for Cartesian physics? That is the question with which we originally began. On the account of Descartes’s strategy developed here, withdrawing from the senses means ignoring and discounting past and present sensory experience. As a result of withdrawing from sensory images, the meditator learns in the Second Meditation to form clear and distinct intellectual perceptions; and by comparing these with her previous belief that external objects as wholly similar to sensory ideas, she realises that it was not based on clear perception, as she thought. The critique of her belief in the Third Meditation reveals that she has no good reason for supposing that sensory perceptions are caused by external objects which they wholly resemble. In the Sixth Meditation she finds good reason to believe that sensory perceptions are caused by external objects with mechanistic properties. But there is still no good reason to suppose that these objects are just as they appear to the senses; sensory perceptions are intended as guides to the ways in which they can affect the mind-body composite. Such perceptions must be interpreted by the intellect before they can yield knowledge of the true nature of the physical world.

As a result of withdrawing from the senses, the meditator learns that the physical world is not just as it appears to our senses. This corrects naïve-cum-Aristotelian errors which conflict with Descartes’s physical views: for example, the meditator will no longer assume that empty space contains no body. But more importantly, she arrives at a new understanding of the epistemic roles of the senses

and intellect; and this serves Descartes's physics and corrects naïve-cum-Aristotelian errors in a more fundamental way. The meditator comes to see how to use the senses and intellect to arrive at a true understanding of the physical world. Our knowledge of the fundamental nature of that world does not come from the senses, but from the clear and distinct intellectual idea of extension. But this idea cannot tell us which particular configurations of extension exist around us, nor which effects they produce; although we cannot determine the true size of the sun simply from our sensory idea of it, we cannot determine it without information derived from the senses. Sensory perceptions contain information about the nature of the bodies around us, but in an obscure and confused form. So although the nature of these bodies cannot simply be read off sensory perceptions, the intellect can work this out using information extracted from them. This is the task of the Cartesian physicist.

One obvious way in which the naïve-cum-Aristotelian conception of the world differs from that of Descartes is over the nature of physical objects. According to the naïve view, objects have sensible qualities resembling our idea of them; according to Descartes' view, they are simply configurations of extension. This contrast is familiar to us as an instance of the contrast between the manifest and the scientific image of reality, and this makes it tempting to see Descartes's attack on the senses as essentially an attack on sensible qualities. But Descartes is not simply concerned to use withdrawal from the senses to withdraw sensible qualities from the world. Firstly, the idea of corporeal nature as extension which provides the meditator's new understanding of the physical world is innate in the intellect, not derived from the senses; and the mind must be drawn away from its preoccupation with the senses before this idea can be discerned (AT VII 64, CSM II 44-5). Secondly, the moral of the reassessment of the epistemic role of the senses in the Sixth Meditation is not that we should endorse sensory ideas of mechanistic qualities and reject sensory ideas of sensible qualities, but that we should recognise that it is the intellect, not the senses, which discerns the truth about external bodies. The intellect uses its innate idea of a body as a configuration of extension to interpret sensory perceptions; it does not extract its idea of the fundamental nature of bodies from sensory perceptions. The order of nature is restored when the meditator who began with the view that the senses are the source of truth (AT VII 18, CSM II 12) finally learns that knowledge of the truth belongs to the intellect alone (AT VII 82, CSM II 57).<sup>16</sup>

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