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 Phil 103
 Modern Philosophy

The Body's Role in Cartesian Cognition

The Crude Reading: Introduction

Fodor summarizes Descartes' view of how the external world relates to our internal representation of the world as "how the world is makes no difference to one's mental states" (Fodor 64). Fodor thought Descartes presented the mind like a Turing machine, where the machine reacts to the data provided on the clicker tape. In this analogy, there are "oracles" that can enter new information onto the tape, which are analogous to the senses. In this Turing machine mind, "the bearing of environmental information upon such processes is exhausted by the formal character of whatever such processes whether what the oracles write on the tape" (Fodor 65). The truth and other semantic properties of what the oracles write on the tape do not affect how the Turing machine mind reacts. Our senses could accurately describe the world, or they could be constantly deceived by an all-powerful demon. Nothing about the external world is thought to correctly reach our minds, and all information from the senses and the body is disregarded.

This view is most obvious in Meditation One, where the meditator rids herself of "the large number of falsehoods that I had accepted as true in my childhood and the highly doubtful nature of the whole edifice that I had subsequently based on them:" the roughly Aristotelean view that the world can be best known from our senses. Most famously, the meditator even doubts seemingly obvious things like she's "sitting by the fire, wearing a winter dressing-gown, holding this piece of paper in my hands, and so on" (CSM II 13). The meditator reasons that she might be dreaming: "How often, asleep at night, am I convinced of just such familiar events — that I am here in my dressing-gown, sitting by the fire — when in fact I am lying undressed in

bed!” (CSM II 13). In the First Meditation, every piece of certainty from the senses is thrown out, even the certainty of her own body and the certainty of geometric principles. The meditator realizes that there is no former belief “about which a doubt may not properly be raised,” and she is like “a prisoner who is enjoying an imaginary freedom while asleep” who “dreads being woken up and goes along with the pleasant illusion as long as he can” (CSM II 15).

Fodor, and the many scholars who have interpreted Descartes similarly, have correctly grasped the overarching project of the Meditations: to shift the basis of certainty from information gathered by the senses to the reflections of the intellect possessed by the mind. Because of how radical this project is, the meditator frequently overstates her disregard for the senses, such as creating a malicious demon in the First Meditation, or after showing in the wax argument that “even bodies are not strictly perceived by the senses or the faculty of imagination but by intellect alone,” she must “stop here and meditate for some time on this new knowledge I have gained, so as to fix it more deeply in my memory” (CSM II 22, 23). It is not until the second half of Meditation Six that the meditator attempts to revive the senses and value what they inform us about the external world. Simmons calls this common reading of Descartes “de-humanizing,” since it seems that Descartes wants to reject our embodied nature entirely. Instead, he focuses exclusively on our minds and tacks on our bodies as an afterthought, a framework which “is nothing like our own human experience” (Simmons 2010, p. 53).

While Descartes is a dualist, regarding our minds and bodies as distinct things, his philosophy is not as de-humanizing as scholars like Fodor make it out to be. There have been recent attempts to re-humanize Descartes, all of which give more sensitive readings of how Descartes treats the body and how much importance he is willing to give it in terms of how we understand the world. In this paper, I am going to examine three rehabilitative scholars. After a

preliminary look at the mind/body union, I will begin with Simmons, who offers a broader reading of the senses and their importance in self-preservation based on the Sixth Meditation. Next, I will look at Wheeler, who looks at how the structure of the body itself factors into processes normally thought of as cognitive, offering a stronger claim about the importance of the body to our understanding of the world. Then, I will move to Hatfield, who pushes the importance of the body even further than Wheeler, emphasizing the role of the brain's structures and institutions of nature. Finally, I will use Descartes' theory of animals to push for the most involved role of the body in how we understand the world.

The Mind/Body Union

After the meditator frees herself from the whirlpool that Meditation One left her in by affirming "I am, I exist," she moves on to define that I as "a thinking thing" (CSM II 18). She expands this definition to "a thing that doubts, understands, affirms, denies, is willing, is unwilling, and also imagines and has sensory perceptions" (CSM II 19). While the meditator lists imagination and sensory perceptions in this expanded definition, after interrogating those in the latter half of the Second Meditation, she affirms that the defining aspect of her mind (of herself at this point) is her intellect (CSM II 22).

While a mind is pure intellect, a Cartesian body is defined in distinction as "an extended, non-thinking thing," since the "clear and distinct conception of them includes extension but does not include any intellectual act whatsoever" (CSM II 54, 55). Incredibly complex bodies, like the human body, are thought of as complex machines: "I might consider the body of a man as a kind of machine, equipped with and made up of bones, nerves, muscles, veins, blood, and skin in such a way that, even if there were no mind in it, it would still perform all the same movements as it now does in those cases where movement is not under the control of the will or, consequently, of

the mind” (CSM II 58). The body is composed of a variety of objects with different extensions that interact and intermesh in a complex way, like the gears of a clock, to perform a set of actions, like breathing or digestion.

These theories of minds and bodies seem to be entirely foreign to the human experience. Simmons points out that “if the world were populated by Cartesian minds and bodies, it would be populated by angels and machines,” but it is not; it is populated by human beings (Simmons 2010, p. 57). How our immaterial, immutable, eternal minds are connected to our extended bodies is a serious problem for Descartes. The meditator describes the union of the mind and the body: “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” (CSM II 56). We know this is the case because we do not experience *our* bodies like other bodies. If I get cut, I do not intellectually know this to be the case, but rather, I *feel* pain, I *feel* the cut. The meditator recognizes “the sensations of hunger, thirst, pain, and so on are nothing but confused modes of thinking which arise from the union, and, as it were, intermingling of the mind with the body” (CSM II 56).

These sensations show that we are not simply angels stuck in machines, but that there is what Simmons calls a “peculiar metaphysical union of the two” (Simmons 2010, p. 58). This union is quite a mystical concept, even for the meditator, who seems to find herself at a loss for words when attempting to describe it. This is understandable. Descartes spends so much of his project making minds and bodies really distinct. When they come together, there are obvious difficulties. In a letter to Princess Elizabeth, Descartes put the problem well: “It does not seem to me that the human mind is capable of forming a very distinct conception of both the distinction between the soul and the body and their union; for to do this it is necessary to conceive them as a

single thing and at the same time to conceive them as two things; and this is absurd” (CSM III 206). However, for the scope of this paper, I will simply take Descartes’ word on the mind/body union.

Simmons

In the context of this intermingled union, our senses are not so simply discarded as they seemed to be in the First and Second Meditation. Now that they have been replaced by the intellect as the source of a firm and lasting foundation of science and true understandings about the world, the meditator can reintroduce them in a much smaller role: “to inform the mind of what is beneficial or harmful to the composite of which the mind is a part” (CSM II 57). After the meditator acknowledges the nature of her mind/body union, she can’t exclusively concern herself with the true nature of things but recognizes that she is “also taught by nature that various other bodies exist in the vicinity of my body and that some of these are to be sought out and others avoided” (CSM II 56). While she is essentially a mind, her mind is now intermingled with a body, and is newly susceptible to various things that could harm her body. She must now worry about what “God has bestowed on me as a combination of mind and body” (CSM II 57). This doesn’t have anything to do with scientific judgments like “space in which nothing is occurring to stimulate my senses must be empty; or that the heat in a body is something resembling the idea of heat which is in me,” which can only be made by the intellect (CSM II 56). The senses do not make a full rehabilitation to their status at the start of Meditation One, but teach her limited nature as a mind intermingled with a body “to avoid what induces a feeling of pain and to seek out what induces feelings of pleasure” (CSM II 57).

Simmons calls this resolution a “division of cognitive labor in the embodied human mind,” where the intellect is responsible for guiding us to the essential nature of things while the

senses serve as our “best guides to embodied self-preservation” (Simmons 2014, p. 268). The senses do not reveal the true natures, but they allow us to make judgements that some things are “bad and require attention,” whereas with the intellect alone, we would simply understand their material interaction (Simmons 2014, p. 268). The meditator further claims that the structure of the mind/body union is created in such a way as to foster this self-preservation, where the nerves alert the mind to get rid of pain, instead of making the mind aware of the actual motion occurring in the brain, the part of the body that is in pain, or any of the regions that the nerve also runs through. This is because “there is nothing else which would have been so conducive to the continued well-being of the body” (CSM II 61).

While the senses are rehabilitated to the point that “the exaggerated doubts of the last few days should be dismissed as laughable,” Simmons lays out a highly imbalanced division of cognitive labor. It seems that the body and brain are only responsible for transmitting sensory data to the mind and coding whether it is good or bad to the body, before the mind must then interpret it. Regardless, Fodor’s claim that the external world makes no impact on our mental states is already dismissed, since the external world and the way the senses present it to the mind affect our mental states, leading us to protect our bodies in various ways. However, at points, the meditator suggests that the body is responsible for more than mere self-preservation. For example, the body alone is responsible for all the movements “not under the control of the will or, consequently, of the mind” (CSM II 58). How much does this entail? Finally, how much work does the body do in deciphering sensory data, and how much is left for the mind?

Wheeler

Wheeler is willing to give the body credit for more. He thinks of the body as composed of “special-purpose subsystems,” which are complex machines able to produce “appropriate actions

only within some restricted task-domain” (Wheeler 31). Giving the body the smallest role in interpreting sensory data, we could think of these subsystems as lookup tables, where, when exposed to certain stimuli, they then send the appropriate signal to the brain, which is then communicated to the mind through the pineal gland. However, Descartes suggests that “as animal spirits flow through the neural tubes, they will sometimes modify the physical structure of the brain around those tubes, and thereby alter the precise effects of any future sensory stimulations” (Wheeler 31).

This adaptive nature gives the body’s structure a great deal more importance in interpreting the external world. The body isn’t a stagnant lookup table, but a constantly improving tool, capable of learning and remembering. In the *Treatise on Man* Descartes credits the body with “the imprinting of the idea of these qualities in the organ of the ‘common’ sense and the imagination, the retention or stamping of these ideas in the memory, the internal movements of the appetites and passions, and finally the external movements of all the limbs” (CSM I 104). Now, instead of only being responsible for informing our mind of pain when we get cut, which a lookup table could do, our body’s structure could potentially be responsible for something as complex as recognizing what we were looking at — something it learned and remembered to the point that the mind was no longer required.

We see something similar to this kind of non-thinking recognition in the Second Meditation: “if I look out of the window and see men crossing the square, as I just happen to have done, I normally say that I see the men themselves, just as I say that I see the wax. Yet do I see any more than hats and coats which could conceal automatons? I judge that they are men” (CSM II 21). Frequently, when we see things, we think we know what we are looking at without using our minds; we don’t need to judge. This non-thinking judgement, a habit the meditator is

trying to discourage herself from making, could be explained by our brain structure adapting and remembering what men look like.

However, Wheeler thinks that the fundamental element required to interpret and respond to the external world is “access to general-purpose reasoning processes,” which are in the mind (Wheeler 36). These reasoning processes are juxtaposed to the body’s special-purpose subsystems. The body must continually specialize, where advancement comes with a more niche purpose, while the mind is able to develop processes to work under any context. At points, this can mean we do things worse than animals, who Descartes claims have no minds, because “a clock tells the time better than our judgement does,” but a clock can only tell time, and our judgment can do almost everything (CSM I 304).

With this relationship between general-purpose reasoning in the mind and special-purpose systems in the body, Wheeler develops a theory of how the body reacts to the external world, where physical objects are first transmitted by the senses into the brain and then into the mind. There, sensations arise that represent the external objects. These sensations are influenced by the body’s special-purpose subsystems. The mind then uses its general-purpose reasoning to understand these sensations, creating mental representations which are then translated back through the pineal gland, through the brain, and used to move our body (Wheeler 43). While both the body’s special-purpose systems and the mind’s general-purpose reasoning come into play in this picture of cognition, in almost every case, the mind’s general-purpose reasoning is involved and responsible for how we react to the world. While more expansive and detailed than the immediate self-preservation account given by Simmons — the body is now adaptive, responsible for memory and common sense, and plays a crucial role in the passions —

the body's role is still quite limited, as the mind must be involved in all interpretations and responses to the external world.

Hatfield

While Wheeler sees the body's special-purpose subsystems as adaptive and more complex than a lookup table, he still places almost all the burden of understanding the world on the mind. However, there are reasons to think that the body's structure does a significant amount of the work in interpreting sensory data before it reaches the mind. The meditator mentions that "any given movement occurring in the part of the brain that immediately affects the mind produces just one corresponding sensation" (CSM II 60). In this case, the signal the brain gives the mind to communicate a pain in the foot could have indicated all kinds of things (CSM II 60). It could have indicated pain elsewhere along the path of the nerve, a motion in any other part of the body, or "something else entirely" (CSM II 61). And yet, the mind produces only one correct sensation — the brain's movement somehow signals to the mind what is occurring in the body. Descartes calls this miraculous correspondence "an institution of nature" (Hatfield 456).

Descartes' clearest example of this relation of the brain structures' signals to sensory perception is with "natural geometry." In the *Treatise on Man*, Descartes describes how the eyes determine the distance from objects they're observing: "This geometry involves the triangle of convergence, formed by the distance between the eyes and the angles needed for the eyes to focus on a single point in the field of view" (Hatfield 459). Like a man in a dark room holding two sticks in front of him to triangulate the position of the objects in front of him, he imagines the eyes creating a similar triangle. Descartes imagines the process functioning through the physical structure of the pineal and lean gland, where "for a convergence point farther away, the gland is more upright. For a nearer convergence (and accommodation), the gland leans forward"

(Hatfield 460). The brain structures of the relative leaning of the lean and pineal gland create a signal that the mind correlates to the distance of an object. Combined with our mind, these signals “produce an experience of things in a direction at a distance” (Hatfield 460). The body’s structure, particularly the brain’s, carries “a significant load in accounting for sensory perception” (Hatfield 461). Further, without these institutions of nature in the body, the mind could not understand data from the senses.

Hatfield’s reading of brain mechanisms doesn’t contradict Wheeler’s theory of mental processes in many substantial ways. Most importantly, it doesn’t deny that the body sends signals to the mind, which interprets them in most situations. Hatfield’s theory doesn’t do anything so radical as to deny that the mind is responsible for most of our cognitive ability, such as general problem solving or thinking. Further, Hatfield’s reading of Descartes maintains Wheeler’s division of the body’s special-purpose subsystems and the mind’s general-purpose reasoning. The brain’s structures for natural geometry can be thought of as a special-purpose subsystem that can only do one thing. In strange circumstances, like seeing a straight stick seemingly bend when placed into water, the body’s special-purpose subsystem leads us astray, and the mind’s general-purpose judgement must step in to correct our understanding. However, the significance of the brain structure’s linkage to the mind through institutions of nature shows how crucial these physiological processes are to understanding the world around us, giving the body’s structure a more significant role. With the brain structure’s greater role, the amount of work the mind must do to appropriately respond to external conditions is frequently trivial. Further, without the brain’s structures, the mind would frequently be at a loss regarding what was happening in the external world. Fodor’s claim now seems absurd.

Consider the Animals

I have attempted to present the three theories of how much credit the body should be given concerning how we understand and interact with the world. Simmons points out that the body and the senses are responsible for immediate self-preservation. Wheeler pushes this further and considers the body as special-purpose subsystems, responsible for things like memory, common sense, and many bodily actions. Hatfield goes even further, arguing that the brain structure and institutions of nature are crucial for the mind to interpret and respond to the external world. I want to conclude this essay with a brief foray into animals, and one final argument for the importance of the body.

Descartes famously thought animals were machines: animals are just a body with no mind. Their bodies are composed of organs, complex physical objects, which interact with one another “every bit as naturally as the movements of a clock or other automaton follow from the arrangement of its counter-weights and wheels” (CSM I 108). By explaining their actions through this complex bodily assembly, Descartes can claim that animals don’t have souls (or minds), breaking from the Aristotelian tradition of plants having a vegetative soul and animals having a sensitive soul. Instead, “it is not necessary to conceive of this machine as having any vegetative or sensitive soul or other principle of movement and life, apart from its blood and its spirits” (CSM I 108).

Because this is the case, we should be able to give our body *alone* credit for at least as much as what the most complex animals can achieve. Scientists have found that chimps can develop tools to better hunt and scavenge, have developed complex social rituals for processes like mating, and have even been taught basic sign language (Nishida). Less scientifically, we develop real relationships with animals. Donna Haraway writes that when training a dog, “both dog and handler have to be able to take the initiative and to respond obediently to the other. The

task is to become coherent enough in an incoherent world to engage in a joint dance of being that breeds respect and response in the flesh, in the run, on the course” (Haraway 62). This is a serious relationship, one built on mutual recognition and understanding. It seems to require real passions and some minimum level of thought. Now, traits like some general problem solving, innovation, passions, and limited thought should all be able to be credited to the body alone, without having to be controlled by the mind.

This is not to say that animals don’t lack many essential parts of human cognition, like speech and advanced rational thinking. I don’t disagree with Descartes that “there is no other animal, however perfect and well-endowed it may be, that can [use language]” (CSM I 140). However, animals seem capable of some critical thinking and passions, and, most crucially, they can do it without a rational mind controlling and interpreting the bodily signals. Descartes describes our mind’s place in the brain having a “principal seat in the brain, and reside there like the fountain-keeper who must be stationed at the tanks to which the fountain's pipes return if he wants to produce, or prevent, or change their movements in some way” (CSM I 101). But animals have no mind to occupy this role.

This doesn’t mean that humans function in this way — Descartes clearly states that the mind is the final arbiter of almost all decisions made — but it does suggest that much of the mind’s decision-making process is fairly trivial and frequently unnecessary. While far from conclusive, thinking about what animals can achieve as only machines supports giving the body a lot of credit in understanding the world. This theory goes far enough to suggest that basic problem solving, passions, and some limited thought could all be credited to the body’s structure.

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