Macalester Journal of Philosophy

Volume 9
Issue 1 *Fall 1999*

Article 6

3-4-2011

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Macalester Journal of Philosophy — Vol. 9, 1999

SAVING DESCARTES' SOUL: A BRIEF DEFENSE OF THE DUALIST PERSPECTIVE IN PHILOSOPHY OF MIND

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> "How can you go on talking so quietly, head downwards?" Alice asked, as she dragged him out by the feet, and laid him in a heap on the bank.
>
> The Knight looked surprised at the question. "What does it matter where my body happens to be?" he said. "My mind goes on working all the same."
>
> — Lewis Carroll, *Through the Looking Glass*

Since the earliest accounts of recorded history, humanity has had the belief that there is more to its existence than the body. Whether it's called jiva, atman, ka, or soul, this belief in an immaterial self has exerted an influence which extends into the heart of religion to this day. Of course, that is not to suggest that the debate between the immaterial/material nature of the self is necessarily a spiritual one. Indeed, parapsychology aside, one of the most extensive arguments to arise from this potential dichotomy is that of the mind/body problem. While this argument can be traced back, like most of the Western canon, to Plato and even in part to the Pre-Socratics, it was not formalized until the work of René Descartes, in which he draws the distinct separation of the soul from the body. According to Descartes, the body is a material thing, spatially extended and unthinking, and is essentially no different than the rocks, trees, and animals around us. He considers the soul, on the other

hand, to be what most today would term the mind—that which is unextended but capable of thought.

While seemingly quite simple, this belief poses a considerable problem, perhaps illustrated best by a brief example. It has long been shown that brain damage can result in an impairment of one's mental faculties. Recent studies show, however, that in many cases purely cognitive therapy for individuals suffering from obsessive compulsive disorder (OCD) will actually cause a reduction in size of the patient's basal ganglia, a part of the brain associated with OCD. If that which comprises consciousness is indeed unextended, how are these interactions possible?

Descartes attempted to answer this question through the process of interactionism, the belief that the mind and body are joined in the brain and through that connection each is capable of influencing the other. Unfortunately, his theory fails to adequately explain how this is possible and, with the development of more advanced neurobiology, both his interactive theory as well as his original belief in mind/body dualism have been largely passed over for more empirically-based explanations of the thought process. While Cartesian interactionism has little value as anything other than an interesting argument and an historically significant theory, to discount the heart of the dualist perspective entirely is to ignore a very valid point. Currently, scientific theory alone is insufficient to explain the complexities and intricacies of the thought process. To do this, one must first reclaim the very heart of Cartesian dualism: the immaterial thought.

Before we can so blithely pass over Descartes' explanation, however, a brief summary of it is in order. Cartesian interactionism is the theory that the mind and body are capable of interacting with one another through the pineal gland, a small uvula-shaped gland near the brain's center. According to Descartes, the pineal gland could be moved by the soul to direct the flow of animal spirits throughout the body by way of the nerves. These animal spirits, or tiny particles, would then cause action in the body before returning to the brain where they would press against the pineal gland, informing

the soul of information from the sense organs as well as the body's condition.

From a modern perspective, it is easy to see that such a theory rests on a fallacious understanding of both physiology and neuroscience. It should surprise no one that animal spirits do not, in fact, exist and by no means does the pineal gland act as any kind of a neural rudder. More importantly than that, however, despite Descartes' very intricate and thorough description of how he believed the body and mind influenced one another, he nonetheless failed to address the very question posed by the mind/body problem: how the unextended mind could possibly interact with the extended body. While he posed that this interaction occurred in the pineal gland, and that the gland's motion resulted in the passing of information between the body and soul, he never wrestled with the question of how an immaterial volition exerts any kind of force on a material gland. Essentially, Descartes' explanation of the mind's interaction with the pineal gland was the philosophical equivalent of explaining how an x-ray machine works by stating that one pushes a button and an image of the subject's skeletal system appears. The important information is not that the image appears, but what goes on between the press of the button and the appearance of the image.

Clearly, dualism's opponents have very good reason to discount Descartes' theory of mind/body interactionism. Their error occurs, however, in taking this as cause to discount the dualist philosophy at the heart of Descartes' thinking—that there is indeed an immaterial aspect to thought marking it as distinct from the body. Simply because metaphysical knowledge of how the mental and physical interact is lacking does not necessitate that the mind does not exist. Despite this fact, the belief that our conscious experience is, at its heart, no different from our physical experience has become quite prevalent with the rise of neuroscience.

This school of thought is known as material monism and is founded on the belief that everything, be it a physical or mental event, can or will be explained purely through the material interactions of chemistry and physics. While in

agreement on this point, the individual philosophies that comprise this school pose distinctly different arguments as to why this is so. One of the most challenging of these objections raised to the dualist perspective is that of reductive materialism. This philosophy contends that mental phenomena can in fact be reduced to physical phenomena, much the same way that the properties of a substance can be reduced to claims about the properties of the molecules that make it up.

Before one can dispute the claims of the reductionist, however, one must first refute the more extreme claims of eliminativism. A form of monism that did not truly establish itself until the twentieth century, eliminativism is the nihilist philosophy which holds that mental phenomena may not actually exist. An interesting, though seemingly desperate, attempt at solving the mind/body problem, eliminativism holds that our perception of having beliefs, emotions, hopes, thoughts, and desires is flawed. Perhaps stated most plainly by Paul Churchland, eliminativism holds that

> our common-sense conception of psychological phenomenon constitutes a radically false theory, a theory so fundamentally defective that both the principles and the ontology of that theory will eventually be displaced, rather than smoothly reduced, by completed neuroscience. . . (Churchland, 67).

This raises an interesting question. If one cannot talk of thinking or believing, how will such perceived experiences be communicated? Problematic to more than just everyday speech, by denying existence to those pieces of information that seem to challenge it, eliminativism forms a hypothesis that, like Aristotle's ether, is difficult to refute. Denied as evidence, thoughts, beliefs and feelings cannot form the basis of a valid argument against eliminativism. Indeed, the only manner that can be used to object to it is one in which mental phenomena are suggested through a purely physical means, thereby necessitating their existence.

This existence can be found, however, in non-accidental patterns, or statistically significant patterns that could not be the result of chance. One of the best examples of these patterns is found in the results of standardized tests such as the SAT. Results from this test show that of the four possible choices given with each question, a statistically significant number of people will choose the correct answer. The results also show, however, that a statistically significant number of people will choose a "baited" answer, an answer that is designed to be arrived at as a result of what psychological terminology would call an erroneous thought process, such as selecting 12 as the answer to 2 + 2 * 3. Now, even if neuroscience is advanced to the point in which it can explain the process of how the perception of the question triggers the series of chemical reactions necessary for the hand to mark the correct answer, the results of "baited" answers are still unaccounted for. If the connection between the physically manifested test and the physical response was physical in and of itself, the errors would be distributed evenly between the three incorrect answers. After all, without thought, there is no explanation for why one incorrect answer should be selected more often than another. This is certainly occurring, however, for the number of "baited" answers that are chosen are statistically far more numerous than the number of "unbaited" incorrect answers that are chosen. Language, devoid of psychological terms, lacks both the words and concepts to adequately explain the cause behind the statistically significant number of "baited" answers selected. Thus, mental phenomena are required to account for the fact that "baited" answers are statistically more common than other incorrect answers, placing eliminativism in a position in which it does not seem to have an answer.

Now that mental phenomena have been established, one can proceed to address the claims raised by reductive materialism. By stating that mental phenomena can all be reduced to physical phenomena, the reductionist is asserting that while mental phenomena are very real, they can all be explained entirely through physical phenomena. Essentially, reductionism claims that while mental phenomena and

physical phenomena both exist, they are, in fact, one and the same thing. In other words, mental phenomena are a natural function of the brain.

This can be easily tested through the application of Leibniz's Law, a truism which essentially states that if $x = y$, then all that is true for x is true of y. In other words, if *Dr. Seuss = the author of The Cat in the Hat,* then all that is true for *Dr. Seuss* is true of *the author of The Cat in the Hat.* This application of synonyms being interchangeable is really only a matter of common sense, but this simple truism has a very profound effect when it is applied to the claims put forward by reductionism.

For the sake of this argument, let us define mental phenomena as those things such as thoughts, beliefs and emotions. Physical phenomena, on the other hand, are those which can be explained by the laws of physics, including such phenomena as the way in which ink holds tight to this page, the acceleration of falling bodies, and, most importantly for this discussion, the firing of neurons in the brain. It is important to note that this distinction of terms is, for the moment, being drawn only to separate different categories of phenomena for the sake of comparison, much the same way in which one might differentiate between the group "penguins" and the group "birds." If in fact the characteristics of the two are sufficiently similar, one can be equated with the other, removing the potentially artificial distinction we have drawn. In the attempt to do this, however, one comes across a point of contention between the characteristics of mental and physical phenomena that seems to violate Leibniz's Law.

This contention, which occurs on the topic of intentionality, is best stated by Franz Bretano, a nineteenth-century Austrian philosopher who first cited what appears to be a difference in the qualities of mental and physical phenomena. Bretano claims, "the reference to something as an object is a distinguishing characteristic of all mental phenomena. No physical phenomenon exhibits anything similar" (quoted in Rey, 23). Essentially, what Bretano is observing is that mental phenomena are all about something else, whether that

something else is another thought, a physical thing, or something that is entirely fictitious. A thought is never just a thought, independent of everything else. Be it a rock, a tree, a person, or a concept, a thought must be about something or it isn't really a thought at all.

This is not true in the case of physical phenomena. The rock, the tree, or the person that a thought is about isn't about anything itself. Physical objects don't need to refer to anything. Unlike mental phenomena, they are capable of simply being, without having to actually be about something else. Some would argue against this, stating that there indeed are physical phenomena that are about something. Paintings and sculpture can both be referred to as being "of" something, just as a thought is "of" another thing. This argument is fallacious, however, for the "of" in the case of painting and sculpture is referring to the property of an image to depict another thing, not to be about another thing. While similar to thought in the fact that an image cannot just be an image unless it depicts something else, an image's depiction is not quite the same as a thought's reference. Depiction is limited solely to other physical phenomena, whereas reference allows the thinker to focus on both physical and mental phenomena. An image shows, but a thought explains and feels.

One might then bring up the subject of abstract or modern art, images that are not of physical objects necessarily, but of physical color. The idea behind this style of painting is that the art is "about" a certain emotion or idea instead of a physical object. Emotions that seem to come from these paintings, however, stem not from the painting itself but from the viewer's thoughts about a given image. It is the thought that contains emotion and meaning, not the painting itself. What the artist has essentially done is the artistic equivalent of writing. In writing, ideas are not conveyed through the actual shape of black lines on paper, but through the process of applying thought to those lines. If this were not the case, one would never need to learn to read. The simple act of just looking at the letters would convey the idea in its entirety, no matter what language it was written in or what the skill of the reader was.

Thus, there appears to be a difference between the qualities of physical phenomena and the qualities of mental phenomena. Physical phenomena are capable of depicting things, but mental phenomena are required to refer to something else. Applying Leibniz's Law to these conclusions, if mental and physical phenomena are the same, as held under reductive materialism, then their qualities would also be the same. The problem of intentionality, however, shows that there is at least one quality that is not shared between mental and physical phenomena. According to Leibniz's Law, then, mental phenomena are not the same as physical phenomena, leaving the reductionist in an awkward position.

Of course, it is not so awkward a position that the reductionist does not have a potential argument. After all, Leibniz's Law is not necessarily the final word in drawing distinctions between any two things, and while it may be that intentionality is unique to mental phenomena, that still leaves open the possibility that mental phenomena are a subset of physical phenomena, complete with slight differences in characteristics. According to this model, while intentionality is an essential characteristic of mental phenomena, it is a nonessential characteristic of physical phenomena. By essential characteristics, what is meant are those characteristics that are necessary for a thing to be specifically itself. In order for a penguin to be a penguin, it is necessary that it cannot fly. In the same light, however, it is a nonessential characteristic of a bird that it cannot fly. While it is very possible that this is the case, to be a bird it need not possess that characteristic and, in this case, often possesses its opposite.

What is addressed here is the matter of specificity. As one moves down the hierarchy of categories (i.e., from genus to species), some of what was accidental to the larger group becomes essential to the smaller group as the description becomes more specific. What is important, however, is that all characteristics that are accidental at one level can be described and explained in terms of nothing but those essential characteristics that are present at the same level, and ultimately those that are present at the most basic hierarchical level.

Indeed, this process of explanation and redefinition is the very heart of reduction. So it follows then that the best way to determine whether a given phenomenon fits into an overall hierarchy (in this case, physical things) is to determine whether those characteristics that are essential to it, but accidental to the more general group of which it is a part, can be explained in terms of the essential characteristics possessed by the larger group. To do this, one must set aside the broader concept of physical phenomena and narrow the discussion to the realm of mental phenomena and brain states, or the firing of certain neurons in the brain. Indeed, this brings the issue to its most fundamental form.

Whatever conscious state an individual may happen to be in, it is marked by two specific characteristics. First of all, there will be some kind of mental phenomena occurring. Secondly, certain neurons will be firing in the brain in a pattern that has been shown to correspond to that specific type of state and mental phenomenon. It is the marked correspondence of these brain states to specific mental phenomena that has led many reductionists to the conclusion that mental phenomena are an emergent property of the firing of different neurons. What they mean by this is that while mental phenomena cannot be traced back to any specific neuron, they are the causal result of the interaction among the system of neurons. In other words, mental phenomena emerge from the interworkings of the neural system. The claim then naturally follows that mental phenomena can be reduced to the causal properties of whole systems of neurons, forming a causal reduction.

Just how strong is this claim, though? Causal reduction has not been mentioned before this point because its greatest strength lies in the fact that it typically leads to an ontological reduction, the type which is generally assumed by the very term "reduction," and is typically passed over for that more powerful claim. I say typically because there appears to be an exception to this rule when dealing with the reduction of mental phenomena. As stated earlier, a thing is only ontologically reducible if it is able to be described and explained in terms of being another thing. Causal reduction, on the other hand,

consists of the description and explanation of a thing in terms of the causal properties of another thing. By means of these definitions, let us examine the resulting descriptions of a commonly occurring mental phenomenon: happiness.

Causally reduced description:

> Happiness—the result of the interaction between firing neurons in the cortex

Ontologically reduced description:

> Happiness—the firing of neurons in the cortex

Returning then to essential and nonessential characteristics, how do these two descriptions satisfy the reductionist's need to adequately describe, and thus equate, pain in terms of the firing of neurons? Now, it is granted that the most striking characteristic of both descriptions is the dramatic simplification of the complex workings of the brain, but the faults that appear in these two descriptions are ones that could not be explained by even a completed neuroscience. One could elaborate on the specific activity of neurons in the cerebral cortex, map out the neural circuit down to each dendrite and gain a perfect understanding of neurotransmitters, yet the ontologically reduced explanation would still fail to capture the essence of happiness. A hopeful student could sit through an indescribably complex lecture on the inner workings of these neural events, but if he/she had never been happy, the student would leave the lecture hall without any greater understanding of what happiness really is. Mental phenomena simply cannot be adequately described and explained in terms of brain states. Simple as this objection is, it is one that reductionism has failed to provide a satisfactory answer to, and thus, one that renders mental phenomena ontologically irreducible to any level of neuroscience.

Of course, this still leaves open the possibility of making the weaker claim that mental phenomena are causally reducible to neural activity. While lacking the weight of an ontological reduction, if such a reduction were possible, it could potentially provide grounds for a reductionist explanation of mental phenomena. The question is, then, whether such a reduction is truly possible in this instance. Indeed, on the surface, such a reduction seems entirely feasible. After all, the warmth of the coffee in front of you, a accidental though distinctly preferable characteristic, is the result of the rapid movement of the atoms that make up the coffee and thus can be explained and described in terms of atomic motion. This is a perfectly legitimate explanation of heat. In the same light, though, it is also possible to then explain and describe the warmth of the coffee solely in terms of the atoms that comprise it. Devoid of the ontological reduction to support it, however, a strictly causal reduction seems to be insisting that the coffee's heat can be explained in terms of the movement of atoms, a causal property, without including the actual atoms themselves. This divorcing of the causal properties of a thing from the thing itself seems somewhat far-fetched in the very least, but this is exactly what is being suggested by the claim that only a causal reduction is occurring. Indeed, without the ontological reduction to give it substance, the causal reduction is nothing more than a causal relation which, after all, is the very source of the mind/body problem itself. And so, without this causal reduction to fall back on, reductive materialism is left without a means to legitimately explain or describe mental phenomena in terms of brain states.

Thus, one can see the importance of irreducible, immaterial thought to any system which hopes to solve the mind/body problem. While still fraught with the difficulty of explaining just how the mind and body do interact, the dualist perspective at the heart of Cartesian interactionism holds a great deal of value that has been passed over by many modern philosophers in search of answers more heavily rooted in empirical science. Clearly, in its current form, dualism does not offer a complete theory of mind. What it does offer, however, are the requisite

parts of such a theory, the distinctly mental and the distinctly physical. Once again, it seems that we must dig back through the cogito and breathe new life into at least a small portion of the soul Descartes originally postulated if we are to fully account for the characteristics of mental phenomena.

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