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Stirring the Pot: toward a Physical Reduction of Mental Events

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**STIRRING THE POT:
TOWARD A PHYSICAL REDUCTION OF MENTAL EVENTS**

**A thesis submitted to
Regis College
The Honors Program
In partial fulfillment of the requirements
for Graduation with Honors**

by

Dylan Jacoby

May 2006

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Introduction

Of the perennial issues that philosophers argue over, few have been quite *as* perennial as the problem of the Mind. The nature of the debate often comes in two flavors. One style, we'll call it the dualist concoction, states that there is a fundamental difference between what we call the mind and what we call the body. The body, appropriately, is the physical vessel which carries us through this world and allows us to interact with it. However, that which guides the body and the 'thinking' part of it, the mind, is something that is at once highly complex and intensely unique to the human species, but necessarily separate from the body. Oftentimes the mind is conceived as an entirely different type of substance from the body, in some cases inhabiting a different world altogether. I don't have the time or the knowledge necessary to address all of the fodder that dualists can muster, so I will focus on the classical evolution of dualism that began with Renee Descartes.

Another of the flavors in the debate over the mind is held by the materialists. Generally, the materialists believe that the hullabaloo that the dualists talk about can be reduced to the occurrence of physical events. Mental events like thinking, feeling and believing can be appropriately reduced brain events. Though not quite as dense, the body of work supporting the materialist position is too wide and varied to consider wholly, so for my purposes I will use the highly reductionist account offered by Paul and Patricia Churchland. The Churchlands believe that, not only can mental events be reduced to the physical, but that our entire way of talking about our mental events will be replaced by a matured form of neuroscience that better encompasses the affairs of our brains. Let us say

that Frank is irritable. Let us say that Mary is cranky. Given our current way of talking about things, these two emotional states are somewhat difficult to differentiate. Under the hypothetical neuroscience of the Churchlands, we would have a better way of distinguishing Frank's and Mary's emotional troubles. Oftentimes, the flavor of the materialists leaves a bitter taste in your mouth when you're done with it (flavor metaphors over, I promise).

People don't typically like being told that they're nothing but a hunk of cells, albeit an intelligent and incomprehensibly complex hunk of cells, but a hunk nonetheless. As you will see in the first chapter, the first and most popular response to this discomfort is to justify our hulking body's existence by giving it something *more*, something that means it's better than the rest of the stuff in this world. You might be able to tell by my tone that I'm not a fan of this reaction. However, I'm also not a fan of being told I'm a hulking mass of cells.

This paper will ideally be a tightrope walk between the qualities that we believe are explicitly human and the possibly realistic fact that being human might be the only thing we've got. I shall be perfectly clear here, I do *not* intend to offer my answer to the problem the mind/body distinction. Instead, I hope to provide some interesting alternatives that eliminate these (possibly) silly notions of the mind and the soul and start a discussion to this effect. I am determined to think and to hope that there is an answer to this debate that at once removes these otherworldly tendencies and preserves what it means to be a human. Again, I'm not searching for answers, I'm battling the complacency that most of us have with the idea that we have souls or minds. As David

Hume once said, truth springs from arguments amongst friends. I'm not looking to burn bridges, just make new ones.

II. Splitting Hairs...and Bodies: The Dualist Distinction

We, as humans, have always had a complex view of ourselves. Often times we take that status for granted without considering the implications behind them. The conception that I'd particularly like to address is that of the human mind (or soul, as others might refer to it). Nowadays, most philosophers have one of two conceptions of the human mind. The first class of philosopher claims that the mind is an ontologically separate thing from the human body, which is the substance-dualist position. The other camp claims that the two are one in the same, and that the physical processes of the body are the foundation for what we've come to call the 'mind.' My objective here is to present the dualist argument as fairly and contemporaneously as possible and then deconstruct it. The problem with the dualist doctrine is that, no matter how one hashes it out, there is no legitimate means for a disembodied, or even embodied, mind to employ mental causation on bodily processes.

Let our analysis begin with what, exactly, the view of the dualist is. From the word itself, we can infer that dualism implies the existence of two 'things.' In this case those two things are the mental and the physical, as Rene Descartes first explained in his *Meditations on First Philosophy*. This particular argument tends to propagate other ontological dualisms that necessitate from the first (that being the 'mental' and the 'physical'). If there is a mental and a physical, then there is a mind/body dualism, as well as a public/private dualism, each of which will be explored. We must first ask ourselves what role our mind plays in our world.

First off, according to Descartes, the human mind is *not* embodied. It is not made up of the same ‘stuff’ as the physical world, as it is purely a mental substance. Always skeptical, Descartes postulates many things that the mind is not:

“What else am I? I will use my imagination. I am not that complex of limbs, which is called the human body; I am also not some thin air infused with these limbs, nor a wind, fire, vapor, breath, nor anything that I imagine...Perhaps it happens to be that case however, that these very things which I suppose to be nothing, because they are unknown to me, do not in reality differ from that I that I know?” (Rozemond, 82)

This large list of things that the mind *isn't* indicates that the mind is a thinking thing. “I noticed nothing else to pertain to my nature or essence except that I am a thinking thing” (Descartes and Cress). Thought is the essential property of the mind, and many believe that it is the mind. This means that any organism or object that possesses the ability to think is appropriately associated with a mind. With the mind’s ontological pony riding on the fact that thought is its essential characteristic, how does this fact characterize the mind?

Surely, I am not able to think someone else’s thoughts, just as others are not able to witness mine. There is something that is crucially *private* about the workings of the mind. Descartes bifurcation of the human being causes a necessary internalization of one part of the ‘person’ (the mind) and an equally powerful externalization, on the other hand (the body). Upon the relationship between the external and the internal, most opponents of dualism set up camp here. If the mind is completely private, as well as ontologically

separate from the body, how can they communicate? Surely they do communicate, as when one person wishes their arm to rise, they will it to do so using thoughts to send messages to their nervous system. In all honesty, no substance-dualist position successfully resolves this issue. Descartes claimed that the Pineal gland, located in the brain, was the seat of the human mind and it was through this hormonal helper that the body and mind could communicate with one another (Descartes and Cress). This particular theory has been quite outdated given the increased knowledge of the human anatomy.

As for these clunking machines we call a body, what are we to make of them? When we analyzed the nature of the mind, there was just one essential property that, for the mind, *sine qua non*. The body has a similar dynamic about it, meaning that there is just one characteristic that is common across all things that exist in the physical universe. That property, for Descartes and many others, is *extension*. Specifically with respect to humans, it is easy to get properties of ideas mixed up with properties of the body. The fact that vanilla candles smell nice is not a property of the candle. Rather this is a function of one's preferences for one smell over another, or perhaps one's general affinity for candles. However, the fact that the candle *is*, and that it has a length, width and depth these are the properties that constitute the extension of the candle into physical space. The goal of dualists and Descartes in particular, is to identify the attributes of mental and physical things such that those attributes apply only to mental things or only to physical things and *never* to both. So while a body may be associated with a thinking mind, the body itself can never think. Conversely, though a mind may inhere in a body, that mind

has no physical properties or tangible qualities that an observer may perceive. The question that comes to mind here is: are we just finagling terms? Why can't a body think, and for that matter why can't a mind extend?

For Descartes this question is answered in his Second Meditation, wherein he is able to doubt *everything* that is physical, except for his mind. To achieve this level of doubt, imagine yourself in a dream, one of those really realistic ones. Every mode of sensual perception can be engaged in a dream, making it difficult to discern from reality (until one wakes up, of course). With this in mind, Descartes claims that, since something like a dream can be nearly real, we can't fully trust our physical world. However, if you were to take away all physical things, the only ontological truth that would be left is the *I*. "But what am I? A thing that thinks. What is that? A thing that doubts, understands, affirms, denies, wills, refuses, and that also imagines and senses (Descartes and Cress). If one were to attribute to the mind a mode of extension, then they also allow for a skeptical attack, in which even the mind could be doubted.

Criticism

Gilbert Ryle provides an excellent deconstruction of the dualist position. Ryle asserts that the problem dualism has with certain features of humanity, like our complexity compared to other life forms, is a product of a category mistake. Category mistakes occur when a property is associated with an entity that, in all likelihood, cannot possibly have that property.

Consider someone interested in computers. They've taken apart and understood all of the pieces that make up a modern computer, however they are still puzzled. They

decided to ask a professor pleadingly, with all the parts spread out in front of them, “where’s the computer?” They had imagined that, inside of the computer, or perhaps as a part of it, there was an actual thing called a ‘computer’ that he might find. Ryle uses an example of a student touring a university. After they have seen all of the buildings and met with some students and faculty, they ask: “where’s the university?” (Ryle). I believe the point is becoming clear. A category mistake is either looking for a property in an object which doesn’t have it, or taking something that doesn’t have physical properties and supposing that it does.

To an extent, the dualists suffer from both sides of this problem. Ryle indicates that there are a few properties of most dualist accounts that resonate across theories. First is that the goings-on of the mind are inherently different from the goings-on of the body. It is a classic separation between the public and the private. “People can see, hear and jolt one another’s bodies, but they are irremediably blind and deaf to the workings of one another’s minds and inoperative upon them” (Ryle). This touches perfectly upon the substance distinction discussed above where the mind for Descartes is made of an entirely different substance than the bodies that minds inhabit.

Ryle has also touched upon another common feature of a dualist’s doctrine, that we are “inoperative” upon another person’s mind. Sure we can argue with someone and, perhaps, they will change their *mind* and agree with us, but I am not able to reach into another person’s head and see ideas and thoughts bouncing around, much less have a physical effect on them. I *only* have access to the capacity of my own mind, I am only aware of the way my own mind works. Having that awareness, and knowing what it feels

like, I am able to assume, and hope, that the other people that I see acting similarly to myself might also have minds, though I have no definitive conclusion to that effect.

The existence of minds and bodies is predicated upon a collection of dispositions being termed as a separate substance than bodies, namely the human ability to have thoughts, feelings, beliefs and whims. It is true that a belief or a feeling is different from a physical body, but that does not mean that such feelings are constituents of a feeling-producing substance like a mind. Ryle claims that the dualist position is a weak one, ultimately supposing that “minds are NOT bits of clockwork, they are just bits of not-clockwork” (Ryle).

III. Throwing Out the Baby with the Water: The Eliminative Materialist

So far in our argument we have dualists vying in most cases for the ontological separation of the mind and body. In the other camp we have materialists, coming in all shapes and sizes to reduce the status of mental states to causally sufficient physical ones. In some way or another, materialists are concerning with getting rid of the mind-concept and replacing it with an equally functional, though purely physical concept.

In order for a materialist to succeed in the mind body debate, they must first satisfy a few criteria. Most importantly, the theory needs to make sense. This means that, if one were to supplant a working dualist theory with the materialist one, the pieces must work well together. For example, if a materialist were to take a highly antiquated atomist position and claim that everything we do is causally related only to the random clashing of atoms in our brains and in the environment, then she would have to set up quite the defense for this position. Why are we able to predict one another's actions with a fair degree of certainty? Does intentionality exist? Obviously this leaves no room for free will, but where is the support for such a view? Though this hypothetical materialist position has *some* potential, it certainly doesn't seem to 'work' right off the bat.

Nowadays, the litmus test for a feasible materialist theory is a complete inter-theoretic reduction from mental states to physical states. Consider two possibly competing theories of mentality like neuroscience and psychology. Neuroscience deals explicitly and singly with the physical brain and its function. Psychology, on the other hand, deals with the human character and the mental states that are associated with it. Within the realm of the psyche lies belief, hope, desire, love and so forth, while the

anatomy espouses the interaction of neurons, cortical regions and axonal pathways. Many materialists claim that the latter encompass the former; most take it one step further and state that the latter description of mentality is much more accurate than the former.

Before they can run wild with this idea, though, they must sufficiently prove that for each psychological attitude (belief, hope, desire, etc.) there is an equal and accurate neurophysiologic entity that obtains the same definition. We must be able to say: ‘mark is hoping it doesn’t rain today’ and in the same tone of voice state: ‘mark’s C36F axonal pathway is resonating with a certain frequency’ all while meaning the same thing.

Here’s the rub, in order for a complete inter-theoretic reduction to obtain, one must create a complete inter-theoretic reduction. Every knick and knack from the field of psychology needs to have an appropriate neurological knick and knack that is congruent. This is where Paul and Patricia Churchland come in with a new form of materialist thinking: eliminative materialism.

The position of the eliminative materialist reaches a very similar conclusion to that of the typical materialist. Basically, the Churchlands want to say that what happens inside of our brains, including the thoughts we have about ourselves, are entirely governed by physical processes. At no point does the soul have an opportunity to “work its magic” (P. M. Churchland, *Engine of Reason, The Seat of the Soul: A Philosophical Journey into the Brain*). Furthermore, the current paradigm for the description of mental processes (psychology, and even more specifically *folk psychology*) is an outright misrepresentation of the inner workings of the human brain.

The eliminative part of their theory comes with the treatment of our current mental vernacular. Termed folk psychology, it is the common-sense ‘ability’ that we all have to understand the mental composition of ourselves and others; it is the method we use to cope with our supposed mental states. It is the reason we have any ability at all to relate to ourselves and others. As such, folk psychology is the central enemy of the Churchlands position, as it is another of the theories¹ that required materialists to create a 1-to-1 list of mental states and the physical states to which they correspond, and a nasty one at that. Paul Churchland holds that, with a more matured and accurate neuroscience, not only will we understand the brain (enough to rid ourselves of the ‘mind’) better than ever, but the body of folk psychology will cease to be useful and thus be eliminated from our common use. Furthermore, the more refined science of psychology will necessarily change to address mental states as physical states rather than as part of an amorphous conception of one’s self. Ideally, instead of guessing at the problems of a patient, a psychologist will be able to identify the brain-related cause of their behavior and ‘fix’ them, or at least diagnose them, much more efficiently.

Many readers will have a problem with this across-the-board elimination of a theory that seems to work pretty well. Before we address this elimination, let us be completely clear about what is being dissolved. The Churchlands have no problem admitting the utility of folk psychology. With little error, it has gotten us this far, right? In an eliminative materialist’s world, something like ‘Mary believes in God’ will be

¹ It has been hotly debated in contemporary philosophy whether or not folk psychology counts as a theory, as theories are subject to the sorts of revisional methods of science that other theories are treated with. Some philosophers (M.R. Bennet and P.M.S. Hacker) believe that the foundation for folk psychology is obtained from a series of conceptual truths and rules that are ingrained in all humans, and thus a theory grounded in truths cannot be a theory, and neither can it be revised (P. S. Churchland).

replaced with a more matured and equally satisfying neuroscientific description.

However, the most successful tenet of eliminative materialism is the claim that there is no need for an inter-theoretic reduction from folk psychology to neuroscience. Most dualists believe that the foundation of a materialist theory needs to be created upon the succinct and precise destruction of a dualist conception (i.e. psychology and folk psychology).

The Churchlands argue that folk psychology, while meaningful, was never an accurate representation of the inner states of human beings. In short, it was fun while it lasted but it was wrong the whole while (P. S. Churchland).

The possibility that folk psychology is wrong is something that many theorists throw out before really considering. In truth, there are some strong arguments that at least lend one to notion that very popular methods of worldly description have been thrown out before, why couldn't it happen again? In the 17th century, a theory for combustion was in use that involved the existence of a substance called *phlogiston*. Phlogiston is an unobservable material that exists in anything that is combustible; as it is released as combustion begins and ensues. Today, not only is phlogiston theory obsolete, it would be surprising if the average person, when asked, could describe anything about it. Such is the fate that the Churchlands predict for folk psychology. Though it was fairly effective in doing its job, recent advances in neuroscience indicate that it is on its way out.

With phlogiston, the obsolescing of it was outright, thus it is an easy case for an eliminativist. Some might contend that, no matter how mature our neuroscience becomes, there will always be a place and a necessity for the terminology used in psychology. Enter Newtonian physics. Under the classical view of physics, Sir Isaac Newton had

created the most complete and accurate form of mathematics concerning our physical world. Absolutely anything that happened on earth, his math was able to not only describe, but predict. Physicists today say that, with a powerful enough computer, and a complete enough knowledge of all the ‘working parts’ of a physical system, they could, for example, tell you how an egg might splatter on the floor, down to the very last atom (Greene). However, Newtonian physics became greatly challenged when describing the really big things in space like black holes and stars, and Einstein’s General and Special Theories of Relativity came in to explain those. Between the two, astronomical physics is in a sort of limbo between classical Newtonian physics, Einstein’s relativity and the inadequacies that they both possess. This is an example of an outdated theory like Newtonian physics (an analog to folk psychology) in the process of being replaced and ‘phased out’ by a more mature physical science, though no one knows what that physical science is yet.

The examples between phlogiston and Newtonian physics give a picture of the logical progression that the Churchlands hope for. Folk psychology is currently similar to Newtonian physics, but in 100 years, it will stand where phlogiston stands today. Just like Newtonian physics, the weakness of folk psychology is hidden by the parochial nature of the environment in which the theory is asked to perform (P. M. Churchland, *Mental Phenomena Are Reducible to Physical Brain Activities*).

Now that we have an idea of what eliminative materialism is trying to eliminate, let’s not forget to obtain an idea of what the surrogate theory might be. Rather than deliver a boring diatribe on current neuroscientific nuances, it would be more effective to

cover some of the basic and inherently ‘human’ activities that, previously, only the mind could undertake.

Cartesian dualism, as well as many dualist theories, focuses on the concept of *ideas*. Like Plato’s Forms, ideas are conceptions we have of the physical world that indicate their ontological validity. One can view a brown chair, a red chair and a green chair and still know that they are viewing a chair. This is because they have within them the *idea* of a chair that is separate from each individual instance of a chair. While the Churchlands do not believe in a full piecemeal intertheoretic reduction, there are certain conceptual consistencies that any legitimate theory must maintain.

How do ideas manifest themselves in a purely neurobiological sense? The short answer is that there isn’t a clear answer yet, but there are some very strong theories. The best of which is the theory of Hebbian Learning. Within the brain there are trillions of brain cells, each communicating with one another via tiny electro-chemical impulses. Specifically the brain cell sends an electrical impulse through an axon, across a synapse to an axon in an adjacent cell (P. S. Churchland). This is important because the terminology of Hebbian learning is riddled with neurobiological language. At any given moment, thousands of pathways across the brain are alight with electrical energy, and the theory in question examines the patterns in which those pathways are engaged.

Neuroscientists know that the more often a specific path between neurons is activated the more ‘hardened’ it becomes, meaning the connections between the cells becomes more defined and more susceptible to electric impulses. This axonal hardening of neurons and synapses is the explanation for human ideas. As a child we are bombarded

with sensory information and are brain is trying to ‘settle down’ by creating meaningful patterns in the world around us. This creates a reasonable and empirical representation for a framework of human *ideas*. Returning to the idea of a chair (let’s say a blue chair): we’ll imagine a brain evaluating the image in a certain pattern. Now if the brain evaluates a red chair, it’s likely that the pattern of neurons firing will be similar, though slightly different since a different color is embodied in this chair. There are two ‘folksy’ arguments that some bring to bear against this theory.

The first argument is that there are far too many ‘things’ to consider that would allow for the brain to have even a general pattern for each of them. This is a misjudgment. If there is one thing the brain is good at, it’s pattern recognition, since whether or not Hebbian learning is the answer, the brain *does* function through the synaptic firing of neurons and pattern recognition is the only reasonable conclusion. Furthermore, if one thinks that the brain is stretched for storage, consider this: if you were to cover the entire Empire State Building with 30” TV screens instead of windows, and then crumple it up like it were a piece of foil until it were the size of the brain, then the amount of images and sensory information on those TVs would come *close* to the sensory capability of the human brain (P. M. Churchland, Engine of Reason, The Seat of the Soul: A Philosophical Journey into the Brain).

Criticism

Paul Churchland's account of the mind escapes many forms of criticism, as it is a sort of 'wait-and-see' philosophy that either will or will not come true. However, John Searle attempts to bridge the gap between the dualists and the materialists in his book *Minds, Brains and Science*. A self-titled materialist, Searle believes that everything the mind does is indeed a product of physical causes, yet he claims that consciousness can never be reduced or explained in purely physical terms. Theoretically, he explains that this is because, in the special case of consciousness, an ontological reduction does not follow from the causal reduction of mental events to physical events.

An ontological reduction occurs when one independent object is shown to be nothing but some other type of independent object. A steel spoon is 'nothing but' the different types of molecules that compose it. The color yellow is 'nothing but' the wavelength of light reflecting off of a surface. These type of nothing but conclusions follow necessarily from discoveries about the causal nature of things. As it applies to consciousness, a 'nothing but' conclusion would be that consciousness is composed entirely of neurological reactions. This is the conclusion that Searle is most certainly *against*.

As for causal reductions, these refer to properties being explained in terms of the causal sources of them. For example, chairs and tables are considered to be solid. The molecular structure of the atoms that make up the table and chair cause this solidity, more specifically the 'vibratory movements of the molecules in lattice structures' ultimately give the effect of solidity (Searle, *Mental Phenomena Are Irreducible to Anything Else*). Where Searle hotly disagrees with an ontological reduction of consciousness, he is

entirely on board with a causal reduction, otherwise he might be considered a dualist (oh my!). Searle has no problem with the explanation that consciousness is a causally emergent property of the interactions between neurons and other brain processes.

According to Searle, there are two reasons why we will *never* be able to adequately reduce consciousness to a fully physical explanation. The first reason is a product of the emergent nature that Searle perceives in consciousness. Consider once more the idea of solidity. This property makes perfect sense when used to explain objects we interact with everyday, such as tables. However, have you tried to apply the term solidity in the way we think of it to an iron atom (Fe), or to an H₂O molecule? The term tends to lose its meaning when describing things that don't particularly lend themselves to such description. This is because, for Searle, something like solidity is an emergent property of the micro-structural elements that compose the solid thing. The molecules that make up a table aren't solid, but the property of the thing they've come together to make can certainly have that quality. Such is the way with consciousness; neurons do not have little bits of consciousness that form one big bit of consciousness when they come together. Neurons have *no* sense of consciousness, and once they've come together to react, consciousness is the product.

The other reason, Searle asserts, that consciousness is irreducible is due to the fact that "no description of the third-person objective, physiological facts would convey the subjective, first-person character of [feelings], simply because the first-person features are different from the third-person features" (Searle, *Mental Phenomena Are Irreducible to Anything Else*). Searle explains that describing what might cause a feeling like pain is

not and cannot be the same thing as *feeling* the pain. The crux of Searle's theory requires that the subjective experiences that are part and parcel of consciousness are a necessary feature, as *sine qua non* of human consciousness.

Perhaps I can illuminate the subjective nature of consciousness by sampling other cases of reduction where the subjective side of things didn't matter quite so much. Let us ruminate on the reduction of heat. Oftentimes heat is a relative property that we identify as something *feeling* hot or not feeling hot. However, after discovering the causal properties of heat² we were able to use a more objective method for determining the heat of an object or system. As before, we have the subjective *feeling* of heat set against the objective explanation of heat as a product of molecules. In this case, though, the physical reduction of heat still preserves the subjective experiences of heat, we are now just able to explain the source of that experience in terms of a physical cause, instead of as a product of the subjective experience itself. Why doesn't this work with consciousness?

The answer lies in the second reason Searle gives for the irreducibility of consciousness, that being that third-person accounts of something do not convey the first person account of them. With the heat example above, the first and third person accounts of heat have been divorced from one another and nothing has been lost, merely separated and preserved. We can have objective descriptions of 'real' heat *and* we can have subjective descriptions of what heat *feels* like. This is not the case with consciousness. If we begin to explain consciousness in terms of purely physical events, as Searle has already explained, we will be unable to convey what anything feels like in a subjective

² i.e. that it is a product of kinetic energy and the motion of molecules

sense (Searle, *Minds, Brains and Science*). As such, in the case of pain or any other feeling, we will have isolated and abandoned what it means to have a subjective experience. This is all due to the fact that, where consciousness is concerned; we care more about the subjective experiences than we do about the objective descriptions. “Where appearance is concerned, we cannot make the appearance-reality distinction because the appearance is the reality” (Searle, *Mental Phenomena Are Irreducible to Anything Else*). Essentially, the buck stops at appearances for consciousness, and any attempt to dig deeper than that will either lead to an incomprehensible theory or the inability to account for subjective experience.

Ultimately, reduction for Searle involves a restructuring of our definitional practices. Referring to heat as kinetic energy or describing a chair’s solidity in terms of molecular structure are authoritative additions to the descriptions we already have about chairs. Something is solid, and we know why or something is hot and we can explain why. We are providing causal sources for subjective experience. In the case of consciousness, however, the entirety of subjective experience itself would be lost upon a purely physical reduction of consciousness. For Searle, “consciousness cannot be redefined in terms of an underlying microstructure, and the surface features then treated as mere effects of real consciousness, without losing the point of having the concept of consciousness in the first place” (Searle, *Mental Phenomena Are Irreducible to Anything Else*).

IV. Lifting the Curtain and What to Make of it All

We have come now to an impasse. Between the dualists and the materialists there is no easy choice, nor a final answer. That does not excuse us from making a choice, nor from at least *looking* for an answer. Before beginning that journey, it will be helpful to know where we've been, to better see where we're going.

The dualist doctrine, though it has some variation, contains three basic claims. The first is that the mind is ontologically separate from the physical world, or is at least composed of a very different substance. Things in the physical world all have *extension*, meaning they interact with our senses in some way or another. However, the mind, being a completely different substance, lacks any means of extension and is thus a separate entity.

The next claim that dualists typically make is that the mind is an entirely private entity. While we can have certain knowledge of the physical events around us, we are “irremediably blind and deaf to the workings of one another’s minds and inoperative upon them” (Ryle). Gilbert Ryle here highlights another interesting distinction, that we are inoperative upon one another’s minds. Sure, we can perform neurosurgery and give CAT-scans and interact with someone’s *brain*, but the brain is just an organ. The mind doesn’t necessarily inhabit any particular part of the human body, it is merely associated with it.

As if the disconnection between mind and body weren’t complete, the third distinction that dualists make is that not only is the mind inaccessible to other humans, but we aren’t privy to how the mind and body communicate with one another, either.

Ryle states that such a question will forever be a “shuttlecock” bandied between physiologists and psychologists (Ryle).

The bottom line with dualist theories of the mind is that they are inescapably chained to the armchair. By that I mean that the progress dualists make comes in the form of ‘armchair exercises’ where one mode of thought battles with another through essays and authorship. This has the effect of making ‘truths’ *provisional*, at best. One rendition of dualism will reign supreme for a time until fashions change and another takes its place. I do not wish to say that what the dualists are arguing isn’t true, I only wish to indicate that the belief in their arguments is a product of elegant persuasion, not a cold hard proof.

By contrast, however, I intend to argue that the basis for a materialist position, while flawed in some senses, is predicated on a more viable method for a successful philosophy of mind. That method is the scientific method. The objective of the materialists is to gain knowledge about the mind. I’m not comfortable with throwing the term knowledge into a sentence and not explaining it at least cursorily.

Knowledge in terms of the scientific method is always relatively permanent. Imagine a scientist has the hypothesis that, if he releases a ball from his hand, it will fall to the earth. Upon conducting this experiment, he finds that his hypothesis was confirmed. Now the scientist’s knowledge of this empirical rule is only confirmed by his own observations and in order for it to be confirmed more broadly, other people must conduct the same experiment with the expectation that the same results will occur. In order for something to be scientifically ‘true,’ it does not need to be tested by every

person on the planet until everyone thinks it to be valid. However, the hypothesis certainly needs to be confirmed by at least one other party, as well as dependable enough so that *anyone* with the necessary equipment can confirm it.

The other, more important, factor about achieving knowledge this way is that its contingency is built into the framework of the method. Nothing that we know about the world through the scientific method is absolutely true. We've seen the frailty of these positions fall apart many times. One of the most notable examples is Newtonian physics, which effectively described the motion of our world and, in part, the universe for hundreds of years. However, in the 19th and 20th centuries, Albert Einstein's theories of General and Special Relativity turned Newtonian physics on its head. Of course, such a huge shift in knowledge took some time, but the irrefutable body of evidence that eventually fell on the side of Einstein naturally shifted the minds of the generation.

The consensus that the scientific method demands is the factor that sets it above the armchair philosophizing that dualism demands. Though this isn't always the case, the realm of science is typically more resistant to the types of 'he said, she said' arguing that emerges in philosophic reasoning.

I would like to turn now to the argument that John Searle had made about the nature of mental activities in the human mind. Searle, a self proclaimed materialist, is *not* arguing for some sort of dualist-materialist position. Instead, he is making the claim that the complexity of the human experience is not reducible to any physical states. The reason for this being that only a particular human can know what it 'feels' like to be in pain in their own way. So a man named Phillip can be perfectly aware of how his pain

‘feels,’³ but if we were to ask Phillip to tell us what Mary’s pain is like, he would surely be stumped.

This conjecture is certainly true, to an extent. However, Churchland would argue that the confusion in this situation does not come from a failing in the descriptive powers of neuroscience. Rather, this problem is a derivative of a confusion in practical knowledge. In order to be able to explain a first person subjective reaction (i.e. pain) using third person objective descriptors (for Searle this meant purely neuroscientific language), one would need to recruit an appropriate lexicon from a new field. The physiological reaction we call pain is not purely physical in character, for the experience of pain tends to also elicit emotions and thoughts and feelings from a person. It is for this reason that Churchland argues that we would need a full understanding of neuroscience *and* human psychology to be able to accurately describe the first person subjective experience of pain using third person objective terms.

Once again, Churchland makes the claim that, at no point along the journey your body takes in the experience of pain, does something non-physical enter into the equation (P. M. Churchland, *Engine of Reason, The Seat of the Soul: A Philosophical Journey into the Brain*). Elements that are particular to each person⁴ certainly take place, but these aren’t non-physical supervening elements.

³ Feeling here means a variety of things. Phillip is familiar with his own trains of thought, he knows the things that he likes, that he doesn’t like. He has many particularities that may be special to him only. For example, he might have an aversion to touching sticky things because they feel unpleasant to him, while other people might not have this problem at all.

⁴ Particular to each person in a physical/historical way. Meaning that, in that person’s long catalogue of experiencing this pain, they may view this particular experience differently by comparison. No one has the same thoughts concerning pain.

Tricky Consciousness

“The brute fact of the matter is that no mental power of property is more important to us humans than consciousness” (McDermott)

I would now like to refocus my discussion to begin what I take to be the true history of the mind/body debate. As noted above, the most important part of this debate will most certainly center around the existence and nature (knowable or not) of the human consciousness. Before jumping into this, I would like to point out that *no one* from either camp in this debate has provided a cohesive and ‘acceptable’ definition for the origin of consciousness. Some philosophers have tried, and failed. Others have taken the fact that consciousness is so mysterious to indicate that it is unknowable and they have left it at that. Sadly, such a conclusion is accepted by many.

It is not the intention of my thesis to provide a concise, or even broad, definition of the consciousness. However, I will argue that it is certainly a knowable entity, and that the way in which we can come to know it is through a concise neuroscientific definition. For this task I will recruit Paul Churchland’s thought experiment involving recurrent neural networks to achieve this task. His description is fairly compelling, but it is certainly unnecessary to include the long-winded explanation of it here, so brevity will suffice.

Churchland begins by identifying a variety of ‘salient’ features of the consciousness. He alludes to things like: we lose it [consciousness] when we go to sleep or get knocked out, it can be used to develop many perceptions of a single thing and it

can be focused more or less on one thing (like a mother listening for choking sounds from her baby's monitor) (P. S. Churchland). This is not an exhaustive list of the features he describes, but it is fairly effective at highlighting some of the things that make consciousness so mysterious.

After identifying these components of consciousness, he demonstrates that using a fairly simple recurrent neural network (basically a computer simulation), one can simulate all of these basic properties of consciousness all at once (P. M. Churchland, *Mental Phenomena Are Reducible to Physical Brain Activities*). This does not mean that the computer was exhibiting artificial intelligence; it merely indicates that each feature that Churchland has described was arguably demonstrated during the run time of this neural network.

The point of this discussion is to indicate that a quasi-feasible answer to the mystery of consciousness already exists. I don't want to say (and neither does Churchland) that this example with the neural networks is *the* answer, as it probably isn't. The point is that this situation creates breathing room for the average materialist, as there is some relevant progress in figuring things out.

I would like to use this discussion to highlight what I take to be a perennial failing of some of the dualist philosophies, and much of philosophy in general. Too often does the absence of a sufficient answer somehow indicate that there is *no answer*. It is not acceptable that one's lack of imagination in answering a question is taken to be the final point in the argument. The essence of this line of reasoning is that, if all we're lacking is

an answer, do not take that to mean that there is no answer. We've got nothing but time on this planet, why not use it to poke around for a while.

Touchy Subjects: The Mind/Soul

The toughest thing about elucidating the nature of the mind/soul is pinning down exactly what those words mean to people. What it comes down to is this: is there a way to talk about the mind outside of religion? Also, is it truly appropriate to use the words mind and soul synonymously?

First I would like to address the possible difference between one's mind and one's soul. I do not think that many philosophers or serious followers of the mind/body debate see a distinction here. However, in my personal exploration of this topic, I've found many people that want to divide these two things. Since I intend my arguments to be accessible to anyone, I feel I must now explore the validity of this distinction.

Let us assume that the mind does the 'work' that we traditionally conceive it to. What I mean by this is that it is the seat of reason in the human person, it provides you with a personality, a sense of purpose and uniqueness and it is part of what makes you essentially human. From here I see one of two possibilities. Either those who believe in a soul will cry out "Hey, that's what the soul is for!" or we need to determine what, if anything, is left for the soul to 'do' if the mind does all that. Those who fall into the former category resolve this discussion for me, if they think that the mind and the soul

are different things, yet the description above can fit both, then those that hold this position are, in a word, silly.

However, the other question is a bit more puzzling. If the soul is some secondary immaterial entity within the body, what purpose could it possibly serve? Is it a creation to thwart the attempts of materialists everywhere? To be perfectly honest, if there is a soul aside from the mind that takes residence in the body, a sort of ghost in the ghost in the machine, I have two speaking points to expound here. The first is that this might well be a notion so well dug into an ideology that I think it is neither my place nor the place of reason to try and explain the nature of this type of soul.

Secondly, if someone wishes to create such an impermeable abstraction out of the soul, then let it be. The mystics shall have their mystery. If the soul truly is some functionless entity that does no 'work' for the person, then let those who hold it in this light have it that way. At the very least a cogent neuroscientific explanation of the brain might still explicate the nature of the mind.

How to Deal: Legitimizing Answers

On the long road to a working theory of the mind/body, we have but another very important building block to explore. Here I will demonstrate that the scientific method or empirical science is the most legitimate way to answer questions of the mind. The grounds for answer these kinds of questions in any discipline rests on the type of authority one appeals to.

For example, if we were to situate two people from two religions that have very different conceptions of the soul, let us say a Christian and a Hindu. How in the world will they settle a dispute? Surely they would appeal to any sort of priestly class, the idea being that a priest has much more authority and knowledge on the matter than a layman. Well how would the relevant religious experts solve the problem? They might consult the guiding texts of their religion, engage in prayer or meditation, but none of these things will settle the matter indefinitely. Religious texts, unless deemed infallible (and even so), are only authoritative as long as A.) that interpretation is accepted and B.) they are kept within that specific religious community. While I'm sure a Hindu person will find some helpful tips in the bible, though it holds no authority over his religious practices or beliefs. On questions of the soul, religious discourse is decidedly stalemated.

Perhaps this stalemate is a product of the foundation upon which religious beliefs are founded. The requirements for them are certainly not based in the physical world. Thus must religious beliefs are grounded in their subject's faith, their trust that what they believe is the right answer, because since it is impossible to know otherwise, we must place our faith in something.

Faith is exactly what we need in this debate. However, the faith need not be placed in solely intangible concepts. This is why I propose we take an honest look at the merits that the scientific method holds. For this debates purpose, I will rely on the hypothetico-deductive model for the scientific method, which is as follows:

- 1.) Use your experience to consider the problem and try to make sense of it. If it is a new or unknown problem, move to step 2.

- 2.) Form a conjecture by stating an explanation for your observations.
- 3.) Deduce a prediction from that explanation by noting what consequences follow from the conjecture you have formed.
- 4.) Test by looking for the opposite of each consequence observed (i.e. try to falsify your results with other experiments)

You may have noticed that, by nature, the method shown above can never absolutely verify anything; it is only able to falsify. This is why placing one's *faith* in science is called for here. Consider gravity, I can think of hundreds of experiments that will falsify the theory of gravity such as dropping a ball and hypothesizing that it rises to the sky. However, upon performing this experiment, I will see that it fails, and by virtue of that failure the theory of gravity holds strong. I repeat, this is the reason faith is required, because nothing in sense is concrete, it is all waiting to be falsified, and we must have faith that it won't be (in the case of gravity, especially).

In our discourse on religious arguments, we observed that discussions took place at varying levels of abstraction from physical reality. Sometimes the answer to the question of the soul can be found within a person, sometimes in a God and sometimes it is a mystery revealed when we enter a world other than this one, like heaven. However, science does not have that problem, and since it is essentially situated in physical reality, the relevant vocabulary is mostly standard. This means that, as far as 'universal' languages go, science gets pretty darn close. Scientist A can perform experiment and report his results. If scientist B has a glaring problem with these results, he doesn't begin arguing with scientist A, instead he begins performing experiments that will prove

scientist A wrong. Such is the language of science. The extent to which an individual buys into the legitimacy of the physical world is the extent to which one must necessarily agree that the scientific method is a highly efficacious way of discussing issues.

So, assuming in some distant future a group of neuroscientist ‘figure it out’ and unlock the mysteries of the human brain. The philosophers and church goers will have a hay day arguing back and forth about the legitimacy, but if we put our faith in science, then we will see that the only proper course of discussion is to fight science with science. If someone has a problem with their conclusions, they can cry about it all they want, but they won’t be able to get anywhere unless they start falsifying some conclusions.

The Bottom Line

To a large extent, I agree with Paul Churchland’s conclusion. The pieces are there to indicate that a more matured neuroscience is on its way, or at least there is nothing legitimate (yet) to stop it from developing. I also see no reason to expect that our current neuroscientific vocabulary won’t become drastically revised upon the inception of this new neuroscience. However the lexical blanket that Churchland believes will be draped across society, a situation in which we will use neuroscientific language *instead* of our current folk psychological one, will most likely be false (P. M. Churchland, *Engine of Reason, The Seat of the Soul: A Philosophical Journey into the Brain*).

No matter how conclusive the results or how enlightening we find the study of our brains to be, the idea of the human self can never be separated from our common

existence. There is no reason to believe that human beings will be content with a material reduction of their bodies unless they can maintain that which makes them unique, that being the idea that they are indeed unique.

Looking through history, we can observe many salient trends about scientific advancement. One trend is certainly the replacement of old vocabularies with new ones. As with the example of phlogiston, the words used to describe that school of thought are hardly around anymore, save for their mentioning in academic essays and text books. However, there is another very salient feature of highly advanced scientific discoveries, and that is that just because the science behind our reality is efficacious and arguably verifiable, that does not necessitate the need to inject all of its vocabulary into our vernacular. We see science manifest itself like that everywhere. Consider Einstein's theory of relativity. An important point of his theory is that time is relative to one's current velocity. Though this may be true, clock makers did not hurry to attach warning labels to their time pieces indicating that their clocks were only accurate up to 0.00000000000001% the speed of light.

The summit of scientific discoveries have only a very specialized place in our society at large, one that acts as a back drop for social interaction, not a requisite for it. The purpose that science serves in everyday life is that, when some has a question that can be answered with a scientific answer, then a relevant scientist is *the* authority to which one can appeal. Churchland's idea suggested that everyone, and he means *everyone*, will become somewhat of an expert in neuroscience. Frank, while talking to Bill, can legitimately say "Wow, Bill, today I'm feeling awfully brain state x025," and

this will be perfectly acceptable and understandable to Bill. I don't want to say that an interaction like this is out of the question, though I find it so highly unlikely that it's not worth worrying about until it happens.

The other important role that a highly developed scientific perspective on the brain will play is that of a corrective body. What this means is that if a person starts speaking of a the mind as a material entity, it is reasonable that a neuroscientist will be able to correct that person and educate them so that they realize that there is nothing immaterial about the human body. We are a magnificent organism, but we are not a mystical one.

With a Pinch of Salt

Everything that we've discussed here is meant to be taken with a pinch of salt. My own beliefs aside, the objective of my argument is to legitimize the possibility that dualism is a farce and there is quite a bit to know about the mystical facets of being a human. Essentially this chapter was written for those who have a conception of the soul, who have NOT given thought to the idea that they might not have one. I've tried (hopefully successfully) to throw the ball into the dualist's court.

I do not wish to make people alter their ideology or sacrifice their beliefs. However, I do wonder if, some day, they ask a neuroscientist the question "what is the nature of my mind?" what will they do if they get an answer?

V. Heeding the Call of the Pragmatist

Now that we've (hopefully) achieved a reasonable understanding of the mind/body debate and my proposed solution to it, it would be unjust of me to ignore what I perceive to be an effective, and detrimental, commentary on my position. In my meager career as a philosopher, few worldviews have been compelling or frustrating as the pragmatist's worldview.

In order to outline an argument against my thesis framed by the pragmatists, it is important that we know exactly what the pragmatists think about philosophy. Honestly, looking up the word pragmatism in the dictionary is a helpful start on the road to description. The adjective pragmatic means "of or pertaining to a practical point of view or practical considerations." Without saying much more, it is important to know that a pragmatic worldview already implicitly resolves many of philosophy's perennial problems. Take the field of ethics, for example. Many philosophers have wrestled with the origin of ethical systems. Does it come from God? Does human nature govern our ethical decisions? Is it all social? The pragmatist would argue that none of these questions matter or are even worth asking. Even if we knew how ethical decisions were made, would that change the way in which we conduct ourselves. Would murder become appropriate? Would we encourage robbery? Pragmatists are intensely concerned with insights and discussions that hold practical consequences and directly affect the ways in which we conduct business in this reality of ours (Menand).

In order to deliver what is, in my opinion, a very contemporary version of pragmatism, I will focus my study on two theorists in particular. Richard Rorty and

Ludwig Wittgenstein, when taken together, form a powerful concoction of modern pragmatic theory. Both of these men stick to most of the pragmatic tenets listed above. They do not appeal to any sort of metaphysical reality, and they strive fervently for a way to cope more effectively with our direct environment. However, where these two differ from some pragmatists is their treatment of the linguistic tradition. Rorty is concerned primarily with the vocabularies we use to talk about certain things, and Wittgenstein is concerned with the intelligibility of the vocabularies we use in terms of their use and applicability (Rorty) (Wittgenstein, *Philosophical Investigations* (3rd Edition)).

Wittgenstein claims that, when using language, “we are not *striving after* an ideal, as if our ordinary vague sentences had not yet got a quite unexceptionable sense, and a perfect language awaited construction by us.” (Wittgenstein, *Philosophical Investigations* (3rd Edition), 45 emphasis his). So when philosophers are doing philosophy, it is inappropriate of them to think that the conclusions they arrive at are reflective of any sort of ideal or perfect conception of something. At best, we can only devise ways to better communicate with one another.

Concerning the mind/body debate in general, Wittgenstein would take issue with our use of the terms mind and soul. When Wittgenstein is thinking about mental processes or states he posits that “sometime perhaps we shall know more about them, [mental processes] – we think. But that is just what commits us to a particular way of looking at the matter. For we have a definite concept of what it means to learn to know a process better” (Wittgenstein, *Philosophical Investigations* (3rd Edition)). The terms for the discussion about the mind have already been laid out before us, and as Wittgenstein

points out, since we know the sensation of gaining knowledge on something like math or the characters in a story, then it follows that when talking about the mind, we must also come to know it better as well. This notion that we can truly come to know something better, for Wittgenstein, is false. What we can do, however, is contrive better and better ways to make our meanings clear to one another without ever corresponding to the true nature of the human person.

Richard Rorty, being a neo-Wittgensteinian, uses Wittgenstein's critiques of human linguistics and evaluates the discussion similarly. While Rorty does not agree to either side of the mind/body debate, he takes some care to remove the materialist theory from consideration. Rorty, ultimately, claims that the entire endeavor of mind/body philosophy should be wiped from the table, as it is a discussion where no real progress is possible. With particular malice towards the existence of consciousness, Rorty states that no "appeal to experience could ever resolve [consciousness], any more than one can appeal to experience to determine whether or not marriage across caste or racial lines is or is not intrinsically disgusting" (Rorty). Such anti-ontological, anti-metaphysical attitudes are applied liberally to all of the perennial questions of philosophy. However, Rorty doesn't just wipe the discussion from the table and leave it at that. Thankfully, he does provide an idea of what he would prefer us philosophers do with our time.

Rather than try and fit the awkward puzzle pieces of our social selves together with the pieces of our anatomical selves, Rorty would have us accept a linguistic dualism. There is no need to deconstruct one vocabulary in favor of another, as Paul Churchland would have us do with a mature neuroscience. Instead we should maintain the saliently

useful features of either language and apply them where they can be appropriately efficacious. As such, Rorty would hesitate to get rid of many of our folk psychological descriptions. Telling someone that “I am angry” will remain much more useful than “My brain is in state B13 right now” due to the intensely historical conditions of meaning that accompany a phrase like ‘I am angry.’ Quoting Vincent Descombes, Rorty agrees that “Mental vocabularies are deeply historical, which is another way of saying that there are historical conditions of meaning” (Rorty). For Rorty, the phrase “My brain is in state B13 right now” will doubtfully be considered more effective than “I am angry” in conveying the emotion we know as anger. Even if it is more accurate, if the new and improved phrase doesn’t really change the way we interact with one another, then it was still a waste of time coming up with it.

In order to fit these puzzle pieces together, it is not a matter of discovering which puzzle piece is more correct than the other; it is a matter of jury-rigging a system of compliance between the two. For this discussion and, as far as Rorty is concerned, for philosophy in general, the key is not to “find out how various things fit together, but to suggest how various social practices should fit together” (Rorty). Rorty instructs us that we need to look at the issue from both sides. In this case we should consider what folk psychology can bring to neuroscience and what features of the brain neuroscience can offer to our common-sense folk-psychological vocabulary. It seems subtle, but placing the burden of importance on lexical utility has a variety of implications that undermine a working theory of the human mind. First and foremost, there is no method for claiming authority on a given topic. Even if scientists make serious progress in the field of

neuroscience, their ability to correct the speech of the dualists extends only so far as the neuroscientist is able to demonstrate the practical nature of her new and improved vocabulary.

Ultimately, pragmatists⁵ would reach two salient conclusions about the mind/body debate. They would primarily have us accept a linguistic dualism between the types of terms we use to describe the brain and the types of terms that we use to describe the uniqueness of the human condition. The dualism effectively lies in the same place it always has, between those who think the mind is something special and those who think the mind is something physical, but its character has changed drastically. The dualism no longer appeals to any metaphysical conclusion because Rorty would have us concerned only with the efficaciousness either vocabulary brought to the table.

The other conclusion forces us to recognize the insolubility of a partial ontology. Just as Wittgenstein claims that we are not pining after a ‘perfect language awaiting discovery by us,’ Rorty matches such audacity by stating that “beliefs cannot be individuated in such a way as to correlate with neural states” (Rorty). As I stated in the previous chapter, the problem of consciousness is a problem not yet solved, but it could be. Rorty would disagree entirely, as he sees consciousness as a permanent mystery that will never be disclosed, especially through appeals to experience. The existence of consciousness is “not a matter which appeals to experience could ever resolve, any more than one can appeal to experience to determine whether or not marriage across caste or racial lines is or is not intrinsically disgusting” (Rorty). At least as far as my central

⁵ At least Richard Rorty and Ludwig Wittgenstein

argument is concerned, the pragmatists have the situation at a standstill. The likelihood of a scientific understanding of the brain being able to hold authority over other conceptions of the human person is impossible under the pragmatist doctrine.

My Response

There are a variety of reasons why the pragmatist position is flawed in the realm of philosophy, and in particular the topic of discussion here. When it comes to ontological theories in the field of philosophy, the pragmatist tends to cut the umbilical cord too soon. I intend to demonstrate that, even if we should concern ourselves with lexical efficacy alone that neurological understandings of the brain will hold the authority over other conceptions just as I predict it will.

We'll start off playing by pragmatist rules. Rorty argues that we cannot know something like consciousness any better than we can know if marriage across racial lines is intrinsically disgusting. Comparing those two examples, in particular, is totally unacceptable. Whether or not something is disgusting is a much more individual and scrupulous determination than discovering salient features about something like consciousness. An appropriate statement might be "an appeal to experience will not tell me anymore about Mary's consciousness any more than it will inform me on the intrinsic happiness Mary receives when she plays tennis."

Just because individual instances of consciousness are unique, that doesn't indicate a level of un-knowability about the entity as a whole. Every person learns differently, yet we see 30 or more students thrown into a classroom under one teacher. How can we possibly expect those students, with all of their individual and unique

consciousnesses, to actually *learn* anything? This is because consciousness, like learning, can be studied. Furthermore, even if consciousness is fully explained it will remain, like learning, an intensely individual and unique phenomenon. That doesn't mean, however, that there isn't something to be gained from figuring out a few facts about consciousness. The bottom line is: there is no real reason to stop discoursing on something like consciousness or the mind/body problem, at least until it comes to some sort of terminus.

When I use the term 'terminus,' I am not referring to any sort of metaphysical end-all terminus. I have faith in the idea that a terminus can legitimately include a level of certainty that something *cannot* be known. As an example, consider the Heisenberg Uncertainty Principle. On a particulate level, the principle states that physical quantities like position and velocity cannot both be known at the same time. This is because, during the measuring processes used to determine one quantity, the act of measuring has disrupted the particle involved and has changed the values for other measured quantities. As per Heisenberg's principle, it conveys the idea that sometimes a fact can be unknowable and scientific *at the same time!* Quantum physics, in fact, is full of notions that limit the power of our understanding. Basically, it is a win-win situation if neuroscientists keep hammering away at the brain. Either they will discover something remarkable about the human person, or they might just discover that the human person truly is too complex for any real level of understanding (also remarkable).

Another reason we should stop talking about these silly questions is the fact that answers pointing towards either side of the argument won't have any real effect on the way we conduct our social practices. I tend to disagree. Not only would pertinent

discoveries about the mind have direct effects on social practices in a local way, they would also have far reaching implications about the way we even interact with each other and our environment. Let us pretend that A.) we have a working neuroscience that can answer all of those burning questions about the soul or B.) we've attained a level of certainty that the human mind is a special and unique entity that is a feature of humanity alone, it matters not which one you imagine. Certainty in either conclusion guarantees change. If the latter hypothesis is true, then neuroscience as we know it must become necessarily mystical to an extent. Conversely, if the former hypothesis is accepted, then religion and other mystical bodies must, at least partially, subvert themselves to the conclusion that some of those things that make us unique are really only a product of our material environment, rather than as a product of human beings occupying a special place in the ladder of being. In either case, I hope it is clear that, if we can reach some sort of provisional conclusion one way or another, that there *will* be social ramifications such that Richard Rorty is satisfied.

Thus far, we've determined that, at the very least, the case of the mind shouldn't be closed without further discussion as there exists the possibility of a fruitful, though non-metaphysical, conclusion. Furthermore, pending aforementioned conclusion, there are definite and tangible effects that will ripple through a great multitude of social practices. However, there remains one last domino that needs be knocked down before I can rest easily on the topic of pragmatism. Why is it, you might've asked as a reader, that

I'm so confident that any sort of conclusion can be reached using our supposedly meaningless language⁶?

To answer this question, we must clear up a few things about human *tendency*⁷. Typically, we are social beings and as such we communicate our ideas through a variety of methods, language being one of them. More importantly to my argument, insofar as we are social, we tend to be *organized* about it. On a basic level, it is clear that when we form a sentence, we have agreed upon a certain ordering of words that will make sense to other people. More specifically, certain terminology, usually called jargon, is accepted and encouraged in certain social circles. Claiming that 'Immanuel Kant believed that we all have a categorical imperative to treat others as an end in themselves instead of just a means' is such a jaded sentence for those outside of the academic field of philosophy that it's only immediately intelligible to those who are aware of the philosophy of Immanuel Kant. What I'm getting at here is the notion that we have certain organized and intelligible ways of talking to each other depending on the situation that we're in. Furthermore, just as our basic level of discourse have rules (i.e. grammar), so to do these rarefied and particular disciplinary lexicons.

Through the codified organization that we, as humans, assign to areas of discourse, we can find value in language. Intrinsically, I do not believe we can mold our language to correspond with some ultimately correct reality. What we can do, though, is utilize these codified realms of language to give value to the conclusions we come to.

⁶ Meaningless in the sense that Wittgenstein meant it earlier (i.e. there is not metaphysical end to the words that we use, our language does not correspond necessarily to the true nature of reality)

⁷ Notice that I did not use the word nature here. That's very dangerous territory around certain pragmatists.

Here the conclusion I'd like to make is that science, as conceived by the scientific method, is a highly codified way of talking about things. As such, and as I have argued in the previous chapter⁸, it still deserves respect as an authoritative commentary on the world that we live in, in a purely physical sense.

Presently, pragmatism occupies in my debate the same place that it inhabits in the wider domain of philosophy itself. I like to refer to it as an ambient philosophy, something that works in the background only as a system of checks and balances rather than an authority that can eliminate a particular theory from a line of discourse. One of the founding fathers of pragmatism, William James, put pragmatism in its place in 1898. "James presents pragmatism not as a philosophy but as a way of doing philosophy, 'a method of settling metaphysical disputes that otherwise might be interminable'" (Dickstein). As long as we aren't reaching for any sort of overarching, metaphysically conclusive knowledge then we *ought* to slip under the pragmatists' radar. The fact that so many things have been done in by pragmatism is a product of pragmatism's non-falsifiable nature.

Pragmatism presents itself thinly so that it can adapt to almost anything we, as philosophers, can throw at it. The critiques pragmatism makes about language and metaphysics is an effect of the inadequacy of any philosophical theory to provide any truly *correct* theory about language and metaphysics. As I stated above, as long as we're clear that we aren't shooting for the stars, so to speak, we might as well hammer away at things while we have the chance.

⁸ Specifically that we should 'trust' science because it operates in the realm of the tangible and only on those things which are tangible.

VI. Conclusion

What is it that a reader should take from an essay like this? Are you now a successful convert into the materialist worldview? Do you see that the soul might be an empty concept in need of heavy redefinition or outright deletion? I suspect that if you didn't hold those views already, it is doubtful that you've acquired them in the course of reading this. I fully intend to tell you what it is that can be learned from my views, but perhaps we should see first where we've been to fully understand where that might lead.

Beginning with the dualists (Rene Descartes in their most codified form) we have thought of ourselves as inherently binary organisms on this planet. One part of us, the body, occupied space and through extension could interact with other parts of our physical reality. One wholly different part of us, called the mind, was the truly defining feature of humanity. Using our mind we could think, feel, solve problems and argue about things. Most everyone is in agreement that these are the things that minds typically do, but the real cause of those abilities is the source of much debate.

The dualists fervently rely on the fact that some feature of the ability to think and be conscious will be forever a mystery. That there is some feature of thinking and feeling that is unknowable is the centerpiece of the dualist position. It is in this unknowability that I find my greatest discomfort with their position. If any, what feature of the mind exists that indicates so presumptively that we cannot know something about it? Many dualists either rely on the apparent complexity of the human mind to bolster this notion; many others merely analyze an argument against dualism and highlight a detail of the mind that the opposition doesn't cover. It isn't necessarily that I think the dualist position

is wrong, but I have yet to be satisfied by the reasons they've given for the binary existence that we may or may not have.

This is perhaps why I gravitated to the materialist position, particularly the position of Paul Churchland. Materialism in general involves the project of taking features of mind/soul/consciousness (synonyms) and examining the physical systems out of which they might arise. The objective of materialists is to formulate a working theory of the mind where the objective of the dualists is to bunker down and craft counter arguments for materialist theories or any other that opposes theirs.

The especially tantalizing feature of Churchland's argument is that it does not rely on our commonsense impressions of 'having' a mind. So many materialist theories try to link up our human experiences with neurological events, and oftentimes to no avail. The reason for this failure, according to Churchland, is because the *real* way the mind works might be much different than the way we think it works and the way we talk about it working. The simultaneous strength and weakness of Churchland's position is that it isn't susceptible to dualist critique. If a dualist says that Churchland's argument doesn't account for something, there are two possible answers. One answer is: just wait, eventually a mature neuroscience will satisfy any questions you might have. The other answer is that our current method for describing a certain feature of the mind, like having a belief or feeling affection might be misled. Churchland pulls the old switch-a-roo by claiming that it is not the responsibility of neuroscience to mesh with commonsense impressions, but it *will be* the responsibility of commonsense impressions to link up with neuroscience.

I hope that the strength of this argument is evident, but I think it would help to explain the weaknesses a little more. Churchland's eliminative materialism suffers from almost the same problem that dualists suffer from. Dualists claim that the mind is unknowable, but never provide great reasons why. Eliminative materialists explain that the mind is nothing special and we have only to sit and wait for neuroscience to remove the veil and the mind will suddenly be understood. Both theories have a sort of blind faith commitment that the mind either is or is not explainable in physical terms.

Through all this though, I am still vouching for the materialist position. As I explained in chapter 3, I do not see Churchland's inevitable neuroscience as impossible, but I certainly do not want that to be there reason to put faith in materialism. This is why my trust is placed in a healthy empirical foundation with a Popperian scientific method.

As I see it, science in general has two features that are of vital importance to my argument. The first is that science is inherently provisional. When viewed under the lens of the falsification principle, any conclusions in the field of science are right until proven otherwise. This is important because it exempts scientific reasoning in general from being easily deconstructed. If someone discovered something about a discovery that is wrong, well then their discovery just becomes the correction, simple as that.

The other feature of science that is more important to my argument in particular is its inevitability. Considering neuroscience in particular, they will continue to probe and analyze the brain, making hypothesis after hypothesis ad infinitum. It is because of this inevitability that I would like to create discussion. As I had said earlier, I have not found

any good reason to believe in the inherent dualism between the mind and the body, but I'm not arguing that one doesn't exist.

From my point of view, I feel that neuroscience is wildly efficacious at answering and that it is possible that they will yield an answer one way or the other in the mind/body debate. In fact, I'm not opposed to the idea that science itself might reveal that there *is* some unknowable feature of the human mind, but I that suffers the same delusion of Churchland's and the dualists'.

For example, the complexity of the human eye was once an appropriate argument for Intelligent Design⁹ (Lakoff and Johnson). However, in our modern day world, not only do we understand a great deal more about the human eye, but we are also on the verge of creating an entirely prosthetic and functioning eye. I relate this type of argument with the types of arguments that dualists use to justify the dualism between the mind and the body. Given the evidence of history, arguments that aren't predicated on anything salient and substantial do not pass the test of time.

This brings me back to my main point. My thesis has been a reaction to my dissatisfaction with the answers dualists give to the questions about the mind. My objective is to get people talking about this topic because I think it is worth talking about. Let it not be sugar-coated that if the theory that I've offered in these pages is even close to the right one, the idea that we have souls or minds will be an empty concept, most assuredly. At the risk of having the rug pulled out from under them, I encourage anyone

⁹ The idea that human beings are too complex to have evolved naturally or occurred naturally in any way. Our complexity points to the fact that we must've been designed, or that features of our bodies and minds are intentioned by something else.

that buys into the idea that they have a separate and immaterial soul to consider where that idea comes from. More importantly, consider what it would be like if someone could effectively and, dare I say, correctly explain why you don't have a soul as you know it.

If the mind, the soul or consciousness is unknowable, what will you do if someone figures it out?

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