

Analytics on the Mind

An Objectivist Survey of Analytic Philosophy of Mind

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Abstract: Although debates over the nature of the mind have raged in analytic philosophy of mind in recent decades, Objectivism largely lacks not only a theory of mind, but also an active discussion of the subject. The common strategy of adopting views from analytic philosophy of mind is perilous, given the significant differences between the principles and methods of Objectivism and those of analytic philosophy. Nonetheless, Objectivists can and ought to learn from the failures and successes of analytic theories of mind. This paper examines the commonalities and conflicts between analytic philosophy and Objectivism in order to sketch a plausible philosophy of mind consistent with Objectivism.

Mind and Body

In recent decades, debates have raged in analytic philosophy over the nature of the mind and its relationship to the body. In a quest for a viable account of the metaphysics of the mind—for an understanding of the existence, specific character, and causal efficacy of consciousness in a physical world—theories have cycled in and out of fashion with remarkable rapidity. In contrast, a philosophy of mind well-integrated with Ayn Rand’s philosophy of Objectivism has yet to be developed. A survey of the Objectivist literature reveals only scattered critiques of common analytic positions and some (occasionally conflicting) elements of a positive theory (Hsieh 2003). As such, the debate is only just beginning for Objectivism.

The absence of a well-defined Objectivist ontology of mind is surprising not only in light of the vigorous debates in analytic philosophy, but also given the central role of mind-body integration in Rand’s philosophical system. Objectivism regards the mind-body dichotomy (i.e. the metaphysical and religious view of mind and body as separate and opposed substances) as the root cause of a host of other false dichotomies in epistemology, ethics, and politics, such as theory versus practice, reason versus emotion, fact versus value, and moral versus practical. Although Rand vividly condemns this split between mind and body as a “torture rack...with two wheels that pull [man] in opposite directions” in Galt’s Speech, she only alludes to her own positive views in that discussion, writing that man is “an indivisible entity of matter and consciousness” (Rand 1992, 952, 955). Other sources contain little more than hints and suggestions on philosophy of mind, albeit often useful ones (Hsieh 2003). But of course, the principle of mind-body integration (not to mention freedom of the will) depends upon and must be grounded in a well-developed metaphysics of the mind.

Faced with this gap in Ayn Rand’s philosophical system, many Objectivists have adopted views from analytic philosophy: dualism, reductive materialism, functionalism, nonreductive materialism, emergentism, dual aspect theory, and even panpsychism (Hsieh 2003). Following the lead of the analytics, some form of materialism is often regarded as obviously true. Anything else, the basic argument goes, would be unscientific—even mystical. Yet perils lurk in the significant (but often non-obvious) differences between the principles and methods of Objectivism and those of analytic philosophy. Nonetheless, Objectivism has much to learn from the failures and successes of analytic theories of mind. Happily, an examination of the

commonalities and conflicts will help us sketch a plausible philosophy of mind consistent with Objectivism.

Cartesian Substance Dualism

Although the mind-body problem dates back to ancient Greece, modern philosophy of mind traces its origins to Descartes' defense of substance dualism in *Meditations on First Philosophy*. There, through the *cogito*, Descartes argues that humankind is composed of two radically different substances, extended matter and thinking mind (Descartes 23-34). Mind and body are unified and causally interact through God's contingent (but not always perfect) intervention (Descartes 71-90). Broadly speaking, substance dualism holds that the mental and the physical are "fundamentally distinct" and independent substances (Chalmers 2002a, 1).

On an intuitive level, substance dualism appeals to our everyday talk of having "a body" and "a mind"—although perhaps misleadingly so. More significantly in terms of historical motivation, substance dualism is a necessary part of the standard theological commitment to an immortal soul. The actual philosophical argument for the theory—the one used by both Descartes and modern substance dualists like W. D. Hart—is grounded in the logical possibility of disembodied minds. The argument essentially claims that "each of us can imagine being a disembodied consciousness; what can be imagined is [logically] possible, so we are, in the actual world, non-material entities only contingently lodged in our bodies" (Edwards 1989, 512).¹ Imagination is supposed to demonstrate actuality.

From an Objectivist perspective, this argument's deep reliance upon the idea of logical possibility renders it wholly unpersuasive. In his essay "The Analytic-Synthetic Dichotomy," Leonard Peikoff denies any distinction between logical and empirical possibility, arguing instead that any and all valid claims of possibility require "a logical identification of the facts of experience" (Peikoff 1991, 116). The idea of logical possibility, he notes, presumes that "a violation of the laws of nature would not involve a contradiction" (Peikoff 1991, 115). But in fact, because "the laws of nature are inherent in the identities of the entities that exist... a violation of [those laws] would require the existence of a contradiction" (Peikoff 1991, 115). As such, logical possibility cannot justify any philosophical principle according to Objectivism—substance dualism included.

Analytic philosophy's deep commitment to the distinction between logical and empirical possibility obviously precludes the use of such a methodological objection. Instead, analytic philosophers generally appeal to the argument (from Descartes' own time) that substance dualism renders mental causation mysterious (Chalmers 2002a, 2). After all, how could something wholly mental (and non-physical) causally affect the wholly physical (and non-mental)—or vice versa? What causal mechanism could bridge that seemingly vast ontological gap? Descartes' attempted solution through "animal spirits" and the pineal gland is little more than a source of amusement today. More plausibly, modern substance dualist W. D. Hart argues for thinking of causation as the "transmission of energy" such that "the sum of psychic and physical energy is conserved in mind-body interactions" (Morton 1991, 646). Whatever the proposed causal mechanism, substance dualism seems to run afoul of modern philosophy's basic (but perhaps dubious) presumption that the physical world is "causally closed," i.e. that all physical effects have sufficient physical causes (Kim 1993, 280). As such, substance dualism is

¹ David Chalmers' zombie argument, which concerns the logical possibility of wholly nonconscious physical duplicates of conscious beings, is basically just a reversal of this Cartesian argument (Chalmers 1996, 94-9).

widely regarded in analytic philosophy today as “a fundamentally antiscientific stance” that ought “to be avoided at all costs” (Dennett 1991, 37).

Somewhat surprisingly, Objectivist philosopher Harry Binswanger explicitly rejects the idea that substance dualism suffers from any causal gap between mind and body in his lectures *The Metaphysics of Consciousness*. In response to a question after the third lecture, Binswanger argues that philosophy does not require causing entities to “resemble” affected entities in any way (Binswanger 1998, T3). As such, he concludes that the difference between and opposition of the mental and the physical in substance dualism does not constitute a prima facie objection to the possibility of two-way causal interaction.² On scientific grounds, however, causal interaction seems to require *some* similarity, as even apparently wholly dissimilar entities like electrons and photons interact in virtue of the common underlying property of mass-energy. Whatever our ultimate conclusions about the possibility of mental causation in substance dualism, Binswanger’s argument on this issue is overshadowed by his unexpected and problematic advocacy of a strong form of dualism in these lectures.

Binswanger’s Dualism

Toward the end of *The Metaphysics of Consciousness*, Binswanger is asked to differentiate his views from Cartesian substance dualism, a position which the questioner characterizes as “clearly... wrong” (Binswanger 1998, T3). Binswanger astonishes by responding that substance dualism isn’t “really wrong”—if interpreted properly (Binswanger 1998, T3). Mind and body are “really two existents,” but they are not actually separable or independent substances because the mind “depends upon the brain” (Binswanger 1998, T3). Binswanger concludes his response by claiming that he is, in fact, “a dualist” (Binswanger 1998, T3). At first glance, these comments seem inconsistent with the philosophy of mind Binswanger defends earlier in these lectures, but a closer look reveals the label to be fairly accurate.

In the first lecture of *The Metaphysics of Consciousness*, Binswanger develops his theory of mind by way of six self-evident facts about consciousness: (1) the subject-object distinction, (2) the primacy of existence, (3) consciousness as action (or interaction), (4) the irreducibility of consciousness, (5) the causal efficacy of consciousness, and (6) freedom of the will (Binswanger 1998, T1). So what is Binswanger’s basic philosophy of mind?

Binswanger begins with a defense of and elaboration on Rand’s view of conscious awareness as “an active process” that is “achieved and maintained by continuous action” (Rand 1990, 29).³ Consciousness, he argues, is basically “a difference detector” in the relationship between subject and object (Binswanger 1998, T1). As such, it is “an action, a process over time” (Binswanger 1998, T1). Binswanger then asks the seemingly innocuous question “What kind of action or interaction is it?” (Binswanger 1998, T1). This question, he maintains, is essentially “unanswerable” because consciousness is an “irreducible primary”—and thus its own kind of action (Binswanger 1998, T1). After a lengthy discussion of the nature of reduction using the examples of a box and a stadium wave, Binswanger summarizes that “to reduce an action is to identify its constituents” where those constituents are “the entities that are acting and the stages of their individual changes” (Binswanger 1998, T1). The irreducibility of consciousness thus means that it “can never be shown to consist—at any scale—of subactions that are themselves non-conscious” (Binswanger 1998, T1). So while Binswanger recognizes that brain processes underlie consciousness, he argues that “small little brain events add up to a

² Binswanger’s own theory of mental causation (discussed later) does not require the position he stakes out here.

³ In contrast, analytic philosophy often speaks of consciousness (or “mentality”) as a passive property of a system.

big brain event,” not consciousness (Binswanger 1998, T1). Conversely, conscious experience can be subdivided into conscious aspects (such as recollection, emotion, and perception), but not broken down into nonconscious parts (such as neurological states) (Binswanger 1998, T1). Furthermore, we cannot reduce conscious action to an underlying physical entity (like the brain), because the entity underlying consciousness is either an irreducible self or the organism as a whole, i.e. as a unity of mind and body (Binswanger 1998, T1). Binswanger summarizes his views on the irreducibility of consciousness thusly:

Conscious experience is correlated with and does require a brain process, but there are still two irreducibly different things: the state of awareness and the brain process. Yes, man does have a mind and a body, but neither can be reduced to the other... Consciousness exists and matter exists. Each is what it is and neither is a form of the other (Binswanger 1998, T1).

Applying this ontology of the mind to mental causation and volition, Binswanger then argues for the “startling but inescapable conclusion” that “consciousness must have the power to move matter around in our brains” (Binswanger 1998, T1). He speculates that scientists studying consciousness will eventually find “a new force of nature,” namely “the physical force exerted by consciousness on its own brain” (Binswanger 1998, T1). Conservation of energy would be preserved by the back-and-forth conversion of the “physical energy” of the brain into the “psychological energy” of the mind (Binswanger 1998, T1). The only alternative to this view of mental causation, Binswanger claims, is epiphenomenalism (Binswanger 1998, T1).

Given this sketch of Binswanger’s philosophy of mind, what sense can we make of his endorsement of dualism at the end of these lectures? We may begin by noting that Binswanger’s understanding of mental causation as an exchange of physical and mental energy is clearly a form of interactionist dualism, as it presupposes a mind distinct from the body in some significant sense. In fact, leading modern substance dualist W. D. Hart proposes a virtually identical theory of mental causation as energy exchange in *The Engines of the Soul* (Morton 1991, 646). Yet Binswanger’s basic ontology of consciousness as irreducible action doesn’t seem particularly dualistic. After all, nonreductionism in analytic philosophy is coupled with a wide variety of non-dualistic views, from dual aspect theory and panpsychism to epiphenomenalism and nonreductive materialism. So by reasoning directly from nonreductionism from dualism, Binswanger seems to wrongly presume that dualism is the only genuine alternative to reductive materialism.⁴

Far more significantly, a close examination of Binswanger’s comments on reductionism reveals a deep confusion of ontology with epistemology. For the most part, analytic philosophers rightly understand the debate about reductionism to be epistemological; the basic question is whether the concepts and explanations of consciousness can be reduced to those of physical phenomena (Chalmers 2002b, 248). In other words, can we fully explain our beliefs, hopes, and perceptions purely in terms of patterns of neural activity? The ontological debate is about materialism, i.e. whether consciousness is fundamentally nothing over and above physical processes. In other words, are our beliefs, hopes, and perceptions really just patterns of neural activity? As the possibility of nonreductive materialism suggests, an epistemology of

⁴ Generally speaking, Binswanger accepts a particularly crude version of the common false alternative of “either materialism or dualism,” one which equates materialism with eliminativism (Binswanger 1998, T1). In *Objectivism: The Philosophy of Ayn Rand*, Leonard Peikoff similarly limits materialism to either eliminativism or epiphenomenalism (Peikoff 1991, 33).

reductionism requires an ontology of materialism, but not vice versa.⁵ Accordingly, the various arguments against reductionism can only demonstrate the epistemological fundamentality of consciousness—in the sense that we cannot step outside our own conscious experience to describe it in terms of nonconscious processes. A demonstration of ontological fundamentality, of consciousness as its own unique type of existent distinct from matter would require quite different and far stronger arguments. Binswanger, however, regards his case against reductionism as demonstrating the ontological fundamentality of consciousness—and thereby as proving dualism. Looking back upon his examples of reduction, we thus can see that they do not concern our concepts or explanations of boxes and stadium waves, but rather the boxes and stadium waves themselves. So unable to break apart actual conscious experience into actual physical processes from his own first person perspective, Binswanger erroneously endorses dualism.

All things considered, Binswanger’s characterization of his own views as “dualist” is quite apt. Admittedly, his theory isn’t a standard form of substance dualism, given the dependence of the mind upon the brain. But property dualism seems too weak a characterization, given that consciousness is not merely an attribute tacked on to an otherwise purely physical system. Whatever the label, Binswanger’s conclusions are clearly very much at odds with the bulk of Objectivist commentary on philosophy of mind. For example, in a 1947 journal entry Ayn Rand writes,

...go to the roots of the whole vicious error, blast the separation of man into “body” and “soul,” the opposition of “matter” and “spirit.” Man is an indivisible entity, possessing both elements—but not to be split into them, since *they can be considered separately only for purposes of discussion, not in actual fact.* In actual fact, man is an indivisible, integrated entity... (Rand 1997, 551, emphasis added).

So unlike Binswanger, Rand clearly regarded the distinction between mind and body as wholly conceptual.

Given the dead end that is dualism, let us now turn our attention to the dominant view in analytic philosophy of mind, namely materialism.

Reductive Materialism

Within analytic philosophy, some form of materialism is widely regarded as the only alternative to dualism—and thus as the only approach to the mind compatible with modern science (Searle 1997, 194; Chalmers 2002a, 1). The central principle of materialism is physical monism, the view that “everything is ultimately physical”—including consciousness (Searle 1997, 135). In addition, the materialist principle of the causal closure of the physical requires all physical effects (including bodily movements and neurological states) to have *sufficient* physical causes (Kim 1993, 280).

In its strongest form, materialism is reductive; the basic goal is to explain consciousness “wholly on the basis of physical principles that do not themselves make any appeal to consciousness” (Chalmers 2002b, 248). Over the past century, a variety of reductive materialist theories of mind emerged (and disappeared), including behaviorism (the mind is nothing but externally observable behavior), identity theory (the mind is nothing but the brain), functionalism (the mind is nothing but a set of abstract causal relations), and eliminativism (the mind doesn’t exist at all). Each of these reductive theories attempts to explain mental states in purely physical terms. Thus pain might be explained as wincing and groaning behavior by behaviorism, as the

⁵ Colin McGinn’s essay “Can We Solve the Mind-Body Problem?” is a particularly clear example of just such a simple combination of materialism and nonreductionism, as he argues that the reduction of the mental to the physical may be impossible—even if conscious processes are actually physical processes (McGinn 2002).

firing of c-fibers by identity theory, as the causal relationship between tissue damage and future avoidance behavior by functionalism, and as a myth of “folk psychology” by eliminativism. Such reductive explanations are the natural—although not necessary—companion to materialism (Chalmers 2002b, 248). After all, if the mind is actually physical, then presumably we ought to be able to explain it in purely physical terms.

From an Objectivist perspective, one disturbing aspect of reductive materialism is its wholehearted acceptance of “the false alternative of consciousness *versus* science” according to which “belief in consciousness ... implies supernaturalism” (Peikoff 1991, 33). Within that framework, science is rationalistically limited to the study of publicly accessible facts, like those of the archetypic science of physics. Accordingly, the development of a science of the mind requires the reductive materialist to reject the idea of consciousness as our inner, subjective experience of the world on the grounds that such is inherently accessible only from a first person, private—and hence unscientific—standpoint (Ryle 2002, 33-4).

Behaviorism is a particularly clear example of this idea, as any aspect of a person not directly observable by the behaviorist was not just ignored but actively denied to exist (Kim 1998a, 30). Although behaviorism is basically dead in philosophy of mind, rationalism about the requirements of science persists. For example, in *Consciousness Explained*, Daniel Dennett concludes a discussion of why the “desires” of completely unconscious zombies would really be no different from our own conscious desires with the comment that “postulating special inner qualities that are not only private and intrinsically valuable, but also unconfirmable and uninvestigatable is just obscurantism” (Dennett 1991, 450).⁶

So according to reductive materialism, our choice is clear: either science or consciousness, but certainly not both. However, even a very brief survey of the sciences beyond physics reveals the choice to be a false one. Medicine, for example, has dramatically progressed as a science in the last few centuries by effectively integrating first person, “subjective” data (e.g. “It hurts there and there!”) and third person, “objective” data (e.g. “The x-ray shows that the bone is broken in two places”).⁷ So although we might wonder how to best relate the first and third person perspectives in the relevant sciences, the progress of science does not require us to choose between them.

The Body Problem

More fundamentally, we might wonder about the precise meaning of the basic materialist thesis that the mind is physical. What does the term ‘physical’ mean? How should we define it? What is it that all physical existents have in common? In her formulation of “the body problem,” analytic philosopher Barbara Montero argues that materialism has no adequate answer to these simple and critical questions (Montero 1999; Montero 2001). The three common answers found in analytic philosophy—that the physical is defined by the stuff of everyday experience, by present physics, or by future physics—are all inadequate.

Consistent with analytic philosophy’s intuitionism, some argue for an “I know it when I see it” conception of the physical using the ordinary objects of everyday experience like rocks

⁶ Robert Efron’s essay “Biology without Consciousness—And Its Consequences” details the conceptual confusions caused by the extension of concepts logically dependent upon life and consciousness to non-living and non-conscious systems—as Dennett does in this discussion with the concepts suffering and desire (Efron 1968).

⁷ As a consumer-driven field, medicine has not been subject to the push towards reductionism found in academic psychology over the last century. After all, what patient would wish to be under the care of a doctor who simply denied the existence of any “special inner qualities” like blinding pain if unconfirmed by the usual battery of tests?

and tables as paradigmatic examples of physical entities (Montero 1999, 2). The problem for the materialist then lies in explaining how those ordinary objects are similar to more exotic examples of the physical like gravitational fields, quarks, photons, and leptons (Montero 1999, 3). The materialist cannot appeal the idea of the physical as “whatever is not mental” because “this is precisely *not* what is meant by those who argue that the mind is physical” (Montero 1999, 8). Nor can he appeal to the constituents of these ordinary objects, as that both wrongly defines Chalmers’ panpsychism (in which “mental properties pervade all aspects of the world”) as a form of materialism and wrongly categorizes far-off stuff like dark matter as nonphysical (Montero 1999, 6).⁸ Thus intuition can’t provide an adequate understanding of the physical.

The materialist might instead appeal to science by subjectively defining the physical as “whatever the physicist, or more precisely, the particle physicist, tells us exists” (Montero 1999, 10). If that refers to contemporary physics, however, then materialism is committing itself to an account of the physical that is surely incomplete and likely false in certain respects (Montero 1999, 13-14). Thus the far more common approach is to appeal to some perfect and complete physics of the future (Montero 1999, 15). This conception of physics, however, is not only “extremely vague” and perhaps even illusory, but also subject to significant errors of classification (Montero 1999, 14). For example, if the immaterial souls of Cartesian substance dualism were ever discovered and studied by physics, they too would be physical! As such, materialism becomes “not only unfalsifiable, but also trivial” by essentially interpreting “the view that everything is physical... as the view that everything exists” (Montero 2001, 23). But if such dualistic possibilities are excluded a priori, then materialism is both obsequiously deferring to physics and arbitrarily dictating to it. As Montero notes, “leaving the job of making all substantial ontological hypothesis up to the scientists *except* for the hypothesis that the mental is not fundamental... seems oddly ad hoc” (Montero 2001, 23). So by defining the physical through future physics—as so many philosophers of mind do—materialism is either trivially true or an article of faith.

So none of the common analytic definitions of the physical help us understand what materialism means by asserting that everything, including consciousness, is physical. Furthermore, based upon an analysis our hierarchy of concepts, some form of body problem seems inevitable for materialism. If we trace the concepts mental and physical back to reality by asking Rand’s Question (“What are the facts of reality that give rise to this concept?”), we find them grounded in the subject/object distinction basic to perception, in the difference between the internal “states and processes... of consciousness” on the one hand and the “outside world” of which consciousness is aware on the other (Rand 1990, 51, 247).⁹ So in this primitive form, the concepts mental and physical neatly and exhaustively divide the concept existence, as represented by the table to the right.¹⁰

Objectivist Conceptual Hierarchy	
Existence	
Mental	Physical

⁸ In the Appendix of *Introduction to Objectivist Epistemology*, Rand offers a similar critique. She argues that appealing to our everyday philosophical concept of the physical as “that of which all the things we perceive are made” to justify the materialist principle that “everything is physical” puts philosophers in the “position of the pre-Socratics who were trying to claim that everything was air, water, earth, and fire because that’s all they knew” (Rand 1990, 290).

⁹ Interestingly and not entirely coincidentally, Rand’s discussion of the foundations of our concepts mental and physical quoted here is part of a larger discussion of why the axiom of existence doesn’t logically imply the existence of a physical world.

¹⁰ As an epistemological distinction, the in-here versus out-there division of existence into the mental and the physical ought not be interpreted as implying the oh-so-ontological thesis of dualism, for reasons that we shall detail

So how does the materialist principle that consciousness is physical alter our conceptual hierarchy? In essence, mental phenomena are subsumed under the concept physical along with the non-mental, as pictured to the right. This shift, however, renders the concept physical superfluous at best and meaningless at worst. It is superfluous because it is identical to the concept existence. As Montero notes, the result is that materialism is simply claiming that everything that exists exists. More fundamentally, however, the concept physical has been rendered meaningless because the distinction with the mental which justified its formation has been eliminated.¹¹

Materialist Conceptual Hierarchy	
Existence	
Physical	
Non-mental	Mental

Montero’s “solution” to the body problem is to accept materialism’s redefinition of the physical, such that “something counts as physical if and only if it exists” (Montero 1999, 25). Then the mind-body problem can be reformulated in terms of the distinction between mental and non-mental as “whether the mind is ultimately non-mental,” i.e. whether the mental is fundamental to reality or not (Montero 1999, 25). Admittedly, this conceptual restructuring allows us to accurately characterize theories of mind as materialist or not. But why bother patching up materialism’s errors when the Objectivist hierarchy grounded in the subject-object distinction offers the same basic picture? To see the full benefit of the Objectivist hierarchy (which we shall discuss later) however, we need to examine the debates about reductionism.

Montero’s Conceptual Hierarchy	
Existence = Physical	
Non-mental	Mental

Analytic Arguments Against Reductionism

For both analytic philosophy and Objectivism, one of the more interesting and revealing debates about reductive materialism revolves around a series of qualia arguments developed by analytic philosophers in recent decades. These arguments cast doubt upon the reductionist project of fully explaining the mental in terms of the physical by highlighting the ways in which reductive materialism necessarily ignores central features of consciousness.¹² For example, Frank Jackson’s knowledge argument asks us to imagine Mary, a neuroscientist who has spent her entire life in a black and white environment studying human vision—so much so that she now knows *all the physical facts* relevant to it, including those about light, the eye, the brain, and so on (Jackson 2002, 275). So, Jackson asks, what happens when Mary leaves her black and white room for the world of color? Undoubtedly, she will “learn something about the world and our visual experience of it”—namely what colors actually look like. As such, reductive materialism fails by leaving the subjective experience of color and other qualia unexplained.¹³

The intuitive power of this and other qualia arguments is vindicated by a more general antireductionist argument demonstrating that the process of reduction, if properly understood,

later. Generally speaking, this simple division becomes much more complex (and even overlaps) when we consider other minds.

¹¹ This analysis is similar in structure to David Kelley’s argument against the skeptical “What if it’s all an illusion?” question in *Foundations of Knowledge* (Kelley 1987).

¹² Some of the arguments against reductionism are too wholly analytic to be of much interest to Objectivism. Kripke’s modal argument, for example, relies heavily upon the distinction between necessary and contingent truths (Kripke 2002, 329-3). Chalmers’ zombie argument depends upon the idea of logical possibility (Chalmers 1996, 94-9). Admittedly, even the analytic arguments more compatible with Objectivism (including the knowledge argument discussed here) rely too heavily upon silly sci-fi thought experiments.

¹³ Notably, Jackson regards this argument as undermining not only reductionism, but also materialism, given that Mary learns new, nonphysical *facts* in leaving her room (Jackson 2002, 276).

simply and obviously cannot be applied to consciousness.¹⁴ In *Rediscovery of the Mind* and elsewhere, John Searle argues that reductions in science, the model for philosophy of mind, follow a familiar pattern (Searle 1992, 112-124). Reduction begins with our basic understanding of phenomena such as color and heat purely in terms of “the subjective experience of... perceivers” (Searle 1992, 115). By investigating the source of these perceptions, science discovers that these experiences are (respectively) caused by the reflective properties of surfaces and molecular motion. Unconcerned with the phenomenal experience of color and heat in these scientific investigations, we “carve off and eliminate the subjective experience” from our concepts and thereby redefine them in terms of the causes of our perceptions (Searle 1992, 115). This process of reduction does not deny the reality of our subjective experiences of color and heat, but simply sets them aside as irrelevant to the scientific inquiry (Searle 1992, 120). Broadly speaking, Searle characterizes this process of reduction as one of distinguishing between “appearance” and “reality” (Searle 1992, 121). So, we can now ask, can we apply this model of reduction to philosophy of mind? Absolutely not, Searle argues (Searle 1992, 117-8). Scientific reduction, as we have seen, ignores subjective experience as irrelevant. But in philosophy of mind, the specific character of subjective experience is a (and perhaps the) central concern. So consciousness cannot possibly be explained by reduction—only explained away. Reductively accounting for pain in terms of the firing of c-fibers or tissue damage, for example, might identify the physical causes of pain, but thereby excludes the essential features of pain as unpleasant, as hurting, as @&%#! painful (Searle 1992, 117). So as Searle notes, “you cannot make the appearance-reality distinction for conscious states themselves, as you can for heat and color, because for conscious states, the existence of the appearance is the reality in question” (Searle 2002, 33).

Although Objectivism is broadly sympathetic with this argument against reductionism in philosophy of mind, two points of difference are worth noting. First and most obviously, Objectivists would characterize the process of scientific reduction somewhat differently than Searle; in particular, his appearance-reality distinction can be more precisely understood in terms of Objectivism’s distinction between the form and content of perception (Kelley 1986a, 41-2; Rand 1990, 279-82). The content of perception is simply whatever features of the world stimulate our sensory systems; the form is “those aspects of appearance that result from the way our sensory systems respond to stimulation” (Kelley 1986a, 42). In actual perception, form and content are wholly unified, such that the cheery redness and searing heat of a winter fire seems to reside in the fire itself. But by investigating our perceptual systems, science helps us conceptually separate the content and the form of perception. Applied to Searle’s argument against reductionism, this reformulation yields the same antireductionist conclusion, as the form of perception disregarded as unimportant by science is of central concern in philosophy of mind.

Additionally, unlike in Objectivism, Searle sees a genuine difference between concepts amenable to reduction (like color and heat) and those not (like pain)—albeit one grounded in “definitional practices” rather than any facts of the matter (Searle 1992, 123). This distinction seems to dubiously presume that we can really only have one concept of color, heat, pain, and so on—and so we must choose between a phenomenological and a physical one. But in fact,

¹⁴ This basic argument has been advanced in various forms by Kripke, Nagel, Searle, and others (Kripke 2002, 329-34; Nagel 2002, 222-3; Searle 1992, 112-24). This paper focuses upon Searle’s exposition because it is the most clear and least analytic. In his more recent *Consciousness and Language*, Searle accurately comments that “the concept of reductionism is one of the most confused notions in science and philosophy” and has “probably outlived its usefulness” (Searle 2002, 32).

parallel phenomenological and physical concepts under the same word are not just possible, but actual. Alternatively, we might simply integrate our understanding of the physical causes of forms of perception into our phenomenological concepts. In any case, we do not lose our phenomenological concepts of color and heat by learning their physical causes. (If we did, we would have to keep color meters and thermometers handy in order to answer everyday questions about soup and crayons!) By recognizing that our phenomenal concepts are always preserved, that they are never actually reduced or eliminated by science, reductionism in philosophy of mind simply becomes all the more implausible.

Objectivist Arguments Against Reductionism

In addition to these analytic arguments against reductionism, Objectivism offers two further reasons to deny reductionism in philosophy of mind: consciousness as an axiomatic concept and a foundationalist theory of knowledge. In Objectivist commentaries on philosophy of mind, reductionism is most commonly denied with the simple argument that the concept consciousness, as one of the three major axioms in the Objectivist metaphysics (along with existence and identity), is necessarily “a unique and irreducible primary” (Branden 2001, 8-10; Peikoff 1991, 34). As Rand notes in her basic account of axiomatic concepts in *Introduction to Objectivist Epistemology*,

An axiomatic concept is the identification of a primary fact of reality, *which cannot be analyzed, i.e., reduced to other facts or broken into component parts*. It is implicit in all facts and in all knowledge. It is the fundamentally given and directly perceived or experienced, which requires no proof or explanation, but on which all proofs and explanations rest (Rand 1990, 55, emphasis added).

So from the perspective of the Objectivist metaphysics, reductionism requires a denial of consciousness as an axiomatic concept.

Digging a bit deeper, however, we find a more revealing conflict between reductionism and Objectivism’s thoroughly foundationalist theory of knowledge (Peikoff 1991, 129-31). According to that theory, knowledge is hierarchical in the sense that all conceptual knowledge is grounded either directly or indirectly in perception, like “a tree with perceptual roots to which every branch can ultimately be traced” (Kelley 1986a, 178-9). Our percepts are the “epistemological primitives” upon which all of our knowledge depends—including our complex scientific theories about the physical world. As such, we can explain the causes of our percepts, but we cannot coherently claim to reduce them to anything more fundamental, for they already constitute our most basic understanding of the world. In other words, the attempt to explain pain as “nothing but” the firing of c-fibers or some other physical process inverts the hierarchy of our knowledge, such that a lower-level concept is illegitimately explained in terms of a higher-level one. Ayn Rand argues precisely this point (albeit perhaps mistakenly in terms of sensation rather than perception) in a discussion of ostensive definitions:

Sensations are the primary material of consciousness and, therefore, cannot be communicated by means of the material which is derived from them. The existential causes of sensations can be described and defined in conceptual terms (e.g., the wavelengths of light and the structure of the human eye, which produce the sensations of color), but one cannot communicate what color is like, to a person who is born blind. To define the meaning of the concept “blue,” for instance, one must point to some blue objects to signify, in effect: “I mean this.” Such an identification of a concept is known as an “ostensive definition” (Rand 1990, 40-1).

Rand then immediately applies the same analysis to the axioms, arguing that “since axiomatic concepts are identifications of irreducible primaries, the only way to define one is by means of an ostensive definition” (Rand 1990, 40-1). As such, these two Objectivist arguments against

reductionism—that consciousness is an axiomatic concept and that reductionism inverts the hierarchy of knowledge—are very much related.

So what does the irreducibility of consciousness mean for an Objectivist philosophy of mind? As we learned from Binswanger’s error in leaping from nonreductionism to dualism, the irreducibility of consciousness does not imply *ontological* fundamentality, i.e. that consciousness is an existent metaphysically distinct from the body. Instead, irreducibility demonstrates the *epistemological* fundamentality of consciousness—in the obvious sense that knowledge is impossible separate from or without it. Mired as we are in the subjectivity and intentionality of consciousness, we cannot pull back the curtain in any process of introspection to reveal underlying causal processes. Without the help of science, in fact, those causal processes would be wholly invisible to us.

Given this background of nonreductionism, we can now understand the basic project of an Objectivist philosophy of mind a bit more precisely. In his lectures on free will in *The Foundations of Knowledge*, Objectivist philosopher David Kelley accurately formulates the problem that necessitates philosophy of mind thusly:

In saying that consciousness is epistemologically fundamental, that it’s axiomatic, we’re looking at it from the inside. We know from the inside, as subjects of conscious experience, that we are conscious and that we have volition. But we can also examine consciousness (and conceptual awareness and volition) from the outside, so to speak, as capacities possessed by certain kinds of entities in nature and [as] having arisen in a certain way... Explaining how consciousness arose is primarily a scientific question, but because it involves trying to relate something we know about from the inside as subjects of awareness to something that scientists discover from the outside by studying the causal processes of physical nature, somebody’s got to cross that gap. The methods of neurophysiology will not, in and of themselves, be able to relate neurophysiological phenomena and causal laws with consciousness. So one role for philosophy here is to provide the integrative principles. Then the details have to be worked out scientifically (Kelley 1986b, T2).

In other words, philosophy of mind concerns the gap between our basic understanding of ourselves as both knowing subjects and known objects. Although we shall return to the origins of that gap in a moment, we should complete our examination of reductionism by first surveying the dominant view in analytic philosophy today: nonreductive materialism.

Nonreductive Materialism via Multiple Realization

In recent years, analytic philosophers of mind have largely abandoned the reductionism of identity theory in favor of a (weakly) nonreductive form of materialism. Although the qualia arguments discussed earlier exerted some influence, the shift towards nonreductive materialism was largely the result of the widespread acceptance of Hilary Putnam’s multiple realization argument. In “The Nature of Mental States,” Putnam argues that mental state types cannot be strictly identical to physical state types because mental states can be (and likely are) realized in a wide variety of physical systems with the requisite functional organization (Putnam 2002, 73-9). In other words, pain cannot really be nothing but the firing of c-fibers if some pain-feeling creature somewhere experiences pain through the opening of d-valves instead. So while Putnam grants the possibility “that parallel evolution, all over the universe, might *always* lead to *one and the same* physical ‘correlate’ of pain”—he understatedly characterizes it as “an ambitious hypothesis” (Putnam 2002, 77). In short, multiple realization argues that identity theory is too closely wedded to particular physical systems—and is thereby at odds with basic evolutionary science.

As we might expect, the nonreductive materialism that emerged from the ashes of the clash between identity theory and multiple realization adheres to the basic tenets of materialism (i.e. physical monism and the causal closure of the physical) while rejecting an identity

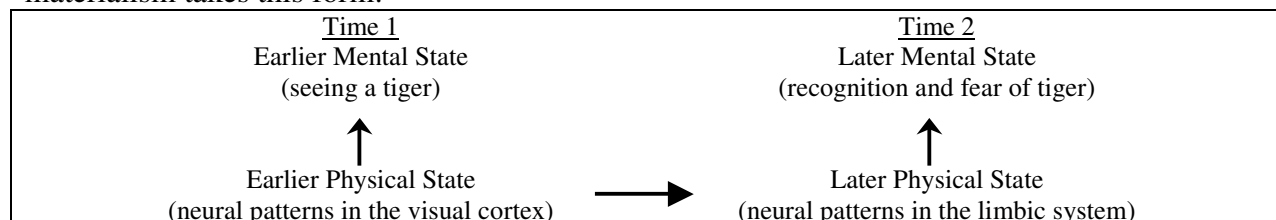
relationship between the mental and the physical. This nonreductive materialism instead opts for “poor man’s identity,” i.e. the strong supervenience of the mental upon the physical. With supervenience, any mental difference or change requires an underlying physical difference or change; strong supervenience additionally asserts a relationship of necessary dependence between the mental and the physical, such that “what mental properties a given thing has depends on, and is determined by, what physical properties it has” Kim 1998a, 11). Freed from the constraints of identity, nonreductive materialists combine physical monism with a form of property dualism in which mental properties (like beliefs, hopes, and desires) exist dependently upon physical properties (like brain states), but nonetheless do “real causal work” (Kim 1993, 267, 279). Nonreductive materialism also claims that we can give “complete and independent” explanations of minded behavior (e.g. climbing a ladder) in terms of either mental processes (e.g. beliefs and desires) or physical processes (e.g. neural activity) (Kim 1993, 239).

Admittedly, the basic motivation for nonreductive materialism—the desire to accommodate identity theory to the multiple realization argument—is basically unpersuasive and irrelevant to Objectivism. Years before the publication of Putnam’s seminal article, Objectivism rejected identity theory on the basis of the standard “phenomenological argument” that mental states and brain states cannot be identical because they have radically different features (Branden 2001, 9-10). Revenge, France, and the unemployment rate can be on the mind but not on the brain; and conversely, the brain is gray and warm, but the mind is not. Additionally, the difficulties of integrating materialism, multiple realization, and mental causation often generate theories so abstract and convoluted as to be virtually meaningless.¹⁵ Nonetheless, a brief review of the major challenge to nonreductive materialism, namely Jaegwon Kim’s “supervenience argument,” is instructive, for it reveals a problem that must be addressed by any nonreductive theory of mind.

Kim’s Supervenience Argument

The basic thrust of Kim’s supervenience argument is that the supervenience of nonreductive materialism is incompatible with its insistence upon mental-to-mental and mental-to-physical causation (Kim 1998a, 148-52; Kim 1998b, 38-47). The combination of “upwards determination” and “downward causation” within a materialist framework seems to lead to either epiphenomenalism or a violation of the principle of the causal closure of the physical (Kim 1993, 353). In other words, if my mental states are wholly determined by my physical states, then how could my mental states ever cause changes in my physical states?

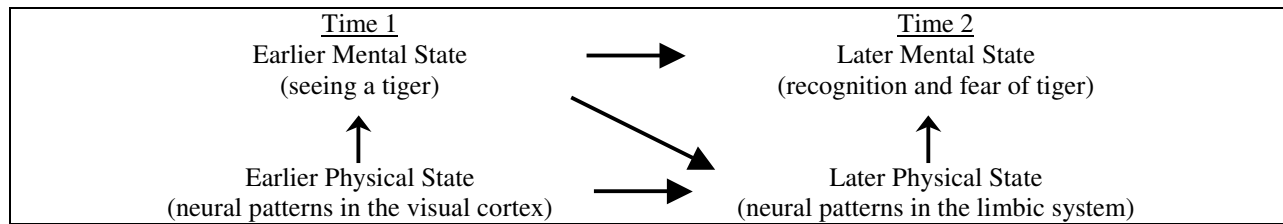
The difficulty becomes apparent when the causal relations are sketched over time. So ignoring mental-to-mental and mental-to-physical causation for a moment, nonreductive materialism takes this form:



The upward arrows (from the physical states to the mental states) represent the one-way determination of the supervenience relationship. The rightward arrow shows the earlier physical state as a sufficient cause of the later physical state, in accordance with the causal closure of the

¹⁵ See, for example, Pereboom 2002.

physical. Of course, for the nonreductive materialist, this sketch is woefully incomplete, as the mental is doing no causal work; it is merely an epiphenomenon of physical processes. So by adding the additional arrows to represent mental-to-mental and mental-to-physical causation, nonreductive materialism thus takes its final form:



But, Kim asks, are these additional causal connections really necessary? Didn't we already have a complete account of all the mental and physical states without them? (Kim 1993, 354). In other words,

Given that [the earlier physical state] is a sufficient cause of [the later physical state], how could [the earlier mental cause] *also* be a cause, a sufficient one at that, of [the later physical state]? What causal work is left over for [the earlier mental state], or any other mental property, to do? (Kim 1993, 354).

Thus mental-to-mental and mental-to-physical causation seems superfluous in nonreductive materialism.

Perhaps worse still, if the nonreductive materialist insists upon such causation in order to avoid epiphenomenalism, he thereby violates the causal closure of the physical by endorsing either overdetermination or joint sufficiency. If the overall causal relationship between Time 1 and Time 2 is one of overdetermination, then both the earlier physical state and the earlier mental state are each individually sufficient causes of the later physical state. However, such overdetermination violates causal closure because “in the counterfactual situation in which the physical cause had not occurred, the mental cause would have occurred and caused the physical effect” (Kim 1993, 281). If the causal relationship is one of joint sufficiency, then the earlier physical and mental state together are a sufficient cause of the later physical state. But this too violates causal closure because “it regards the mental event as a necessary constituent of the full cause of a physical event” (Kim 1993, 280). So in sum, Kim’s supervenience argument lays a careful trap for the nonreductive materialist, one that forces an either-or choice between materialism and mental causation.

On a superficial level, nonreductive materialism’s difficulties with mental causation seem like an internal dispute within analytic philosophy of mind—and thus irrelevant to Objectivism. But in fact, the supervenience argument seems to apply generally to nonreductive theories of mind, including the ever-popular emergentism (Kim 1993, 344-8). So we ought to ask: Is the problem inherent to nonreductionism? Or are just particular elements of this multiple realization version of nonreductive materialism to blame? Without clear answers to these questions, an Objectivist theory of mind could itself fall prey to the supervenience argument.

We might begin hopefully, by noting that nonreductionism, as an epistemological thesis, is unlikely to be the cause of nonreductive materialism’s ontological and causal difficulties. Instead, its property dualism seems largely to blame. By postulating mental properties *ontologically* distinct from the physical, property dualism requires two distinct causal chains, one mental and one physical. Then if we inquire about the relationship between these causal chains, as Kim does, materialism offers us one answer, nonreductionism another (Kim 1993, 238). On the one hand, materialism says that these distinct causes must be “nomic equivalents” such that “they co-occur as a matter of law” (Kim 1993, 247). On the other, nonreductionism precludes

the reduction of the mental to the physical through any such laws. Property dualism, in short, creates a conflict between nonreductionism and materialism.

Objectivism, in sharp contrast, completely rejects the realism about universals that makes property dualism possible (Rand 1990, 52-4). Thus in differentiating her theory of concepts from both nominalism and realism, Ayn Rand writes,

Objectivism holds that the essence of a concept is that fundamental characteristic(s) of its units on which the greatest number of other characteristics depend, and which distinguishes these units from all other existents within the field of man's knowledge. Thus the essence of a concept is determined *contextually* and may be altered with the growth of man's knowledge. The metaphysical referent of man's concepts is not a special, separate metaphysical essence, but the *total* of the facts of reality he has observed, and this total determines which characteristics of a given group of existents he designates as *essential*. An essential characteristic is factual, in the sense that it does exist, does determine other characteristics and does distinguish a group of existents from all others; it is *epistemological* in the sense that the classification of "essential characteristic" is a device of man's method of cognition—a means of classifying, condensing and integrating an ever-growing body of knowledge (Rand 1990, 52).

So by locating our conceptual distinctions between mental and physical properties in reality itself, property dualism runs contrary to basic principles of the Objectivist epistemology.

The Dualistic Structure of the Analytic Debate

Stepping back from the particular debates about dualism, materialism, and reductionism to survey the analytic approach to philosophy of mind, we find substantial problems in the basic language, categories, and structure of the debate itself. By accepting the "archaic vocabulary" inherited from Cartesian substance dualism, most analytic philosophers are automatically thrust into the mind-body dichotomy (Searle 1992, 4, 14). Breaking from that tradition, John Searle argues that dualistic categories prevent philosophers from acknowledging even basic and obvious facts about consciousness, including that we are conscious and that those conscious states are intentional, subjective, and causally efficacious (Searle 1984, 15-16). So what is this language of dualism? In *The Rediscovery of the Mind*, Searle writes:

The vocabulary includes a series of apparent oppositions: "physical" versus "mental," "body" versus "mind," "materialism" versus "mentalism," "matter" versus "spirit." Implicit in these oppositions is the thesis that the very same phenomenon under the same aspects cannot literally satisfy both terms. Sometimes the semantics and even the morphology seems to make this opposition explicit, as in the apparent opposition between "materialism" and "immaterialism." Thus we are supposed to believe that if something is mental that it cannot be physical; that if it is a matter of spirit that it cannot be a matter of matter; if it is immaterial, it cannot be material (Searle 1992, 14).

Implicit in these oppositions, Searle notes, are "a surprising number of theoretical claims that are almost certainly false" (Searle 1992, 14). Yet they structure the debate—and thereby rigidly limit theories of mind to predetermined categories. Thus Searle describes his options as an undergraduate: "You could either be a monist or a dualist. If you were a monist, you could be either a materialist or an idealist. If you were a materialist, you could be either a behaviorist or a physicalist. And so on" (Searle 1984, 14). Since that time, the range of recognized views has expanded somewhat, but the basic divisions generated by the dualistic language remains. Rather than confuse the debate in an attempt to rehabilitate these terms, Searle justifiably recommends that we "abandon [the] vocabulary altogether" (Searle 1992, 55).

As a rejection of an implicit dichotomy between mind and body, Searle's analysis of the problems of dualistically defining the mental and the physical is obviously compelling to Objectivists. And complaints about the structural limits of the modern debate are common in Objectivist commentaries on philosophy of mind (Peikoff 1991, 35-6; Branden 1991, 10). But since Objectivism understands the concepts mental and physical as grounded in the basic

contrast between subject and object (as previously discussed with respect to the body problem) are we thereby mired in the language of dualism? Is there some way of overcoming the implicit opposition of these two concepts? In short: yes, by thinking of the minds of other creatures.

In its most primitive form, our distinction between subject and object—and thus between mental and physical—is grounded in our own first person perspective. We are subject and all else is object, so the concepts mental and physical neatly divide the world into two exhaustive and mutually exclusive categories. But when we consider other rational and conscious beings, the categories begin to overlap. After all, other conscious creatures are the objects of our awareness (i.e. physical), but the subjects of their own awareness (i.e. mental). And conversely, we are objects to them (i.e. physical) and subjects to ourselves (i.e. mental). In other words, all conscious creatures are both mental and physical—and thus we need a philosophy of mind to help us understand the relationship between the physical and mental aspects of conscious creatures. So despite some superficial differences, Searle's suggestion to shed the dualistic language of the analytic debate is compatible with the Objectivist perspective on the foundations of the concepts mental and physical.

Aristotle's Biological Approach to the Mind

As already mentioned, Searle's objections to the structure of the analytic debate are similar to those found in Objectivist commentaries on philosophy of mind. However, those Objectivist critiques are almost always coupled with an intriguing endorsement of Aristotle's approach to the mind. For example, in a 1963 Review of Herman Randall's book *Aristotle*, Ayn Rand writes,

For Aristotle, life is not an inexplicable, supernatural mystery, but a fact of nature. And consciousness is a natural attribute of certain living entities, their natural power, their specific mode of action—not an unaccountable element in a mechanistic universe, to be explained away somehow in terms of inanimate matter, nor a mystic miracle incompatible with physical reality, to be attributed to some occult source in another dimension. For Aristotle, “living” and “knowing” are facts of reality; man's mind is neither unnatural nor supernatural, but natural—and this is the root of Aristotle's greatness, of the immeasurable distance that separates him from other thinkers (Rand 1963, 19).

In *Psychology of Self-Esteem*, Nathaniel Branden echoes these sentiments in writing,

In the writings of Aristotle, one finds a treatment of consciousness (and of life) that is signally superior to the approach of most “moderns.” There are many respects in which, when one studies the history of philosophy, moving from Aristotle to Descartes to the present, one feels as though history were moving backwards, not forwards—as if most of Aristotle's successors down through the ages have been pre-Aristotelians. Aristotle is neither a mystic nor a “materialist”; he does not regard consciousness as supernatural, as an incomprehensible and irksome presence in a mechanistic universe, to be banished by reduction to the blind motion of inanimate particles, like an exile whom the authorities found discomfiting. To Aristotle, consciousness is a natural fact of reality, the characteristic attribute of certain entities. In this issue, his approach is far more “empirical” than of most “empiricists.” His example should serve as a lead to those who desire to pursue a genuinely scientific study of conscious living organisms (Branden 2001, 10).

Obviously, the object of praise in these passages is not the details of Aristotle's substantive theory of mind but rather his deeply biological and naturalistic approach to the subject.¹⁶ So let us take Branden's advice and pause to review Aristotle's approach to the mind.

For Aristotle, growing, eating, reproducing, moving, perceiving, thinking, and imagining are activities of particular kinds of organisms, whether plant, animal, or human (Aristotle 413a23-25). The aspect of a living organism that makes such activities possible is that

¹⁶ I discuss both the particulars of Aristotle's theory and his biological approach in my paper “The Soul of Aristotle” available at <http://www.dianahsieh.com/papers/tsoa.html>.

organism's "soul."¹⁷ The nutritive soul of plants enables them to grow, obtain food, and reproduce. The sensitive soul of animals further enables perception and movement. And the rational soul of humans, i.e. the mind, allows us to also think and reason. Thus we might think of the soul as "a complex of ... actual capacities" of living beings (Wedin 1988, 15). So by emphasizing "the continuity, rather than the differences, between process in plants and processes in humans," Aristotle deeply connects consciousness to the ordinary biological processes of life (Sorabji 1993, 165). In this biological orientation, Aristotle stands outside the traditional choice of either materialism or dualism. He explicitly rejects the mind-body dichotomy underlying those views, instead regarding the organism as a metaphysical unity of mind and body.

From an Aristotelian perspective, both materialism and dualism obfuscate the relationship between mind and body by artificially elevating either mind or body while denigrating the other. The dualist begins with minds as self-evident, then wonders how body might possibly be understood. Thus in *Meditations on First Philosophy*, Descartes argues for his indubitable existence as a thinking self in the Second Meditation, but doesn't establish the existence of his body until the Sixth Meditation (Descartes 1988, 24-25, 71, 80). Materialism simply reverses the process by first regarding the existence of bodies as obvious and then wondering how to understand the mystery of mentality. So in *Philosophy of Mind*, Jaegwon Kim formulates the mind-body problem as that of "accounting for the place of mind in a world that is essentially physical" (Kim 1998a, 9). Both dualism and materialism err from the outset in severing the conscious organism into two distinct elements, one self-evident, the other mysterious and inexplicable. In doing so, explaining the unity and causal interaction of mind and body becomes virtually impossible.

In contrast, Aristotle regards the whole organism, the unity of soul and body that is a living being, as the proper starting point of the inquiry. Every organism is a "unit" such that any divisions between soul and body or between parts of the soul are only "convenient abstraction[s]" (Hammond 1902, xxi). As a result, explaining the relationship between mind and body is no more difficult than explaining the unity of features found in any entity.

Given the strengths of Aristotle's basic approach to the mind, we might wonder: What would a modern philosophy of mind in the tradition of Aristotle look like? Somewhat surprisingly, it would look a great deal like John Searle's biological naturalism.

Searle's Simple Solution of Biological Naturalism

In our survey of philosophy of mind thus far, we've focused a good deal of attention on the errors and pitfalls of the analytic tradition. Admittedly and unfortunately, much analytic philosophy is a confused tangle of error from an Objectivist perspective. One analytic philosopher, however, stands out as a notable exception to this rule: John Searle. Despite his roots in the analytic tradition, his biological naturalism is essentially what an Objectivist theory of mind ought to look like. Let us briefly sketch his views.¹⁸

In the opening pages of *The Rediscovery of the Mind*, Searle boldly claims that the mind-body problem has a "simple solution," one available to "any educated person since serious work began on the brain nearly a century ago" (Searle 1992, 1). This solution, which he calls

¹⁷ For Aristotle, the soul is the form of an organism; the body is the matter. The soul is not a separate substance in the Cartesian sense, but a wholly integrated aspect of it. Consequently, Aristotle cannot be justly read as endorsing either vitalism or dualism. The language is merely unfortunate—not revealing.

¹⁸ The most concise summary of Searle's basic theory of mind is found in the chapter entitled "The Mind-Body Problem" in *Minds, Brains, and Science* (Searle 1984, 13-27).

“biological naturalism,” views consciousness as being “as much a part of the natural biological order as any other biological feature such as photosynthesis, digestion, and mitosis” (Searle 1992, 1, 90). As such, the apparently intractable mind-body problem is not really much more difficult than the nonexistent digestion-stomach problem (Searle 1984, 14). As we might expect, Searle’s theory rejects the scientific rationalism of reductive materialism, instead recognizing the obvious, unique, and fundamental features of conscious experience (like intentionality, subjective feeling, and unity) as objective facts of biology (Searle 1992, 126-141; Searle 1984, 25). Even the subjectivity of consciousness, Searle argues, is an objective fact:

My present state of consciousness is a feature of my brain, but its conscious aspects are accessible to me in a way that they are not accessible to you. And your present state of consciousness is a feature of your brain and its conscious aspects are accessible to you in a way that they are not accessible to me. Thus the existence of subjectivity is an objective fact of biology” (Searle 1984, 25).

Consciousness, in short, is fascinatingly unique, but not mysterious (Searle 1984, 24).

At the heart of Searle’s theory of mind are two basic theses about the relationship between mind and brain:

1. Causal Thesis: “Mental phenomena, all mental phenomena whether conscious or unconscious, visual or auditory, pains, tickles, itches, thoughts, and indeed all of our mental life, are caused by the processes going on in the brain” (Searle 1984, 18).
2. Feature Thesis: “Pains and other mental phenomena just are features of the brain (and perhaps the rest of the central nervous system)” (Searle 1984, 19).

Searle plausibly appeals to detailed analogies to atomic theory to convey the meaning of these theses in philosophy of mind:

A common distinction in physics is between micro- and macro-properties of systems—the small and large scales. Consider, for examples, the desk at which I am now sitting, or the glass of water in front of me. Each object is composed of micro-particles. The micro-particles have features at the level of molecules and atoms as well as at the deeper level of subatomic particles. But each object also has certain properties such as the solidity of the table, the liquidity of the water, and the transparency of the glass, which are surface or global features of the physical systems. Many such surface or global properties can be causally explained by the behavior of elements at the micro-level. For example, the solidity of the table in front of me is explained by the lattice structure occupied by the molecules of which the table is composed. Similarly, the liquidity of the water is explained by the nature of the interactions between the H₂O molecules. Those macro-features are causally explained by the behavior of the elements at the micro-level (Searle 1984, 20-1).

So in atomic theory, we accept that “the surface features are *caused* by the behavior of elements at the micro-level” and that “the surface phenomena *just are* features of the... system” (Searle 1984, 21). Searle argues that the same basic analysis applies to the relationship between mind and brain, in that the mind is “caused by processes at the neuronal or modular level” and also “realized in the very system that consists of neurons” (Searle 1984, 22). Searle thus (cautiously) describes consciousness as an “emergent property” of elements of the brain (Searle 1992, 111-2; Searle 2002, 31).

Because Searle’s theory is sufficiently distinct from the standard categories and debates in philosophy of mind, we must pay close attention to what this biological naturalism does *not* imply. First and foremost, it does not imply that consciousness can be reduced to the physical, as Kim claims (Kim 1998b, 49). As discussed earlier, Searle argues that the process of reduction discards subjective experience as irrelevant, but such subjective experience is precisely what philosophy of mind seeks to explain. Second, Searle’s theory does not imply dualism “any more than the causal relationship between molecule movement and solidity implies a dualism of molecules and solidity” (Searle 2002, 31). Mind and body causally interact, but “are not two different things,” just “two levels of description” (Searle 1984, 26). Third and finally, Searle’s

views do not lapse into epiphenomenalism because “far from showing the macro level to be epiphenomenal, the micro level of explanation shows, among other things, why the macro levels are causally efficacious” (Searle 2002, 27).

In sum, Searle’s biological naturalism is consistent with both our knowledge of the brain from science and our knowledge of consciousness from philosophy—and with Objectivism’s approach to mind and body. While some marginal revisions might be necessary and useful from an Objectivist perspective, we might better spend our time before closing with a brief look at the ways in which philosophy of mind is prone to the errors of the “diaphanous model of the mind.”

The Diaphanous Model in Philosophy of Mind

In *Introduction to Objectivist Epistemology*, Ayn Rand argues that a recurring source of error in epistemology lies in the implicit presumption that knowledge, to be valid, must not be “processed” in any fashion by consciousness (Rand 1990, 79-82). Kant, she argues, exemplifies this error with particular clarity:

His argument, in essence, ran as follows: man is *limited* to a consciousness of a specific nature, which perceives by specific means and no others, therefore, his consciousness is not valid; man is blind, because he has eyes—deaf, because he has ears—deluded, because he has a mind—and the things he perceives do not exist, *because* he perceives them (Rand 1990, 80).

In *Evidence of the Senses*, David Kelley builds upon Rand’s insights, identifying the “diaphanous model of the mind” as the origin of the false dichotomy between (naïve) realism and idealism in perception (Kelley 1986a, 37-41).

Kelley argues that the diaphanous model is grounded in the simple observation that our “awareness of an object seems transparent” like “a revelation” (Kelley 1986a, 37). From this subjective perspective, we are “unaware... of the way our cognitive faculties operate to produce our awareness” and so “it seems as if nothing but the object itself determines... the way it appears” (Kelley 1986a, 37). The critical error made by the diaphanous model is in then inferring that consciousness must actually *be* transparent, that “the awareness of objects cannot be mediated by any process whose nature affects the way the object appears” because any such process would only distort our awareness (Kelley 1986a, 37). More generally, the model claims that “if consciousness has an identity of its own, then it cannot grasp the identities of things external to it” (Kelley 1986a, 39). As Kelley notes, the debate between idealism and realism depends upon both sides accepting the diaphanous model as the standard of knowledge (Kelley 1986a, 39). The idealist claims that consciousness *does* have a definite identity, so it *cannot* grasp reality. The realist claims that consciousness *does not* have any definite identity, so it *can* grasp reality. Both views, however, are wrong. Consciousness is, in fact, “a faculty possessed by living organisms, with a specific, determinate nature like any of their other biological systems” (Kelley 1986a, 40). As such, it “responds in specific ways to external stimulation, processing in specific ways the material provided by the environment” (Kelley 1986a, 40). These facts do not demonstrate that consciousness cannot grasp reality, but rather just the opposite: that it can, by revealing the ways in which it does.

Unsurprisingly, we find this same diaphanous model of the mind hard at work in analytic philosophy of mind—and even Objectivist commentators on the subject are not immune from the error. The diaphanous model in philosophy of mind claims that if the mind is grounded in specific physical causal mechanisms, then it cannot really be a mind at all. The materialist, focused upon the neurological causes of consciousness discovered by science, infers (like the idealist) that the mind isn’t really real after all. The dualist, focused upon the transparency and

subjectivity of conscious experience, infers (like the realist) that consciousness must be something separate and distinct from the mere mechanical processes of the body.

In sharp contrast to both these mistaken views, Searle's biological naturalism regards the discovery of the neurological causes of consciousness as confirming the reality and causal efficacy of consciousness. And what a difference that makes!

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