

"Consciousness and Realism"*

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ABSTRACT: There is a long and storied history of debates over "realism" that has touched literally every academic discipline. Yet realism-antirealism debates play a relatively minor role in the contemporary study of consciousness. In this paper four basic varieties of realism and antirealism are explored (existential, epistemological, semantic, and ontological) and their potential impact on the study of consciousness is considered. Reasons are offered to explain why there is not more debate over these issues, including a discussion of the powerful influence of externalist versions of physicalist realism. Examples are given of approaches to consciousness studies that challenge contemporary versions of physicalist realism.

“Realism” refers to a wide range of different theories ranging from what things exist in the universe to the very nature of existence itself. The vast majority of these theories fall within a few broad categories. The purpose of this essay is to explain the essential features of each of these basic categories; first, as they can be articulated independent of any particular subject matter, and then as each one is applied to the present object of study, “consciousness.”

There is a good deal of variation in the classification systems used to sort the myriad versions of realism. I recommend the following types of realism as drawing the most salient distinctions: existential, epistemological, semantic, and ontological.

1. Existential Realism

To be an *existential realist* about anything is to believe that that thing “really exists,” that it is included within one's ontological commitments. One can be committed to the existence of a single object, a *token* (e.g., Big Ben, my wedding ring), and/or to the existence of a kind or a *type* (e.g., clocks, gold).

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While it is possible to be committed to the existence of a token without thereby committing oneself to the existence of a type, we often do both. When I assert, “I have a pain in my knee,” I seemingly commit to the existence of both a token-pain (the one in my knee) and to pain as a type. But here we must be careful. There are at least two ways in which my casual speech might belie my deepest metaphysical commitments. First, I might speak “as if” some kind, *K*, exists when I am really committed to no such thing.

Second, even if I do include some kind, *k*, in my ontology, all this reveals is that I believe that *k*'s exist *in the same sense that* I believe more familiar things like trees and planets exist. But if it has not been specified *in what sense* that is, precious little has been expressed. Scientific disputes about the existence of theoretical entities (the aether, quarks, or pain) are almost always *local* disputes, where the rest of one's ontology is simply bracketed (for pragmatic reasons) even though all parties do *not* necessarily agree about what it means to say that something “exists.” These *global* ontological disputes about the very nature of existence will be discussed in “Section 4: Ontological Realism.”

“Does consciousness really exist?” is a question of local ontology. It asks us to draw a line that separates those who are *existential realists* about consciousness from those who aren't. The first cut is easy. There are eliminativists who straightforwardly argue that consciousness does not exist. Paul Churchland believes that future scientific advancements, especially in neuroscience, will force us to abandon our commitment to pre-theoretical (folk psychological) categories, including those that we would describe as “conscious.” It may turn out that there is nothing in the universe that has the property of “being a conscious mental state,” given current uses of that phrase. If so, then new terms, that are more neurophysiologically based, must be added to the language to successfully refer to real mental states (Churchland, 1988, p. 301).

There are some who hold a position very close to eliminativism but who are quite calculated about speaking of consciousness as if it really does exist. Daniel Dennett falls into this camp, with his commitment to the "intentional stance." (Dennett, 1987) He believes that we are justified for pragmatic reasons in attributing folk psychological states, including conscious mental states, to human beings (and even to artifacts) because attributing intentions (and the like) is the best, most reliable way of predicting their behavior. This is a view variously called, pragmatism, operationalism, and instrumentalism. The latter term will be used here.

There are grounds for calling Dennett an instrumentalist, as he himself once did. For him, terms referring to mental states are convenient tools, but carry little in the way of ontological weight. Dennett, however, no longer approves of being labeled an 'instrumentalist' (1987) because he likes to think of himself as a kind of realist. Here, Dennett joins many other famous non-realists from Immanuel Kant (A369) to Hilary Putnam (1983, p. 226), who have insisted that they occupy some territory *between* realism and antirealism, a position that has all the virtues of each and is immune from the criticisms of both.¹ Such territory would be nice to occupy, if it existed, but I am not convinced that there is any such coherent place to stand. Even if I am wrong about this, however, it would be altogether misleading to label Dennett a classic realist; instrumentalism is a better fit.

Eliminativism and instrumentalism are not the only reasons to exclude "consciousness" from one's ontological commitments. One might exclude it because one believes that conscious

¹ Immanuel Kant, the grandfather of modern antirealist positions, while describing his view as a form of idealism ("transcendental idealism") nonetheless, like Dennett, claimed his position was the only reasonable, common sense kind of realism available, what he called "empirical realism" (Kant, A369). Hilary Putnam advanced a form of antirealism in the 1980's (a kind of neo-Kantianism) that continues to influence philosophers, social scientists, and natural scientists today. Putnam too claimed that he was neither fish nor fowl with a position that he believed was best described first as "internal realism" and then as "pragmatic realism." He claimed that he was charting "a narrow path . . . between the swamps of metaphysics and the quicksands of cultural relativism and historicism" (1983, p. 226). It's nice work if you can get it; but I believe Kant, Putnam, and Dennett are each important and interesting precisely because they defend sophisticated non-realist positions (Anderson, 1992).

mental states are already listed under a different description. Those who accept the Identity Thesis are reductionists about consciousness, believing that mental states reduce, without loss, to brain states. A reductionist already includes brain states in her list of ontological commitments and it would therefore be redundant (and some believe, misleading) to add the term ‘consciousness’ to the list because that would imply that consciousness is something over-and-above dynamical states of the brain. So a case can be made for the view that reductionists are not *existential realists* about consciousness and thus hold precisely the same metaphysical position that eliminativists hold. (Dummett, 1978, pp. 145, 156-58; Siderits, 1997).

Many people (including some reductionists) will find this last claim counter-intuitive. Some will say that there is all the difference in the world between Churchland's eliminative materialism and the classic Identity thesis. After all, when it was discovered that lightening is not a thunderbolt of Zeus but reduces without loss to an electrical discharge, we did not thereby discover that lightening is not real. We simply discovered what its true nature is. The appropriate thing to say is that lightening exists but its essential nature is identical to that of electricity. So on this score, we will leave it to individual reductionists (Identity theorists or others) to decide whether they consider themselves realists about consciousness, or not.

2. Epistemological Realism

Throughout history, it has often been the case that epistemological concerns have taken center stage in debates over realism. One of the primary reasons for rejecting existential realism with respect to some ontological domain is the claim that there is not sufficient evidence to support belief in the existence of such entities. *Epistemological realism* is the view that some entity, *e*,

not only exists but that there is sufficient evidence to support the claim that we *know* that it exists. Epistemological realism, then, entails existential realism.

The view opposing *epistemological realism* is *skepticism*. To be skeptical about *e*'s is to deny that we know whether or not they exist. Of course someone who doesn't believe that *e*'s exist will also reject epistemological realism. However, some of the most famous defenders of skepticism have admitted that they believe in the existence of the disputed entities. David Hume, for example, has given some of the most influential *skeptical* arguments against our knowledge of the "external world," yet he admits that given our psychological constitution we just can't help but to believe in trees and such. He simply denies that those beliefs have the evidential support requisite for knowledge.² Hume is an existential but not an epistemological realist.

Recently, an interesting set of arguments supporting skepticism about our own conscious mental states has been advanced. Change-blindness is a phenomenon produced when an image is gradually changed (fairly substantially) over time yet many subjects fail to detect the change because of the way the eyes naturally saccade back and forth, scanning different parts of the image at different times. Some have argued that this phenomenon, together with blindsight, demonstrate that our visual window on the world is ultimately a "grand illusion," threatening our knowledge of the external world (Noë, 2002a). But does this actually support a kind of Humean skepticism? Admittedly, our visual system is susceptible to certain forms of unreliability. But I must agree with Alva Noë (2002b) that this does not justify the claim that the *beliefs* generated by our visual system might profoundly misrepresent reality. The mistakes we make in change-blindness cases are *not* mistakes that result in wildly incorrect ontological commitments. Given the way that physical changes actually happen in the world and given the many checks and

² David Hume (1740/1975) Part IV, Book 1, Section II.

balances built into our belief-forming systems, there is no reason to think that our beliefs about the external world are riddled with falsehoods.

If it is not skepticism of a Humean kind, then what is at work in the “grand illusion” phenomenon? It is not skepticism about trees, but about our tree-experiences, about our conscious mental states. When asked about the character of a visual experience, we will falsely state that we can discriminate colors on the periphery of our visual field, even though we cannot. And if we are wrong about color, we could well be wrong about other features of our visual experience – thus raising general doubts about the character of our own experiences. Only time will tell what significance this kind of skepticism will have on our understanding of consciousness. It may prove of some importance. But since our false beliefs about our experiential states do not seem to threaten the general reliability of the beliefs about the external world, the significance may well remain modest.

3. Semantic Realism

In the 20th century, analytic philosophy turned its realist attentions away from epistemology and toward language. No longer taking language for granted, philosophers plumbed its depths looking to discover its fundamental nature and its working mechanisms so as to explore the ways in which it might give up clues that could impact our ontological and epistemological commitments. Now called the “linguistic turn,” this philosophical movement impacted virtually every sub-discipline of philosophy and its legacy remains undiminished in contemporary philosophy (Rorty, 1992; Lafont & Medina, 1999).

The linguistic turn permanently shifted the focus of the debate about realism, drawing attention to the following truths:

- (1) There are different ways of interpreting the claim that ‘Entity, *e*, exists’ which must be made explicit or fundamental disagreements about ontology will remain invisible.
- (2) What it means to be a realist and whether anyone is, in fact, capable of being a realist *about anything*, ultimately depends upon what our ontological utterances *mean* and in particular whether or not they succeed in making realist claims.

In the 20th century, and especially during its second half, it became clear that the central debate about realism was not any particular, local dispute (although, those disputes continued apace) but a *global* dispute about the very coherence of realism for *all* domains of discourse.

Early in the century, influences from sociology and anthropology (especially the Sapir-Whorf hypothesis), had already advanced the thesis that language shapes our beliefs about reality. Sapir’s claim that “the ‘real world’ is to a large extent unconsciously built up on the language habits of the group” (Sapir, 1929) led many social scientists to hold a form of *ontological relativism*. This is the view that there is not one objective (viz. real) way that the world is, but each culture lives in its own world, constructed by the conceptual scheme unique to that culture. How you “see” the world – whether you have a different term for blue and green or whether you have just one “grue” term – is determined not so much by the “real” world, but by your own interests. The activity of the conscious mind determines what is true about the “world-of-experience” rather than the world determining the experiential and representational states of the conscious mind.

While these arguments did foster a kind of linguistic idealism among some scholars, their primary influence was on sociologists, anthropologists, and some continental philosophers. It had less impact within analytic (or Anglo-American) philosophy. Then, in the 1960’s when

many philosophers assumed that the debate had been settled once and for all in favor of realism,³ a wave of new semantic arguments attacking realism were advanced.

Michael Dummett (1978) argued that no one is capable of *being* an ontological realist about “trees” unless the ‘tree’-sentences that express one’s belief in trees have *realist truth-conditions*. *Realist* truth-conditions are contrasted with *epistemic* truth-conditions. If a statement about the external world expresses a *realist* claim, then the truth of that claim is determined solely by the conditions that obtain with respect to the intrinsic nature of mind-independent reality, independent of humans’ ability to recognize those conditions. If a statement expresses an *epistemic* claim, then the truth of that claim is determined solely by conditions that can be recognized as obtaining from the perspective of some cognitive agent.⁴

One of Dummett’s most influential arguments against realism is that there is no coherent theory of understanding that can explain how human language-speakers could come to grasp the meaning of statements with realist truth-conditions. For example, young children learn to say “There is a red ball” whenever they have the subjective experience of seeing a red sphere. So initially, the only meaning that a child could attribute to the terms, ‘red,’ and ‘ball,’ are the empirical properties (i.e., how things *appear* to the speaker from her own epistemic perspective). But what the child grasps are the conditions under which the statement is *verified* rather than the conditions under which it is *realistically true*. On this account, it is inevitable that the language

³ In the definitive reference work of the period, *The Encyclopedia of Philosophy*, serious challenges to realism were considered all but dead as the entry for “realism” states: “This battle was certainly won by the realists in that few English-speaking philosophers in the twentieth century would espouse idealism. Indeed . . . in a climate of thought that respects common sense and science, realism seems so obvious a starting point that it is difficult to explain how the idealist view ever seemed plausible;” (Edwards, 1967, Volume 7, p. 78). Ironically, the *Encyclopedia* was published in 1967, four years *after* Dummett published his seminal paper, “Realism” which ignited the antirealist movement within Analytic philosophy that continues today.

⁴ Many philosophers consider the realism debate to be about the nature of truth, usually pitting a correspondence theory of truth (read: “realist” theory of truth) against the coherence theory of truth (read: “nonrealist” theory of truth). I believe that is a mistake, that there is only one coherent theory of truth, about which relatively little can be said. It is not a dispute about the nature of truth, but rather about the *kind of truth-conditions* that are expressed by a proposition: verificationist (non-realist) truth-conditions vs. realist truth-conditions.

children begin speaking has epistemic rather than realist truth-conditions. But at what point in childrens' development do they come to grasp the meaning of realist truth conditions? Nothing in our use of language manifests such a knowledge. In the absence of any plausible theory of understanding, Dummett challenges the assumption that any of us have the capacity to grasp realist truth-conditions. (Dummett 1978)

Dummett's arguments greatly influenced Hilary Putnam's conversion from one of the 20th century's most famous defenders of realism, to one of its most famous critics. To Dummett's battery of anti-realist arguments, Putnam contributed his famous "Brains-in-a-Vat" argument (1981, pp.1-21) and his "model-theoretic argument" (1983, pp.1-25) – which are both semantic arguments that claim to show that ontological realism cannot coherently be expressed given a sober analysis of language.

While antirealism (semantic and ontological) continues to garner respectable support within philosophy, the social sciences, and even among some physicists, why is it not taken more seriously within the study of consciousness? This can best be explained, I suggest, by the rise of "global externalism," a philosophical movement that is (at least tacitly) optimistic that a wholly externalist account will eventually be forthcoming for every domain of philosophy, from epistemology to semantics to ontology, from intentionality to consciousness. The contemporary externalist movement arose in many different areas of study at basically the same time in history (the 1950's-70's). In each domain, this movement brought important new insights to their field – many elements of which are fairly uncontroversially accepted. However, the cumulative effect of these successes in a number of different areas has led to an increasingly popular (yet, not often-enough admitted) assumption that *global externalism* ought to be the new metaphysical dogma for the 21st century. Consider a few areas where externalism rose to prominence.

New anthropological data about color terms was marshaled for a direct attack on the Sapir-Whorf hypothesis and the cultural relativism that it encouraged. Using more fine-grained methods for gathering data, Brent Berlin and Paul Kay (1969) made a strong case for the position that the way humans categorize the world into color-types is *not* determined solely by the interests of each culture. Rather, within known natural languages, there is a rather strict hierarchy of color categories. If a language has only two color terms (and some do), they will always be white and black. If a third color is added, it will always be red. If there are only five color terms the next two to be added will always be yellow and green; the sixth will be blue and the seventh brown. While the order of the final four colors (pink, orange, purple and grey) varies, the colors themselves do not. The total number of basic color terms in a language will not exceed 11 and it will always be the *same* eleven colors just listed.⁵

Berlin and Kay defended this *universalist* account of color in opposition to the prevailing *relativist* account, with remarkably swift success. While Berlin and Kay's views have generated recent controversy, their work has nonetheless won over a great many converts and its influence remains considerable. Many continue to believe that Berlin and Kay's research supports the position that the way mind and language conceptualizes colors is determined by objective, externalist facts about color optics and the way that the brain processes color.

At the same time that this development was changing the shape of cognitive linguistics, an even more dramatic revolution in semantics was taking place in philosophy. Up until that point, the received view about the nature of how words refer to objects in the external world could be traced all the way back to Aristotle and had its most familiar articulation in John Locke's "way of ideas." Locke argued that words gain their meaning by the ideas that speakers

⁵ The phrase "basic color" is a technical term which Berlin and Kay (1969) were able to operationally define and which made possible the methodology they employed to gather the data just described.

associate with them. If I think of the term, ‘gold,’ as being anything that is “yellow, shiny, malleable, and dissolvable in aqua regis,” then that is precisely what the word means . . . *to me*. It may mean something slightly different to you. On this account, everyone speaks a slightly different language. And the meaning (often called, the “sense”) of each term will then determine what objects in the world it refers to (its “reference”).

In the late 1960’s and early 1970s, this Lockean, “definite description” theory of reference was challenged by arguments by Saul Kripke, Hilary Putnam, Keith Donnellan, and others, who advanced a “new theory of reference.” According to this theory many words (esp. proper names and natural kind terms) do not have a “sense” but function more like labels that are directly hung on the objects themselves. The terms directly refer to their objects not by virtue of any thoughts floating in the heads of speakers but by virtue of the fact that the terms bear a *causal connection of the appropriate type* to either the singular object (“Aristotle”) or to stuff constituting a particular kind (“gold”). Space doesn’t permit a survey of the arguments advanced in defense of this theory, but their effect was dramatic. Virtually overnight the age-old view of language was dethroned and a majority of philosophers embraced the new theory – at least for natural kind terms (gold, water, tiger, etc.) and for proper names. There are many, though, who believe that causal connections can ultimately account for the semantic content of virtually all aspects of language when combined with an externalist analysis of the mental states that ground all definite descriptions (Adams, Stecker and Fuller, 1992). A fully externalist account of language is the first step toward an externalist reduction of aspects of human thought and cognition.

Externalist epistemological theories have replaced internalist accounts of knowledge: The essence of knowledge no longer lies in the cognizer having epistemically accessible (*viz.*

consciously grasped) “reasons” for belief, rather a belief is knowledge so long as the belief is caused by a “reliable belief-forming mechanism” – whether or not the believer *knows* that it is reliable. The most popular theories of mind (e.g., behaviorism, the Identity thesis, and functionalism) analyze mental states wholly in externalist terms that can be given a third person account, making it possible to determine the content of mental states without taking any account of those (internalist) properties that characterize the subjective “feel” of those mental states. Intentionality gains an externalist analysis by way of the externalist semantics upon which it is built. Externalism's reach has gone so far that even the technical term, ‘qualia,’ that was introduced to give name to the subjective *qualitative* feel of mental states, has been stripped of its internalist heritage by philosophers who have given wholly externalist reductions of the concept (e.g. externalist intentionalists).

There is not the space here to explore all the ways that the internalism-externalism debate intersects the realism-antirealism debate. Suffice it to say that while externalism need *not* lead inevitably to realism,⁶ it is a matter of historical fact that the vast majority of externalists believe that it does. It is reasonable, then, to expect that if antirealism is going to be taken seriously in the study of consciousness it is likely to come from researchers not dogmatically committed to an externalist-realist perspective.

We turn now to two contributors to this volume who do not presuppose a realist ontology in their study of consciousness. One is a physicist and one is a cognitive psychologist

4. Ontological Realism

⁶ Putnam (1981) and Ebbs (2001) are philosophers who have embraced semantic externalism and have produced arguments intended to show that externalist commitments are incompatible with ontological realism, as traditionally conceived. There is a minority view, however. Michael Devitt (1984/1991) reflects the majority view when he titles a chapter "The Renegade Putnam" expressing his chagrin that Putnam would help launch the new theory of reference and then, inexplicably, use it to attack metaphysical realism rather than to defend it.

It is not surprising that a physicalist version of *ontological realism* seems inevitable to those who believe that *knowledge* has been reduced to reliable belief-forming mechanisms, *reference* is a causal connection of the appropriate type, and *qualia* are reduced to intentionality which has itself been reduced (again) to causal connections of the appropriate type. However, a physicist who has spent a career dealing with the Copenhagen interpretation of quantum mechanics may not feel the inevitability of ontological realism with quite the same force. Likewise, a cognitive psychologist, whose research focuses on the way that our perceptual systems go far beyond the mere “copying” of physical phenomenon, is more likely to be open to the Kantian idea that our sensory and cognitive faculties make a constitutive contribution to the empirical world.

Consider first the arguments of Harald Atmanspacher and his co-authors Frederick Kronz (1999) and H. Primas (2005) who focus on realism issues as they arise in quantum theory. They appeal to two different ontological categories: (1) ontic states, and (2) epistemic states. Ontic descriptions characterize systems as they “really are” without reference to epistemic access (viz. knowledge or ignorance). Epistemic descriptions encode knowledge by way of observation and measurement, which in turn presuppose a context of investigation. Epistemic descriptions are always local in nature, limited in scope. Ontic descriptions seek an exhaustive characterization from the proverbial “God’s eye view.” (NOTE: Echoes of this distinction are seen in the contrast drawn earlier in this paper between *existential realism* and *ontological realism*.)

This ontic-epistemic distinction reflects the apparently irreconcilable perspectives of Bohr and Einstein, with the former defending the Copenhagen interpretation of quantum mechanics with its uncompromising commitment to the empirical data and the latter striving for an account of mind-independent reality that would resolve the quantum puzzlements that defy ontic description. Within quantum mechanics, this distinction seems an unbreachable dichotomy

which stands in the way of significant advances in the field. Atmanspacher and his co-authors seek to break the dichotomy by embracing both elements.

Science starts with observation and measurement, presupposing a particular epistemic context. Yet, an ontic level of analysis is also unavoidable because there is no escaping the fact that the very instruments used in measurement (i.e., epistemically) are presupposed and described as if they are robustly (i.e., ontically) real. Thus Bohr's paradigmatically epistemic perspective, itself requires both ontic and epistemic elements. The difficulty of reconciling what seem to be irreconcilable elements

can be resolved if it is realized that the distinction . . . can be applied to the entire hierarchy of (perhaps partially overlapping) domains leading from fundamental particles in basic physics to chemistry and even to living systems in biology and psychology. Ontic and epistemic descriptions are then considered as *relative to two* (successive) domains in the hierarchy. (Atmanspacher and Primas, 2005, p. 59)

This approach borrows freely from two of the most influential antirealist philosophers of the 20th century: W.V.O. Quine and Hilary Putnam. While, neither Quine, Putnam, nor Atmanspacher and friends are comfortable with the antirealist label, they share in common a commitment to *ontological relativity*, which requires ontological claims to be made relative to a particular conceptual scheme and which directly challenges traditional realism. Atmanspacher and Primas (2005, pp.59-61) argue that in quantum mechanics, if the tension between the presuppositions of "common sense" realism and the supposed "absurdities" in quantum holism is ever to find resolution it will be when we are able to understand and adjudicate the ontic and epistemic levels relative to their successive domains within the hierarchy.

Atmanspacher and Kronz suggest that similar analyses might provide insights for the study of consciousness. The asymmetry of views that have consciousness emerging as a higher order property of the brain, might give way to a more fundamental symmetry which is broken when both mind and matter emerge at a higher level of description. Symmetries in quantum holism might even provide the resources necessary for discovering the deeper symmetry behind the mental and the physical. (1999, p.302)

A second non-realist approach to the study of consciousness is offered by J. Scott Jordan (1998, 2000). Jordan stands firmly within the empiricist tradition, committed to the tenet that in scientific inquiry, inferences should not be allowed to extend beyond what the data justifies. Epistemology precedes ontology. Ontology only follows where the evidence and parsimony lead; it is not allowed to be the cart that goes before the horse. Parsimony is accepted by virtually everyone as one of (if not *the*) central evaluative criteria for assessing scientific theories. Current physicalist theories of the mind have beat out dualism in no small part because the latter is considered ontologically profligate, increasing metaphysical commitments “beyond necessity.” It follows from Jordan’s arguments that physicalism will suffer a similar fate if only empiricism and parsimony are allowed to have sway. (Jordan 1998, pp. 66-67)

At the level of description relevant to the analysis of perception, physicalism assumes reality is populated by discrete entities with sufficiently precise boundaries to allow a Newtonian description of their interaction with one another. Perception, on this account, must be conceived in terms of one discrete entity scanning another and generating a representation of that object. Our knowledge of other objects will be measured by the accuracy of that representation. The age old epistemological dilemma, of course, is that we never “see” reality as it is in-itself, so we can never compare our representation to the real thing to determine its reliability, which leads to

skeptical worries. If perception is seen as “representation” of an external stimulus it will always be inadequate because it will be judged as lagging behind the stimulus and incapable of capturing the totality of what is given in the stimulus (Jordan 1998, p. 66).

Jordan suggests that there is an alternative way of understanding the relationship between the knower and the world that is more rigorously empiricist, is more parsimonious, and that does not raise the same skeptical worries. Rather than reifying regularities in our experience by giving them discrete, corpuscularian properties, the relationship between knower, acts of perception, and things known should be seen instead as the dynamic workings of overlapping fields of force. On the traditional view, the organism is the passive element, bombarded by “input” from the environment. The organism is only able to control the “output,” its post hoc response to stimulus. Jordan wants to turn this picture on its head by considering the organism as the active element, and the environment as the passive domain which is affected by the organism-as-agent. Here perception is the dynamic process by which the organism (a field of force overlapping with the other fields comprising the environment) imposes itself on the environment, forcing a transfer of energy from the environment that allows the organism to achieve its survival-related goals.⁷ The measure of success in perception is not veridicality (or “accurate mirroring”) of the proximal representations, but rather effective control of the distal environment.

Hershberger and Jordan (1992 & 1994) conducted studies in which subjects in an otherwise dark room produce saccadic eye-movements across a fixed, rapidly blinking LED.

⁷ This echoes Kant’s (1787) most famous dictum, the so-called Copernican revolution in epistemology. He insisted that the burden was not on the human knower to somehow figure out how to mirror the world, but the burden was on the world to meet the conditions necessary for the very possibility of human experience, without which it would not succeed in being a world “for-us” (i.e., a world that we are able to experience).

Subjects observe a "phantom" array of horizontal flashes in the opposite direction of the saccadic movement. Is this a failure of the perceptual system, with the subject seeing lights where there are none? Interestingly, the shifts in the perceived location of the LED's *precede* the saccade, indicating an anticipatory effect (1998, p. 74). On Jordan's account this is best understood *not* as an illusion nor the mistake of a malfunctioning system that cannot accurately "represent" mind-independent reality, but rather as an active, anticipatory form of perception that is designed (quite appropriately by evolution) not to perform acts of "mirroring" but to dynamically construct the perceived world in advance of direct "input" so as to maximize the effectiveness of the energy transformations necessary to maintain the health of the organism.

How is Jordan's position to be described vis-à-vis the realism debate? There are distinctly Kantian themes running through his position. He also shares some commonality with the early 20th century phenomenalist tradition by arguing that ontological commitment need not extend beyond what is given directly in experience. Jordan fits comfortably into the broader antirealist tradition that includes many of those with pragmatist leanings among the logical positivists (including the Vienna Circle) and even going back to J. S. Mill and his analysis of physical objects as "the permanent possibility of experience." Jordan, himself, feels more kinship with the likes of thinkers like John Dewey (Jordan, 1998) and Michael Oakeshott who don't carry quite as much philosophical baggage as do the phenomenologists. Finally, he describes himself as a "neutral monist" – an umbrella term for a broad range of different theories that typically have in common a rejection of the mind-matter dichotomy for an ontologically "neutral" substrate from which all things are constituted. (I leave to the reader to judge whether this description is apt.)

In briefly surveying the positions of Atmanspacher, Kronz & Primas and Jordan, we have seen how the study of consciousness shifts in interesting directions when ontological realism is not assumed to be an unimpeachable dogma.

5. Conclusions

The scientific method calls us to give priority to the empirical data and to hold ontological commitments tentatively, always open to revision. There is no room for dogmatism. However compelling the metaphysical perspective of a reductive-physicalist-externalist-realism, it is not methodologically appropriate to make that a presupposition immune from criticism. This is especially true when the subject of study is consciousness, that part of the universe that has thus far been so resistant to easy, uncontroversial reductive analysis. In the study of consciousness we are searching for deep insights into that puzzling relationship between the subjective, first-person perspective of the world given through immediate experience and the objective, third-person perspective of the world given through the natural sciences. In the study of realism we are also searching for deep insights into the puzzling relationship between the “independently real” and the “epistemically justified.” The realism debate covers territory that either overlaps with the consciousness debate or is congruent to it. A resource that could greatly benefit the study of consciousness will be lost if many centuries of critical reflection about realism are ignored.

The suggestion being offered here is *not* that antirealism necessarily holds the key to the mysteries of consciousness. The reader may be surprised to find that the author is not a committed ontological antirealist. I believe in the mind-independent existence of the middle-sized physical objects that populate a typical common sense metaphysics and I am even a scientific realist about the theoretical entities countenanced by current physical theory. I hold that

human beings have the capacity to speak a language with realist truth-conditions, rejecting Kant's, Dummett's and Putnam's arguments to the contrary. I am a semantic realist, then, with respect to a broad class of statements.

I part company with most realists, though, in holding that our statements about the external world are not universally to be given a realist interpretation. A good part of our everyday discourse is properly interpreted as having antirealist truth-conditions. (Anderson, 1995.) Further, I reject the triune doctrines that comprise what I have called the externalist juggernaut: semantic externalism, epistemological externalism, and externalist theories of mind. While I do not go so far as Jordan, I do believe that we will never have a satisfactory theory of consciousness without the integration of some internalist elements in all three of the domains previously mentioned and without the addition of some antirealist semantic elements in our language. As things currently stand, insights into the nature of consciousness from the broadly idealist /empiricist traditions are in short supply. The reductive power of externalist theories goes some distance to explain the popularity enjoyed by physicalist realism. However, given that it is consciousness that we are studying, it is still surprising that more attention is not paid to the constitutive role of our cognitive faculties in shaping the world of our perceptions. A much greater stock of resources is available to enrich our understanding of consciousness if only the long tradition of philosophical reflection on questions of realism and idealism is brought to the table. And if, as many people believe, the philosophical perspective of externalist-physicalist-realism does indeed prove capable of constructing a satisfactory theory of consciousness, locating and defending that theory against the backdrop of the realism-antirealism debates will help to make clear precisely how that victory was secured. It is my proposal that the doors and

windows be thrown open and that the “realism” debates be taken front and center within the school of consciousness.

REFERENCES

- Adams, F., Stecker, R. and Fuller, G. (1992), ‘The Semantics of Thought,’ *Pacific Philosophical Quarterly*, 73, pp. 375-389.
- Anderson, D.L. (1992), ‘What is Realistic about Putnam’s Internal Realism?’ *Philosophical Topics*, 20 (1), pp. 49-84.
- Anderson, D.L. (1993), ‘What is the Model-theoretic Argument?’ *The Journal of Philosophy* XC, pp. 311-322.
- Anderson, D. L. (1995), ‘A Dogma of Metaphysical Realism,’ *American Philosophical Quarterly*, pp. 32: 1-11.
- Anderson, D.L. (2002), ‘Why God is not a Semantic Realist,’ in *Realism and Antirealism*, ed. W.P. Alston, (Ithica, NY: Cornell University Press).
- Atmanspacher, H., and Kronz, F. (1999), ‘Many Realisms,’ in *Modeling Consciousness Across the Disciplines*, ed. J.S. Jordan (New York: University Press of America), pp. 281-306. (Originally published in *Acta Polytechnica Scandinavica*, (1998), 91, pp. 31-43.
- Atmanspacher, H., and Primas, H. (2005), ‘Epistemic and Ontic Quantum Realities,’ In *Foundations of Probability and Physics* ed. By A Khrennikov, American Institute of Physics, pp. 49-61. Originally published in *Time, Quantum Information*, ed. By L. Castell and O. Ischebeck, Springer, Berlin, 2003, pp. 301-321.
- Berlin, B. and Kay, P. (1969/1991), *Basic Color Terms: Their Universality and Growth*, 2nd Ed.. (Berkeley, CA: University of California Press).
- Churchland, P. (1988). ‘Reduction and the neurobiological basis of consciousness,’ in *Consciousness in Contemporary Science*, eds. A.J. Marcel and E. Bisiach (Oxford: Oxford University Press), pp. 273-304.
- Dennett, D. (1987), *The Intentional Stance* (Cambridge, MA: The MIT Press).
- Devitt, M. (1984/1991), *Realism and Truth*, 2nd Edition (Oxford: Blackwell).
- Dummett, M. (1978), *Truth and Other Enigmas* (Cambridge: Cambridge University Press).
- Ebbs, G. (2001), *Rule-Following and Realism* (Cambridge, MA: Harvard University Press).

- Edwards, P. (1967), ed. 'Realism.' *The Encyclopedia of Philosophy, Vol. 7* (New York: The Macmillan Company & The Free Press).
- Gibson, R. F. (1986), 'Translation, Physics, and the Facts of the Matter,' in *The Philosophy of W.V. Quine*, ed. L. W. Hahn & P. A. Schilpp (La Salle, IL: Open Court), pp. 139-154.
- Hershberger, W.A. and Jordon, J. S. (1992), 'Visual direction constancy: Perceiving the visual direction of perisaccadic flashes' in *The role of eye movements in perceptual processes*. Ed. E. Chekaluk (Amsterdam: Etsevier).
- Hershberger, W. A. and Jordon J. S. (1994) ????
- Holt, J. (2003), *Blindsight and the Nature of Consciousness* (Peterborough, Ontario: Broadview Press).
- Hume, D. (1740/1975), *A Treatise of Human Nature, 2nd Ed.*, ed. L. A. Selby-Bigge, 2nd ed. revised by P.H. Nidditch (Oxford: Clarendon Press).
- Jordan, J.S. (1998), 'Recasting Dewey's critique of the reflex-arc concept via a theory of anticipatory consciousness: Implications for theories of perception,' *New Ideas in Psychology, 16* (3), pp. 165-187.
- Jordan, J. S. (2000), 'The world in the organism: Living systems are knowledge,' *Psychology, 11*.
- Kant, I. (1787/1929), *Critique of Pure Reason*, trans. Smith, N.K. (New York: St. Martin's Press).
- Lafont, C. and Medina, J. (1999), *The Linguistic Turn in Hermeneutic Philosophy* (Cambridge, MA: The MIT Press).
- Noë, A. (2002a), ed. *Is the Visual World a Grand Illusion, Special Issue: Journal of Consciousness Studies* 9 (5-6).
- Noë, A. (2002b), 'Is the Visual World a Grand Illusion?' in *Is the Visual World a Grand Illusion, Special Issue: Journal of Consciousness Studies* 9 (5-6), pp. 1-12.
- Primas, H. (1990), 'Mathematical and philosophical questions in the theory of open and macroscopic quantum systems,' in *Sixty-two years of uncertainty*, ed. A. I . Miller (New York: Plenums0.
- Putnam, H. (1981), *Reason, Truth, and History* (Cambridge University Press), pp. 1-21.
- Putnam, H. (1983), *Realism and Reason: Philosophical Papers Vol. 3* (Cambridge University Press).

Quine, W.V. (1969), *Ontological Relativity and Other Essay*. (New York: Columbia University Press).

Quine, W.V. (1981), *Theories and Things* (Cambridge, MA: Harvard University Press).

Quine, W.V. (1986), 'Reply to Roger F. Gibson, Jr.' in *The Philosophy of W. V. Quine*, ed. L. W. Hahn & P. A. Schilpp (La Salle, IL: Open Courts), pp. 155-157.

Rorty, R. (1969/1992), ed. *The Linguistic Turn: Essays in Philosophical Method, 2nd Ed.* (Cambridge, MA: The MIT Press).

Sapir, E. (1929), 'The Status Of Linguistics As A Science,' *Language*, 5, pp. 207-14.

Siderits, M. (1997), 'Buddhist Reductionism.' *Philosophy East and West*, 47, pp. 455-78.