



Akan knowledge symbol:
Nea onnim, "The one
who does not know"

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A Christian Perspective on the Impact of Modern Science on Philosophy of Mind

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Today it is widely held that, while broadly logically possible, dualism is no longer plausible in light of the advances of modern science. My thesis is that once we get clear on the central first- and second-order issues in philosophy of mind, it becomes evident that stating and resolving those issues is basically a (theological and) philosophical matter for which discoveries in the hard sciences are largely irrelevant. Put differently, these philosophical issues are, with rare exceptions, autonomous from (and authoritative with respect to) the so-called deliverances of the hard sciences.

To promote this thesis, I shall (1) clarify certain preliminary notions; (2) defend my central thesis by focusing on select paradigm cases that are representative of the actual dialectic in the literature in philosophy of mind; and (3) respond to two defeaters.

Most philosophers agree that the vast majority of people throughout history have been substance and property dualists.

In his excellent defense of agent causation, *Persons & Causes*, Timothy O'Connor lays out his project in this way:

Philosophers want to do more than paint a commonly held picture of ourselves. We also want to put forth a vision of human beings and their place in the wider scheme of things ... There is at present a widespread trend in English-speaking philosophy toward "deflationary" analyses of most traditional targets of philosophical inquiry ... The general, if vague, impetus is to analyze philosophical notions in a way that makes them hospitable to a "naturalistic" view of human beings that has apparently been handed down to us by "Science."¹

In context, O'Connor's remarks are applied to questions about human action,

and his approach is to counter the "fashion for apologies on behalf of 'Naturalism'" by giving, among other things, pride of place to pre-philosophical intuitions and philosophical arguments about human agency. Setting aside for the moment the issue of the relationship between science and "Naturalism," I believe O'Connor's insights apply with equal force to the main issues and options in the contemporary literature in philosophy of mind. In the pages to follow, I shall clarify this belief and offer my reflections about the proper way to view the impact of modern science on these main issues.

Most philosophers agree that the vast majority of people throughout history have been substance and property dualists. Some form of dualism appears to be the natural response to what we seem to know about ourselves through introspection and in other ways. In this regard, Jaegwon Kim's concession may be taken as representative: "We commonly think that we, as persons, have a mental and bodily dimension ... Something like this dualism of personhood, I believe, is common lore shared across most cultures and religious traditions ..."²

Moreover, the overwhelming majority of educated and uneducated Christians throughout history have been dualists in two senses:

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they have embraced interactionist dualism regarding God and the material world, and they have accepted the reality of the souls of men and beasts, as it used to be put. Thus, theologian H. D. Lewis felt free to say without qualification: "Throughout the centuries Christians have believed that each human person consists in a soul and body; that the soul survived the death of the body; and that its future life will be immortal."³

Today it is widely held in the academic community that, while broadly logically possible, dualism is no longer plausible in light of the advances of modern science.

Today it is widely held in the academic community that, while broadly logically possible, dualism is no longer plausible in light of the advances of modern science. This attitude is especially prominent outside Christian circles. Thus, John Searle says that it is an obvious fact of physics that "the world consists entirely of physical particles in fields of force ..."⁴ He goes on to say that much of the justification for the various forms of physicalism that dominate philosophy of mind is the assumption that

they represent the only scientifically acceptable alternatives to the antiscentism that went with traditional dualism, the belief in the immortality of the soul, spiritualism, and so on. Acceptance of the current views is motivated not so much by an independent conviction of their truth as by a terror of what are apparently the only alternatives. That is, the choice we are tacitly presented with is between a "scientific" approach, as represented by one or another of the current versions of "materialism" and an "antiscentific" approach, as represented by Cartesianism or some other traditional religious conception of the mind.⁵

This attitude is not limited to non-Christian thinkers. Indeed, while not all Christian physicalists appeal to science to justify their views, such an appeal is, in fact, widely employed by many Christian physicalists. To cite one example, Nancey Murphy claims that physicalism is not primarily a philosophical thesis, but the hard core of a scientific research program for which there is ample evidence. This evidence consists in the fact that "biology, neuroscience, and cognitive science have provided accounts of the dependence on physical processes of *specific* faculties once attributed to the soul."⁶ Dualism cannot be *proven* false—a dualist can always appeal to correlations or functional relationships between soul and brain/body—but advances in science make it a view with little

justification. According to Murphy, "science has provided a massive amount of evidence suggesting that we need not postulate the existence of an entity such as a soul or mind in order to explain life and consciousness."⁷

I find myself among the dissenters of this view of the impact of modern science on issues in philosophy of mind. My thesis is that once we get clear on the central first- and second-order issues in philosophy of mind, it becomes evident that stating and resolving those issues is basically a (theological and) philosophical matter for which discoveries in the hard sciences are largely irrelevant. Put differently, *these philosophical issues are, with rare exceptions, autonomous from (and authoritative with respect to) the so-called deliverances of the hard sciences.*

My main purpose is to clarify and defend this thesis. In this article, I shall (1) clarify certain preliminary notions; (2) defend my central thesis by focusing on select paradigm cases that are representative of the actual dialectic in the literature in philosophy of mind; and (3) respond to two defeaters of my thesis.

Clarification of Important Preliminaries Relevant to the Autonomy Thesis

Two preliminaries need clarification in light of the arguments to follow: (1) identification of the central first- and second-order issues in philosophy of mind and (2) the nature of the Autonomy and Authority Theses.

I doubt that any list of the proper issues within a sub-branch of philosophy would be complete. Still, it is possible to provide a reasonably adequate characterization of the central first-order topics that are ubiquitous in the literature in philosophy of mind. Those topics tend to revolve around three interrelated families of issues constituted by the following kinds of representative questions:⁸

(1) *Ontological Questions*: To what is a mental or physical property identical? To what is a mental or physical event identical? To what is the owner of mental properties/events identical? What is a human person? How are mental properties related to mental events (e.g., Do the latter exemplify or realize the former?)? Are there (Aristotelian or Leibnizian) essences and, if so, what is the essence of a mental event or of a human person?

(2) *Epistemological Questions*: How do we come to have knowledge or justified beliefs about other minds and about our own minds? Is there a proper epistemic order to first-person knowledge of one's own mind and third-person knowledge of other minds? How reliable is first-person introspection and what is its nature (e.g., a non-doxastic seeming or a disposition to believe)? If reliable, should first-person introspection be limited to providing knowledge about mental states or should it be extended to include knowledge about one's own ego?



Of the [Autonomy and Authority Theses], the Autonomy Thesis is less controversial and, in my view, clearly correct, at least in certain areas outside philosophy of mind. ... [O]nce we get before us the four families of questions ..., it becomes evident that scientific discoveries play virtually no role at all in formulating or resolving those issues.

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(3) *Semantic Questions:* What is a meaning? What is a linguistic entity and how is it related to a meaning? Is thought reducible to or a necessary condition for language use? How do the terms in our common-sense psychological vocabulary get their meaning?

The main second-order topics in philosophy of mind revolve around a fourth kind of representative questions:

(4) *Methodological Questions:* How should one proceed in analyzing and resolving the first-order issues that constitute the philosophy of mind? What is the proper order between philosophy and science? Should we adopt some form of philosophical naturalism, set aside so-called first philosophy, and engage topics in philosophy of mind within a framework of our empirically best-attested theories relevant to those topics? What is the role of thought experiments in philosophy of mind and how does the "first-person point of view" factor into generating the materials for formulating those thought experiments?

These are the sorts of questions that form the warp and woof of philosophy of mind. To clarify the Autonomy and Authority Theses, I can do no better than cite advocate George Bealer's statement of them:

I wish to recommend two theses. [1] *The autonomy of philosophy:* Among the central questions of philosophy that can be answered by one standard theoretical means or another, most can in principle be answered by philosophical investigation and argument without relying substantively on the sciences. [2] *The authority of philosophy:* Insofar as science and philosophy purport to answer the same central philosophical questions, in most cases the support that science could in principle provide for those answers is not as strong as that which philosophy could in principle provide for its answers. So, should there be conflicts, the authority of philosophy in most cases can be greater in principle.⁹

Of the two, the Autonomy Thesis is less controversial and, in my view, clearly correct, at least in certain areas outside philosophy of mind. Debates about universals, the status of the identity of indiscernibles, the merits of foundationalism, the appropriateness of naturalized epistemology, and so

forth are carried out with virtually no regard whatever for the latest findings in chemistry or physics. Most of the first- and second-order topics in philosophy of mind are similarly autonomous, or so I shall shortly argue.

The Principle of Authority is more controversial, but in my opinion, not for the reason that may first come to mind. At first glance, ambivalence toward or rejection of the principle may arise from the idea that science is, in general, a superior guide to joint areas of exploration. I think this idea is wrong. In my view, the controversial nature of the Authority Principle derives from the fact that, in those cases where philosophical considerations carry more weight than scientific ones, it is usually open to someone to adopt an anti-realist depiction of the relevant scientific view, to operationalize the relevant terms that constitute it, and to avoid epistemic conflict by resorting to an autonomy depiction of the philosophical and scientific aspects of the disputed area.

As an illustration, consider debates about the nature of time. It seems to be widely accepted, perhaps on the basis of simplicity considerations, that the scientific factors are best captured by a B-series view of time. For the sake of argument, let us grant that this is correct. Let us also grant that there are powerful, overriding, uniquely philosophical considerations (e.g., from certain considerations about temporal indexicals) for an A-series view of time. In this case, one may hold that the Authority Thesis has been satisfied. However, it is also possible to advert to the Autonomy Thesis by claiming that science is merely interested in empirical or measured time, but philosophy is interested in the essence of time itself. Thus, it is tricky to make an authority claim stick, and I shall not attempt to do so here. Instead, my purpose is to defend the Autonomy Thesis as stated by Bealer and as applied to the central first- and second-order issues in philosophy of mind.

Two Paradigm Case Studies on Behalf of the Autonomy Thesis

Perhaps I am naive, but I think that once we get before us the four families of questions listed above, it becomes evident that scientific discoveries play virtually no role at all in formulating or resolving those issues. In

any case, I have selected, almost at random, two paradigm case debates in philosophy-of-mind literature to serve as illustrations of the Autonomy Thesis.

Case One: Churchland's *Matter and Consciousness*

Case one involves Paul Churchland's treatment of two different approaches to closely related semantic and epistemic issues.¹⁰ According to Churchland, a popular physicalist approach to these issues—one which he favors—is the network theory of meaning for the terms in our psychological vocabulary. On this approach, one looks not for an ontological analysis of meaning itself, but rather for a theory about how psychological terms get meaning. The best way to embark on this quest is to start with a third-person perspective and focus on publicly accessible language to see how terms in folk psychology get their usage. These terms primarily function in a theory as theoretical terms used to explain/predict other people's behavior. Moreover, says Churchland, as theoretical terms, they get their meaning by their relationships to laws, principles, and other terms in the entire theory in which they are embedded.

In [Churchland's] Matter and Consciousness, ... scientific information comes in the second half of the book, and it plays absolutely no role whatever in presenting the core philosophical issues and arguments in the first half of the book.

For Churchland, the epistemic approach most suited to this semantic theory is one which starts with third-person questions about knowledge of other minds and assimilates first-person to third-person knowledge. We are justified in applying a mental term to another creature just in case this provides the best explanation for and prediction of the creature's behavior. Churchland claims that one's justification here need owe nothing at all to one's examination of one's own case. According to Churchland, it follows that one could justifiably apply a mental term such as "pain" to a creature and, thus, know its meaning, even if one had never had the relevant experience himself.

Regarding self-consciousness and knowledge of one's own mind, Churchland characterizes self-consciousness as the ability to use a linguistic network to judge that one's various mental states satisfy the interlocking network of folk psychology. Thus, self-consciousness is largely something that is learned. Moreover, according to Churchland, all perception is theory-laden, including self-"perception,"

and self-consciousness is essentially linguistic behavior of a certain sort. Space considerations prevent me from presenting Churchland's largely accurate depiction of a dualist approach to these questions, but it involves a commitment to such things as irreducible self-presenting properties, first-person introspection and ostensive definition, epistemic movement from the first- to the third-person, non-doxastic mental states as temporally and epistemically prior to concepts and judgments, and meanings that are not essentially linguistic.

Who is right in this debate? And what factors are relevant to this question? The answers, of course, are complicated, and the dialog involves thought experiments that, in my view, derive their force from first-person introspection, debates about private languages, analyses of the relationship between thought and language, and so on. What is less complicated is that factual information in the hard sciences is virtually irrelevant to these issues. Almost no book in philosophy of mind where these issues are discussed contains any detailed scientific information that plays a role in the discussion. Curiously, while Churchland himself is a physicalist and an advocate of naturalism as a second-order methodological thesis, and while he does include scientific information in *Matter and Consciousness*, that scientific information comes in the second half of the book and it plays absolutely no role whatever in presenting the core philosophical issues and arguments in the first half of the book. Thus, his actual practice underscores the Autonomy Thesis.

Case Two: Kim's *Philosophy of Mind*

For my second paradigm case, I select Jaegwon Kim's discussion of type identity physicalism.¹¹ According to Kim, advocates of type identity physicalism are committed to at least three theses. They are:

- T₁: Lawlike mental type/physical type correlations exist.
- T₂: Mental type/physical type identity statements are contingent, empirical, theoretical identity statements with non-synonymous yet co-referring expressions.
- T₃: A property exemplification view of events, or something very close to it, is correct.

According to Kim, T₁ is justified on the basis of empirical evidence. Since my purpose here is not to evaluate directly type identity physicalism and to forestall objections to it from multiple realization, we may relativize the correlations it expresses to species or individual organisms or we may just grant it for the sake of argument. The important question for our purposes is this: Do scientific considerations play a role in assessing type identity physicalism and, if so, how important is that role relative to the one philosophical considerations play?

It seems to me that scientific considerations play little or no role at all in assessing T₁-T₃. Due to space consider-



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It seems to me that scientific considerations play little or no role at all in assessing [Theses 1–3 in Kim’s discussion of type identity physicalism]. ... [T]he question before us is whether the introduction of simplicity into the debate turns it into one in which scientific considerations are the relevant factors in resolving it.

ations, I shall limit my remarks to T_1 and T_2 . The hard sciences, indeed, do play an important role in establishing the correlations in question, and it may well be that future discoveries will make them increasingly precise. Even here, however, we must not overstate the role of the hard sciences. In this article, I cannot enter a debate about methodology in the hard sciences, but that methodology seems essentially to employ a third-person approach to the relevant objects of study.¹² Since the correlations expressed in T_1 rely on first-person introspective reports, they are not as straightforwardly empirical as, say, the correlations between temperature and pressure in a gas. Moreover, establishing these correlations for complex mental states, such as one’s view of modernist epistemology, is virtually impossible and will require, among other things, a decision about the proper criterion for property identity (e.g., a course- or fine-grained criterion).¹³ Still, the hard sciences crucially are involved in establishing the data for which type identity physicalism is an explanation.

What about T_2 ? For three reasons, scientific considerations are virtually irrelevant for its assessment. First, it is far from clear that the alleged theoretical identities to which mental/physical type correlations are assimilated (e.g., color and wavelength) are identities and not correlations. Crucial considerations in that discussion are those relevant to assessing the nature and mind independence of secondary qualities, and the nature of intentionality is at the core of that debate. And even if these are taken as identities, Kripkean considerations (e.g., with color there is a difference between appearance and reality not present in, say, pain) are relevant for attempts to take them as proper analogies for mental/physical type identities.

Second, there are various ways to analyze the correlations, and these are not rival scientific paradigms nor are the central issues that divide them scientific. Kim himself lists seven empirically equivalent views: causal interactionism, pre-established harmony, occasionalism, the double-aspect view, epiphenomenalism, emergentism, and type identity physicalism.¹⁴ No matter where one comes down on this debate, the reasons for one’s choice will be philosophical, not scientific.

Third, what about the role of theoretical simplicity in this dispute? Kim claims that theoretical simplicity is a mark of a good theory and type identity physicalists assert that application of simplicity to this debate decides it in their favor.

Since my purpose is to assess the Autonomy Thesis and not type identity physicalism, the question before us is whether the introduction of simplicity into the debate turns it into one in which scientific considerations are the relevant factors in resolving it. For two reasons, a negative answer must be given to this question. For one thing, most dualists do not take their views to be primarily theories; rather, they see dualism as a report about what is known of mental properties/events and the self through first-person awareness. So simplicity is irrelevant to most dualist claims, and arguments about the role of simplicity will be distinctively philosophical ones.

Second, a good theory should exhibit several epistemic virtues: factual accuracy, predictive success, internal clarity, simplicity, ability to handle external conceptual problems, comportment with proper methodological rules, and so on. Often, debates between advocates of rival theories are debates about the relative merits of different epistemic virtues and, generally speaking, these debates are not scientific in nature. This is especially true of the debate about type identity physicalism. To see this, consider the following claim by Roderick Chisholm:

Let us consider some particular psychophysical identity statement—the statement, say, that thinking about unicorns is the same thing as to have Q fibres that vibrate in manner N. One cannot understand such a statement, of course, unless one can grasp or conceive the property or properties that are referred to ... To the extent that we can understand the statement in question, we can see that the two properties referred to are not the same property—just as we can see that the property of believing that all men are mortal is different from that of wondering whether there is life in outer space. It has been held, not implausibly, that to deny the validity of such rational insights is to undermine the possibility of every type of reasoning.¹⁵

Underlying Chisholm's argument is an epistemic priority given to first-person introspective knowledge of the intrinsic features of mental properties over third-person knowledge of facts about other people. Now, just exactly what consideration from the hard sciences and for which scientists are the appropriate experts is the relevant one for assessing the strength of Chisholm's argument relative to the use of simplicity to justify type identity physicalism? It is hard to see what it could be.

In a way, the dualist is in a dialectical disadvantage because he or she takes his or her view to be obvious in light of first-person introspection. Thus, many dualist arguments, e.g., the Knowledge Argument or the Simple Argument, involve thought experiments that point to our direct knowledge of mental entities, and the dualist invites others to attend to what he or she believes is a matter of commonsense knowledge.¹⁶ The dualist will be inclined to agree with Searle's remark that if one is unwilling to admit that one is conscious, one needs therapy not an argument.¹⁷

In a similar manner, an advocate of the Autonomy Thesis is in a dialectical disadvantage. He or she takes the thesis to be fairly obvious and invites others to attend to the actual dialogical issues as they pepper the pages of literature in philosophy of mind, believing that one will simply be able to see that those issues are largely philosophical and not scientific.

In my opinion, there is no straightforward scientific evidence for philosophical naturalism and, a fortiori, no such evidence for its employment to set the terms of debate in philosophy of mind.

This is precisely what I have tried to do in this section. If my claims on behalf of the Autonomy Thesis are persuasive, then it will not do for philosophers, such as David Papineau, to adopt philosophical naturalism prior to entering the debate in philosophy of mind as a way of limiting the relevant considerations to those in the empirical sciences and of shifting a substantial burden of proof onto dualists.¹⁸ The simple fact is that those relevant issues are not scientific and, moreover, second-order arguments for or against philosophical naturalism are not themselves scientific. It is not science that says the world consists entirely of aggregates of particles standing in fields of force. It is philosophical naturalists who are making claims about the limits of ontology and epistemology, and those claims are themselves philosophical, not scientific.

In my opinion, there is no straightforward scientific evidence for philosophical naturalism and, a fortiori, no such evidence for its employment to set the terms of debate in philosophy of mind. If someone thinks I am wrong about this, he or she is invited to state the scientific evidence that a theist or dualist could not accommodate easily into his or her views.

Response to Two Counterarguments

There are two counterarguments to the Autonomy Thesis I want to consider. Both of them have been stated nicely by Nancey Murphy. First, Murphy claims that while substance dualism cannot be proven false, nevertheless, "biology, neuroscience, and cognitive science have provided accounts of the dependence on physical processes of *specific* faculties once attributed to the soul."¹⁹ According to Murphy, "science has provided a massive amount of evidence suggesting that we need not postulate the existence of an entity such as a soul or mind in order to explain life and consciousness."²⁰ Thus, since advances in science have provided detailed accounts of mental/physical dependencies which make postulation of the soul otiose, the Autonomy Thesis is false, at least in this case.

I have three responses to this argument. First, many substance dualists do not believe in a substantial ego primarily because it is a theoretical postulate with superior explanatory power. Rather, they take the ego to be something of which people are directly aware. The point is not that they are right about people's awareness of the self. Given this dualist approach, the point is that advances in our knowledge of mental/physical dependencies are simply beside the point. The debate about which approach is the fundamental one for defending substance dualism is not something for which advances in scientific knowledge are relevant.

Second, in those cases where substance dualism is postulated as the best explanation for a range of purported facts, those facts typically are not the scientific ones Murphy mentions, but rather, are distinctively philosophical ones, usually surfaced from commonsense beliefs based in first-person non-doxastic seemings. Arguments from the unity of consciousness, the possibility of disembodied survival or body switches, the best view of an agent to support agent causation, the metaphysical implications from the use of the indexical "I" are typical of arguments offered by substance dualists, and the facts Murphy mentions are not particularly relevant for assessing these arguments. Those scientific facts or others lurking in the neighborhood (e.g., split brain phenomena) may provide difficulties for certain versions of substance dualism, but they are not decisive—dualists have provided reasonable responses to them—and, in any case, they are less important than the philosophical issues mentioned above.



Functional dependence on causal relations to the brain are of much less value in telling us what kind of thing a human person is than is a careful description of the kind-defining mental capacities (i.e., faculties) human persons as such possess.

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Finally, contrary to what Murphy claims, the discovery of “the dependence on physical processes of *specific* faculties once attributed to the soul” does not provide sufficient grounds for attributing those faculties to the brain rather than to the soul. (After all, are dualists supposed to think that mental/physical correlations or causal relations are vague and unwieldy and not specific and regular?) To see this, it is important to understand how the term “faculty” historically has been used in discussions of substances in general and of the soul in particular.²¹ Roughly, a faculty of some particular substance is a natural grouping of resembling capacities or potentialities possessed by that thing. For example, the various capacities to hear sounds would constitute a person’s auditory faculty. Moreover, a capacity gets its identity and proper metaphysical categorization from the type of property it actualizes. The nature of a capacity-to-exemplify-F is properly characterized by F itself. Thus, the capacity to reflect light is properly considered as a physical, optical capacity. This fact about the proper categorization of a capacity is one reason why some philosophers, perhaps in reliance on simplicity considerations, have sought to reduce or eliminate dispositions to rid them from their ontology in favor of their associated categorical properties. According to property dualists, the capacities for various mental states are mental and not physical capacities. Thus, the faculties constituted by those capacities are mental and not physical faculties.

Now, arguably, a particular is the kind of thing it is in virtue of the actual and potential properties/faculties essential and intrinsic to it. Thus, a description of the faculties of a thing provide accurate information about the kind of particular that has those faculties. For example, a description of the (irreducible) dispositions of gold provide us with information about the sort of thing gold is.

It seems to me that a description of a particular’s capacities/faculties is a more accurate source of information about what kind of thing that particular is than is an analysis of the causal/functional conditions relevant for the particular to act in various ways. This is because the causal/functional conditions relevant to a particular’s actions can either be clues to the intrinsic nature of that particular or else information about

some other entity that the particular relates to in exhibiting a particular causal action. For example, if Smith needs to use a magnet to pick up certain unreachable iron filings, information about the precise nature of the magnet and its role in Smith’s action does not tell us much about the nature of Smith (except that he is dependent in his functional abilities on other things, e.g., the magnet). We surely would not conclude that the actual and potential properties of a magnet are clues to Smith’s inner nature. Similarly, a description of the intrinsic features of a chemical compound is more relevant for getting at its essential nature than is a description of the features of a catalyst upon which that compound depends for causal interaction with other compounds.

In the same way, functional dependence on causal relations to the brain are of much less value in telling us what kind of thing a human person is than is a careful description of the kind-defining mental capacities (i.e., faculties) human persons as such possess. In this case, various forms of nonreductive physicalism and substance dualism are empirically equivalent theses and, in fact, there is no nonquestion-begging theoretical virtue (e.g., simplicity, fruitfulness) that can settle the debate if it is limited to being a scientific debate. But it should not be so limited and, indeed, paradigm case substance dualists such as F. R. Tennant approached the subject of the nature of the self and its relationship to faculties from a distinctively first-person introspective point of view. The choice to side with Murphy over against Tennant cannot be made on the basis of detailed scientific correlations. Rather, it must be made on the basis of factors such as one’s evaluation of the strength of first-person awareness of the self and its conscious life.²²

Murphy’s second counterargument is that we should take physicalism not merely as a philosophical thesis, but primarily as the hard core of a scientific research program. According to Murphy, if we look at physicalism—in her case, a specific version of nonreductive physicalism—not as a philosophical thesis but as a scientific theory, then there is ample scientific evidence for it.²³

If one follows Murphy’s advice, then the Autonomy Thesis will have to be set aside. For at least two reasons, I think Murphy’s

recommendation is ill-advised and question-begging. For one thing, it is entirely unclear as to how physicalism in any of its forms is actually used as the "hard core of a scientific research program" in a way relevant to debates in philosophy of mind. To see this, it will be helpful to get before us some important points made by Alvin Plantinga and Bas C. van Fraassen.

Plantinga contrasts Duhemian and Augustinian science derived, respectively, from the ideas of Pierre Duhem and St. Augustine.²⁴ According to Duhem, religious and, more importantly, metaphysical doctrines often have entered into physical theory. Many physical scientists have seen their job as offering an explanation of the phenomena, the appearances, in terms of underlying material causes. A proffered characterization of those causes often employs divisive metaphysical commitments as when Aristotelians, Cartesians, and atomists gave disparate accounts of the phenomenon of magnetism.

If the aim of physical theory is to explain phenomena in terms of the ultimate nature of their causes, says Duhem, then physical science becomes subordinate to metaphysics, and is no longer an autonomous science. In this case, estimates of the worth of a physical theory will depend upon the metaphysics one adopts. When practitioners of an area of physical science embrace different metaphysical schemes, progress is impeded because there is a compromise in the cooperation needed for progress. Successful science, if it is to be common to all, should not employ religious or metaphysical commitments only acceptable to some, including theism or physicalist naturalism.

For Duhem, it is not the absence of metaphysics as such that serves the prudential interests of science, but of metaphysical views that divide us. According to Plantinga, Augustinian science stands in contrast to Duhemian science. Roughly, an Augustinian approach to science eschews methodological naturalism, and employs religious or metaphysical commitments specific to a group of practitioners not widely shared throughout the scientific community. Among other things, Augustinian science sanctions the use of scientific data to justify a religious or metaphysical proposition specific to a group of practitioners, at least in principle.

According to Plantinga, Duhemian science will not "employ assumptions like those, for example, that seem to underlie much cognitive science. For example, it could not properly assume that mind-body dualism is false, or that human beings are material objects; these are metaphysical assumptions that divide us."²⁵ More generally, in my view, the fact that there is a distinction between Duhemian and Augustinian science and that the former can be practiced at all seems to justify the Autonomy Thesis by showing that the progress of and data derived in accordance with Duhemian science are not of fundamental importance for resolving the deeper metaphysical issues that divide

practitioners into different Augustinian camps, at least in many cases.

For different reasons, some aspects of van Fraassen's philosophy of science lead to a similar conclusion. While one need not be an antirealist to appreciate the point, van Fraassen has argued that the theoretical postulates of a scientific theory typically go beyond the observational evidence and, strictly speaking, several different metaphysical characterizations are empirically equivalent.²⁶ Moreover, says van Fraassen, the primary goal of a scientific theory is to be empirically adequate, and acceptance of the unobservable metaphysical postulates of a theory is merely a pragmatic stance taken by advocates of a research program to continue searching for greater and greater empirical adequacy.

In my view, the fact that there is a distinction between Duhemian and Augustinian science and that the former can be practiced at all seems to justify the Autonomy Thesis ...

It seems clear that this is what is actually going on when scientists employ physicalism as the hard core of a scientific research program. They are simply proffering either physically detectable operational definitions of mental states or are straightforwardly searching for physical correlates/causal relations for those mental states. There is not a single discovery in neuroscience (or cognitive science) that requires or even provides adequate justification for abandoning property or substance dualism, since the main issues in neuroscience and philosophy of mind conform to the Autonomy Thesis.

In Plantingian terms, the actual success of, say, neuroscience is strictly due to its Duhemian nature. This is why in the last few decades three Nobel Prize winners in neuroscience or related fields were a substance dualist (John C. Eccles), an emergent property dualist (Roger Sperry), and a strict physicalist (Francis Crick). What divided them was not a difference of opinion about a range of scientific facts. Their differences were philosophical in nature.

In fact, in a recent article on consciousness and neuroscience, Crick and Christof Koch acknowledge that one of the main attitudes among neuroscientists is that the nature of consciousness is "a philosophical problem, and so best left to philosophers."²⁷ This posture comports perfectly with Duhemian science. Elsewhere, they claim that "scientists should concentrate on questions that can be experimentally resolved and leave metaphysical speculations to



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A Christian Perspective on the Impact of Modern Science on Philosophy of Mind

'late-night conversations over beer'.²⁸ Methodologically, Crick and Koch choose to set aside philosophical questions about the nature of consciousness, qualia, meaning and so forth, and study the neural correlates of consciousness and the causal/functional role of conscious states. If this is all it means to say that physicalism is "the hard core of a scientific research program," a dualist will heartily agree and, in any case, such a Duhemian appropriation of physicalism underscores and does not provide a counter-argument to the Autonomy Thesis.

The mistaken notion that progress in neuroscience requires an Augustinian commitment to physicalism as an essential component of that progress derives, not from the actual physical facts of neuroscience or the actual way neuroscience is practiced as evidenced by the Duhemian approach of Crick and Koch, but from the sociological fact that many contemporary neuroscientists just happen to be physicalists, and many people, including some philosophers, seem overly impressed with the cultural authority of science.

Second, when scientists study the causal correlates/functional relations between conscious states or the self and the brain, they must rely on first-person reports about those states themselves. To see this, consider the binding problem delineated by John Searle:

I need to say something about what neurobiologists call 'the binding problem.' We know that the visual system has cells and indeed regions that are specially responsive to particular features of objects such as color, shape, movement, lines, angles, etc. But when we see an object we have a unified experience of a single object. How does the brain bind all of these different stimuli into a single, unified experience of an object? The problem extends across the different modes of perception. All of my experiences at present are part of one big unified conscious experience (Kant, with his usual gift for catchy phrases, called this "the transcendental unity of apperception").²⁹

Scientists are seeking to find a region of the brain that "unifies" all the different stimuli that activate various parts of the brain.

But exactly why would anyone think that such unification should be sought? Certainly not from an empirical investigation of the brain itself. Rather, we know from first-person introspection—in my view, of our own substantial selves and our conscious states—that all of our experiences are unified into one field of consciousness and, in fact, are possessed by one unified I, and it is on the basis of this knowledge that the scientific research program is justified and motivated. Moreover, William Hasker has argued that the phenomena which underlie this research is best explained by (emergent) substance dualism.³⁰ Whether Hasker is right or not is itself a philosophical matter that illustrates the Autonomy Thesis.

Given that (1) substance and property dualism are widely acknowledged to be the commonsense position based on first-person introspection, and (2) the task of arguing for or against dualism so grounded is a philosophical one, and (3) neuroscientific research must rely on first-person introspective reports, the Autonomy Thesis seems to capture adequately the role of pre-philosophical intuitions and distinctively philosophical issues in neuroscience. The debate between dualists and physicalists is not about scientific facts. It is about things such as the status of first-person introspection as a source of justification for commonsense beliefs about the self and consciousness, the status of philosophical knowledge, and the proper philosophical interpretation of the role of physicalism in scientific research.

I think that the truth of the Autonomy Thesis is what philosophers should have expected all along, and it constitutes philosophical self-understanding throughout the history of philosophy up to and including the present. In his 1886 lectures on the limitations of scientific materialism, John Tyndall claimed that "the chasm between the two classes of phenomena" is of such a nature that we might establish empirical association between them, but it

would still remain intellectually impassable. Let the consciousness of love, for example, be associated with a right-handed spiral motion of the molecules in the brain, and the consciousness of hate with a left-handed spiral motion. We should then know when we love that the motion is in one direc-

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tion, and when we hate that the motion is in the other; but the 'WHY' would remain as unanswerable as before.³¹

Nothing substantial has changed since Tyndall made this remark. Specifically, no advance in knowledge of the specificity of detail regarding the correlations between mental and physical states provides any evidence against dualism or, more importantly, against the Autonomy Thesis. When philosophers write about or teach topics in philosophy of mind, they do not avail themselves of specific information in the hard sciences because it is not relevant to their issues. In evaluating functionalism, it does not matter if one claims that a functional state is realized by brain state alpha or by a more detailed description of the relevant brain state.

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If one reads the literature in philosophy of mind, one will find that scientific data play virtually no role at all in the analysis or arguments. In fact, it is rare for a philosophical text in philosophy of mind to include any scientific information. As was mentioned above, a notable exception to this rule is Paul Churchland's *Matter and Consciousness*. Curiously, the scientific information is contained in the last half of the book, and it plays no role whatever in the semantic, epistemic, and ontological debates discussed in the first half!

The same cannot be said, however, of scientific discussions of topics in these areas. To cite one illustration, after claiming to set aside philosophical issues in order to focus on the more important empirical issues, Crick and Koch's discussion of consciousness and neuroscience is literally teeming with philosophical claims about topics philosophical and with which they qua scientists are inadequately equipped to deal. For example, they claim:

Philosophers, in their carefree way, have invented a creature they call a "zombie," who is supposed to act just as normal people do but to be completely *unconscious*. This seems to us to be an untenable scientific idea, ...³²

Relatedly, in considering whether two people in a similar brain state would experience the same quale, they say:

One is therefore tempted to use the philosopher's favorite tool, the thought experiment. Unfortunately, this enterprise is fraught with hazards, since it inevitably makes assumptions about how brains behave, and most of these assumptions have so little experimental support that conclusions based on them are valueless.³³

Crick and Koch seem to have a poor grasp on the role of thought experiments in philosophical argumentation (Does the Knowledge Argument advocate make assumptions about how brains work in the actual world?). In any case, when compared to philosophical treatments of topics in philosophy of mind, the discussion by Crick and Koch illustrates an asymmetry between neuroscience and philosophy of mind and, therefore, the Autonomy Thesis. Scientists cannot adequately discuss the central topics in philosophy of mind without making substantive philosophical claims, but philosophers need not discuss scientific data to treat adequately these same philosophical issues. This is true currently and throughout the history of philosophy, and it is what one would expect if the Autonomy Thesis were true.


Does the Autonomy Thesis mean that science plays no role in philosophical discussion? No, it does not. Science is especially important when it comes to studying details about the causal relations between mind and body, and when philosophers have erred in the past, they have done so when they have used philosophical theses to answer empirical, causal questions, e.g., using vitalism or animal spirits in an attempt to answer efficient causal questions about the precise nature of mind/body interaction. Again, on a certain view of agent causation according to which a libertarian act creates a small amount of energy, scientific investigation could, in principle, confirm or falsify this view, though I have argued elsewhere that the scientific role in this case is not as straightforward as one might think.³⁴ But the areas where science is relevant are not central to the main first- and second-order philosophical issues listed at the beginning of this article.

If I am right about all this, then if someone is going to be a mind/body physicalist, he or she cannot appeal to science to justify that commitment. It may well be that in first-person introspection one discovers one to be constituted by animality, or there may be overriding philosophical and theological arguments for physicalism, though I suspect that these concessions will be a hard sell to many of us. Explaining why I have these suspicions must be left for another occasion, but one thing seems clear. Whenever and wherever that dialog takes place, it will be a nice illustration of the Autonomy Thesis. ❀

Notes

- ¹Timothy O'Connor, *Persons & Causes* (New York: Oxford, 2000), xi-xii.
- ²Jaegwon Kim, "Lonely Souls: Causality and Substance Dualism," in *Soul, Body and Survival*, ed. Kevin Corcoran (Ithaca, NY: Cornell University Press, 2001), 30.
- ³H. D. Lewis, *Christian Theism* (Edinburgh: T & T Clark, 1984), 125.
- ⁴John Searle, *The Rediscovery of the Mind* (Cambridge, MA: MIT Press, 1992), xii.
- ⁵*Ibid.*, 3-4.
- ⁶Nancey Murphy, "Human Nature: Historical, Scientific, and Religious Issues," in Warren S. Brown, Nancey Murphy and H. Newton Malony, *Whatever Happened to the Soul?* (Minneapolis: Fortress Press, 1998), 17. Cf. pp. 13, 27, 139-43.
- ⁷*Ibid.*, 18.
- ⁸Paul Churchland orders the first half of his book *Matter and Consciousness* (Cambridge, MA: MIT Press, rev. ed., 1988) around these families of issues.
- ⁹George Bealer, "On the Possibility of Philosophical Knowledge," in *Philosophical Perspectives 10: Metaphysics*, 1996, ed. James E. Tomberlin (Cambridge, MA: Blackwell, 1996), 1.
- ¹⁰Churchland, *Matter and Consciousness*, chaps. 3 and 4.
- ¹¹Jaegwon Kim, *Philosophy of Mind* (Boulder, CO: Westview Press, 1996), chap. 3. Kim's own views are still developing and he seems to adopt a functional approach to mental states such as thoughts and beliefs. However, he appears to think that type identity physicalism is in the ballpark of the correct physicalist approach to mental states associated with debates about qualia. See his *Mind in a Physical World* (Cambridge, MA: MIT Press, 1998), chap. 4.
- ¹²The point is not limited to the hard sciences. The history of experimental psychology from the last third of the nineteenth century until the middle of the twentieth century is essentially the replacement of first-person introspection for third person measurements as central to psychological method. See William Lyons, *Matters of the Mind* (New York: Routledge, 2001), chap. 1.
- ¹³For more on criteria for property identity, see J. P. Moreland, *Universals* (Montreal & Kingston: McGill-Queen's University Press, 2001), 116-20.
- ¹⁴*Ibid.*, 49-53.
- ¹⁵Roderick Chisholm, "Mind," in *Handbook of Metaphysics and Ontology*, ed. Hans Burkhardt and Barry Smith (Munich: Philosophia Verlag, 1991): II, 556.
- ¹⁶For a recent discussion of the Knowledge Argument, see J. P. Moreland, "The Knowledge Argument Revisited," *International Philosophical Quarterly* (tentatively scheduled for June 2003). For an exposition and defense of the Simple Argument, see Stewart Goetz, "Modal Dualism: A Critique," in *Soul, Body & Survival*, ed. Kevin Corcoran (Ithaca, NY: Cornell University Press, 2001), 89-104.
- ¹⁷Searle, *The Rediscovery of the Mind*, 8-9.
- ¹⁸David Papineau, *Philosophical Naturalism* (Oxford: Blackwell, 1993), 1-5.
- ¹⁹Nancey Murphy, "Human Nature: Historical, Scientific, and Religious Issues," 17. Cf. pp. 13, 27, 139-43.
- ²⁰*Ibid.*, 18.
- ²¹For example, see F. R. Tennant, *Philosophical Theology I: The Soul and Its Faculties* (Cambridge: Cambridge University Press, 1956), 1-138, especially pp. 33-43.
- ²²The Autonomy Thesis and the epistemic authority of first-person introspective knowledge relative to scientific claims is powerfully woven into Edmund Husserl's practice of bracketing the world and proffering phenomenological descriptions of various intentional objects as experienced and of the intrinsic features of the various mental acts directed upon those objects. For a detailed description of a paradigm case of Husserl in this regard, see J. P. Moreland, "Naturalism, Nominalism, and Husserlian Moments," *The Modern Schoolman* 79 (January/March 2002): 199-216.
- ²³Nancey Murphy, "Nonreductive Physicalism: Philosophical Issues," in *Whatever Happened to the Soul*, 127-48.

- ²⁴Alvin Plantinga, "Methodological Naturalism," in *Facts of Faith and Science Vol. 1: Historiography and Modes of Interaction*, ed. Jitse M. van der Meer (Lanham, MD: University Press of America, 1996), 177-221.
- ²⁵*Ibid.*, 209-10.
- ²⁶Bas C. van Fraassen, *The Scientific Image* (Oxford: Oxford University Press, 1980); "To Save the Phenomena," in *Scientific Realism*, ed. Jarrett Leplin (Berkeley: University of California Press, 1984), 250-9.
- ²⁷Francis Crick and Christof Koch, "Consciousness and Neuroscience," *Cerebral Cortex* 8 (1998): 97-107.
- ²⁸Cf. John Horgan, "Can Science Explain Consciousness?" *Scientific American* (July 1994): 91.
- ²⁹John Searle, "The Mystery of Consciousness: Part I," *The New York Review of Books* (November 1995): 60-6. The quote is from p. 64.
- ³⁰See William Hasker, *The Emergent Self* (Ithaca, NY: Cornell University Press, 1999), 122-46, 171-203.
- ³¹John Tyndall, "Scientific Materialism," in his *Fragments of Science* Vol. II.
- ³²Francis Crick and Christof Koch, "Consciousness and Neuroscience," 3.
- ³³*Ibid.*, 15.
- ³⁴J. P. Moreland, "Reply to Fales," *Philosophia Christi* NS 3, no. 1 (2001): 48-9.



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