



The Knowledge Argument and the Implications of Phenomenal Knowledge

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Abstract

This article presents the knowledge argument against physicalism and objections to it. The focus is on the ways responses to that argument have tried to account for phenomenal knowledge within a physicalist picture. Various ‘phenomenal concepts’ strategies are considered, along with recent arguments against them. Also considered are attempts to explain phenomenal knowledge in terms of indexical knowledge and in terms of acquaintance.

Few doubt that we have knowledge of our own conscious, qualitative states, and that we know them in a particularly first-personal way. I know what it’s like for me to see red, to smell frying bacon, and to feel hungry. This is phenomenal knowledge. While it is easy to come up with examples of phenomenal knowledge, it is much harder to explain why it is special. Although it is not often explicitly viewed in this light, Frank Jackson’s knowledge argument is, perhaps, the best way to get clear on what phenomenal knowledge is and what is special about it, and it generates the best test for an account of that knowledge. It also provides one of the strongest challenges to physicalism, a doctrine many contemporary philosophers simply take for granted.

The knowledge argument centers around a compelling thought experiment: a brilliant neuroscientist, Mary, has spent her life within a black and white room. From within that room, she learned all the facts about color and color vision: how light reflects off of the surfaces of objects, how that light affects the eye and the optic nerves, and how that information is eventually processed in the brain. We can even imagine that Mary exists in a time when the natural sciences are complete, and she has learned – through her black and white computer monitors and by recorded lectures from CalTech and MIT – all the physical information about the world. We also must imagine that Mary is able to draw all the logical consequences from this knowledge: she’s not only well informed, she’s logically infallible. Thus, from within her room, Mary knows all of the physical information and its logical consequences. After a while, her captors relent: she is let out of the room, and as a token of apology she is presented with a red rose. The question is, when she sees the rose, will she learn something new?

Most people who hear this story, though not all, have the strong intuition that she will. When she sees red for the first time, she learns something that no amount of study and reasoning from within the walls could provide: she learns what it is like to have a red experience. What she gains, in other words, is phenomenal knowledge, and in doing so, she learns something that she did not know before: that an experience of red is like *this*. But, since she knew all of the physical information before she left the room, and she learned this new information upon leaving the room, the physical information is not all there is. Physicalism is therefore disproved by the existence of phenomenal knowledge (Jackson 1982).

It is worth guarding against at least a couple of confusions. First, according to the argument, before seeing the rose Mary was not merely ignorant of what it was like for *her* to see red. She was ignorant of what it was like when *other people* had red experiences. She knew that when they looked at roses their brains entered into certain states, but she didn't know what in particular it was like to be in that state (Churchland 1985; Jackson 1986). So, even though phenomenal knowledge is peculiarly first-personal, it can generate knowledge about other people. Second, the knowledge argument does not prove, and does not claim to prove, the general thesis that you have to experience something to fully understand it. In fact, at least on one reading it presupposes the opposite: things like electrons, magnetic fields, and chairs can be fully understood through detailed enough physical descriptions of the sort Mary had available to her in the room. It is only phenomenally conscious experiences that slip through the net of purely physical description.¹

The argument can be put as follows:

1. There are truths that are not deducible from the physical truth, namely, those Mary learns when she leaves the black-and-white the room.
2. If there are truths that are not deducible from the physical truth physicalism is false.
3. Therefore, physicalism is false.²

This simplified version of the argument clearly separates the epistemological step of the argument (premise one) from the metaphysical step (premise two) while drawing attention to the connection between the knowledge argument and other anti-physicalist arguments.

The many responses to this argument typically fall into three categories: (a) that Mary would be able to know what it is like to see red from within the room, (b) that Mary does learn something new, but that it is not new information, and (c) that the argument illegitimately draws a metaphysical conclusion (physicalism is false) from an epistemological premise (Mary learns something new).

For the purposes of this discussion, I am going to focus on strategy (c), and assume the epistemic step of the argument. There are essentially two groups who deny it. There are the Hard-liners who deny that Mary, upon leaving the room, will have any revelatory Aha-moment at all (Dennett 1991, 2007). Slightly more concessive are the Ability theorists who maintain that Mary might have an Aha-moment, but that this doesn't indicate that she gains factual knowledge: she perhaps learns how to do something, by gaining a new ability, but she doesn't learn any new facts (Nemirow 1980, 2006; Lewis 1999). Debates surrounding these views are enriching, but for our purposes it will be easier to sidestep these discussions to consider views that take phenomenal knowledge for what it appears to be.³

Most responses to the knowledge argument say that it commits some version of the intentional fallacy, and that all it shows is that there are two ways of knowing phenomenal states.⁴ Comparisons such as the following are often made: in the beginning, Lois Lane knew that Superman can fly, but she only later learns that Clark Kent can fly. Nevertheless, there is only one fact: that the person who both Superman and Clark Kent can fly. Lois comes to know the same old fact in a new guise. Similarly, Mary always knew what it was like to see red. She simply knew it under the theoretical guise, and upon her release she came to learn the same fact in its experiential guise. We should no more infer that there were new facts discovered in the one case than in the other.

As it stands, this response will not (*ahem*) fly. Lois, of course, does learn many new facts when she learns of Clark's real identity. Among other things, she learns that he

carries spandex in his briefcase. But Mary is supposed to know all the physical facts. Defenders of the knowledge argument say that this difference is important. They hold what can be called the *Disguise Depends upon Ignorance* principle: coming to know the same old fact under a new disguise always involves either ignorance of some fact or a mistake in reasoning (Alter and Howell 2009). Since Mary is supposed to know all the physical facts and be a perfect reasoner, we can't explain her apparent epistemic gain in this manner.

This is where the rubber hits the road in the contemporary debates about the knowledge argument. Defenders of the argument maintain that coming to know something in a new way always involves learning some new fact, and opponents of the argument maintain that while this might be true in general, it is not always the case. In particular, say the opponents, there is something peculiar about phenomenal knowledge that provides an exception to this principle. The current literature largely centers around increasingly sophisticated attempts to explain what makes phenomenal knowledge so special if what is known is metaphysically on par with everything else in the world.

The most significant attempts to explain the uniqueness of phenomenal knowledge appeal to one or more of the following: (a) phenomenal concepts, (b) indexical knowledge, and (c) acquaintance.⁵

According to the phenomenal concepts strategy, there is a certain sort of concept that we employ when introspectively considering phenomenal states that we cannot have without having been in that state (Stoljar 2005). So far, the phenomenal concepts theorist is in complete agreement with most dualists. It is arguable, in fact, that everyone should believe in phenomenal concepts, since there seems to be a way of thinking about phenomenal states that Mary gains upon leaving the room, and this way of thinking can enter into inferences, can satisfy generality constraints, and bears most of the other earmarks of conceptualization. The proponent of the phenomenal concept strategy, however, argues that this knowledge using phenomenal concepts is knowledge of the same facts that Mary knew from within her room.⁶ She cannot deduce the phenomenal knowledge from the scientific knowledge because the phenomenal knowledge essentially employs concepts she cannot possess while she is sequestered in her room. While this response has force, it doesn't go far enough. For suppose we give Mary the relevant concepts. A radical disconnect remains between those concepts and the scientific concepts: she still cannot deduce propositions using the former from propositions that use the latter. The deduction version of the knowledge argument, in other words, still goes through.⁷ For this reason it is important that phenomenal concepts not only (a) cannot be had by a subject who has not had the relevant phenomenal experience, but also (b) are cognitively isolated from other concepts that are not experience-dependent. Most advocates of the phenomenal concept strategy hold this stronger view.

So, what are phenomenal concepts? Why are they so special? There are many different stories. According to some, they are recognitional concepts, closely related to perception and our use of demonstratives (Loar 1990; Levin 2007). To others they are associated with different faculties and cognitive roles (Sturgeon 1994; Hill 1997; Hill and McLaughlin 1999), and for still others they are peculiar because they act in a quotational manner to refer to the experiences (Papineau 2002). There are many interesting strengths and weaknesses of the various accounts, but for our purposes we can focus on what they have in common: that phenomenal concepts are experience-dependent and cognitively isolated.

The appeal of the phenomenal concept strategy is fairly obvious: it argues that *metaphysical dualism* can be avoided by acknowledging *conceptual dualism* which is something

that we should acknowledge anyway. A good scientific and fully physicalistic picture of the mind must recognize that there are phenomenal concepts because of their unique cognitive roles (or what have you). But that means that far from being inconsistent with Mary's predicament, the correct scientific picture of the mind actually predicts it!

One question that should be asked about phenomenal concepts, but that is often overlooked, is whether or not the unique features of phenomenal concepts are contingent or necessary (Alter and Howell 2009). Must any creature that has phenomenal knowledge have concepts with these unique features? If the cognitive isolation of phenomenal concepts is a contingent feature of them, then the phenomenal concept strategy only explains the fact that *humans* cannot deduce phenomenal facts from physical facts. But the non-deducibility intuition is not so limited. That intuition is grounded in the fact that physical properties seem to be exhaustively described by how they are, or how they dispose things to be, in space over time. If there are what it's like features of the world at all, they seem to be over and above such structural and dynamic features of the world. It's not clear that the phenomenal concepts strategy addresses this source of the non-deducibility intuition. It's best hope of doing so is to claim that we are in error about the nature of these states, and that the error is generated by the peculiar sort of access we have to them.⁸ This is, perhaps, a palatable enough move for the phenomenal concept theorists, but it is one that is not often explicitly made.

Powerful as the phenomenal concepts strategy is, we should notice that it is still somewhat concessive. It denies the second premise of the knowledge argument, which infers a metaphysical gap from an epistemic gap, but it seems to embrace a strong version of the epistemic gap.⁹ The implication is that there is a degree of understanding that we can have about the relation between lakes and their micro-physical components, beliefs and their neural components, and in fact any legitimate physical *explanandum* and *explanans*, that we cannot get in the case of the phenomenal. Thus, even if the phenomenal concept strategy prevents the knowledge argument from establishing that physicalism is false, it might establish that our *justification* for believing physicalism about phenomenal states is weaker, or at least different, than it is for any other states.¹⁰

Debates about the phenomenal concept strategy constitute perhaps the most interesting recent activity surrounding the knowledge argument. The most significant are a master argument advanced by Chalmers against the success of all such strategies (Chalmers 2006), and an argument that claims that phenomenal concepts do not exist (Ball 2009; Tye 2009).

Chalmers argues that any phenomenal concepts strategy must accept some thesis C that attributes certain psychological features to humans (that we have cognitively isolated concepts of a certain sort, etc.). It must claim that C both explains the existence of the epistemic gap, and can itself be explained in physical terms. Chalmers argues that this cannot be done: either C is not physically explicable or it does not explain the epistemic gap.¹¹ We can recast his argument as follows:¹²

Take P to be the complete micro-physical truth about the world:

1. Either C is deducible from P or it isn't.
2. If C is not deducible from P, then C is not physically explicable.
3. If C is deducible from P, then C cannot explain our epistemic situation.

Therefore,

4. Either C is not physically explicable or it cannot explain our epistemic situation.

There is thus a dilemma. The phenomenal concept theorist should not accept the first horn, that C is not deducible from P. The phenomenal concepts theorist wants to say, after all, that even though there is a sort of an epistemic gap, it could be predicted by features of ourselves that science can fully explain: the features of phenomenal concepts that make them unique. But if those features could not themselves be deduced from the physical description of the world, we have only replaced one mystery with another.¹³

If C is deducible from P, on the other hand, the phenomenal consciousness theorist holds that C is deducible from P but the phenomenal truths, call them Q, are not. What is wrong with this?

Chalmers' argument is complicated, but perhaps it can be put this way.¹⁴ There is nothing, strictly speaking, wrong with saying that C is deducible from P but Q is not. Many dualists would want to say such a thing. But unlike the dualist, the phenomenal concepts theorist cannot appeal to features of Q to explain the unique epistemic gain that Mary experiences when she leaves her room. For them, phenomenal concepts provide the explanation, and so it must be C that explains Mary's illumination. But if C is fully physically explicable (i.e., deducible from P) then Mary can know all about C from within her room. Given this, it is not clear where the phenomenal concepts theorist thinks the illumination comes from.

One of the more powerful responses to this argument comes from David Papineau who argues that while it is true that Mary can know all about C from within her room, the illumination comes from *being* in C and *having* a phenomenal state, not merely from studying those states (Papineau 2006).¹⁵ That is something Mary, pre-release, cannot do. In other words, the phenomenal concepts theorist is not trying to explain why all the facts about P and C cannot be deduced by Mary within the room. These theorists are trying instead to explain why a certain sort of first-personal knowledge of phenomenal states cannot be possessed by Mary, and this is to be explained by the fact that in her room, she is unable to instantiate the properties described in C which would allow her to grasp the phenomenal states in a first-personal manner. The anti-physicalist will of course want to hear more about this 'first-personal knowledge' since there is a risk that the issue has simply been relocated.

Recently, the very existence of phenomenal concepts has been called into question. If these arguments are correct, of course, the phenomenal concept strategy doesn't even get off the ground. But interestingly enough, it is argued that the knowledge argument itself presupposes phenomenal concepts, so physicalists can still breathe easy (Ball 2009; Tye 2009).

The gist of the argument is that the Burge-style arguments against individualism apply just as well to phenomenal concepts (Burge 1979). As we have noted, phenomenal concepts are concepts that one can have only in virtue of having certain experiences. But such concepts are at odds with social externalism, or the view that one can possess a concept (partly) in virtue of being a member of a linguistic community. Just as one can have an incomplete understanding of arthritis but still possess an arthritis concept, so one could have any concept of a phenomenal property without a full understanding – indeed, without having had the experience. This is why Mary can, from within her room, think thoughts such as 'what it's like to see red is probably not at all like what it's like to feel hunger'. And, intuitively, we can imagine someone outside the room, looking at red and feeling hunger, agreeing with Mary, and we can imagine Mary leaving the room and saying 'I was right! What it's like to see red is very unlike what it's like to feel hunger'. The possibility of intersubjective agreement in the first case, and the possibility of confirmation in the second, seems to require that the concepts employed in the room are the

same as the concepts employed outside the room. Since it is claimed that Mary employs a phenomenal concept outside the room when discovering what it is like, Mary must have the same concept within the room. In other words, if phenomenal concepts are really taken to be experience-dependent, there are no phenomenal concepts. Whatever concepts Mary employs upon seeing the rose, she had before seeing the rose.

If these arguments work, then it seems that there is no thought that Mary could not think from within her room. Call the thought that Mary thinks when she first sees the rose (red is like this!) R. According to this argument, she can entertain R from within the room. Can she know it? This presumably depends on your view of knowledge, but it seems that most views would allow that she could learn R by testimony, or by believing R in such a way that it tracks the truth, or by having a belief that R that is reliably formed, etc. In other words, once it is allowed that Mary can, from within the room, entertain the belief she acquires upon seeing the rose, there seems no good reason why she couldn't have the same knowledge from within her room. So, it looks like the knowledge argument cannot get off the ground.

There are many places one might disagree with this argument, but they fall into two broad categories. A response must either deny that Mary can, within the room, entertain the proposition she entertains upon her release, or it must maintain that there is some epistemic relation she holds to the proposition outside the room that she could not hold within the room. Both sorts of responses seem plausible. Along the lines of the first response, one could simply deny that the Burgean arguments apply to phenomenal concepts. Phenomenal concepts theorists are already willing to claim that these concepts are unique, so this might not be much of a further bullet to bite. One could also go the other route, claiming that while Mary can entertain all the relevant propositions from within her room, she could not know them. More subtly, one could maintain that there is a distinction to be made between entertaining (and thus knowing) a proposition deferentially and entertaining (or knowing) it with a full, non-deferential understanding of the concepts involved. While Mary could do the former from within the room, she could not do the latter (T. A. Alter, unpublished).

In the end, it seems likely that these considerations will force phenomenal concepts theorists to become more sophisticated, but they will not change the outcome of the debates. For one thing, the deducibility version of the knowledge argument would still go through: social externalism might show that Mary has phenomenal knowledge from within the room, but it would not enable her to deduce that knowledge from physical knowledge. Second, it seems that a variant of the *disguise depends upon ignorance* principle can be invoked here. There is a difference between someone who merely deferentially possesses a concept and someone who possesses it with mastery. It also seems to be the case that Mary goes from being a deferrer to a master. Furthermore, it seems very plausible, and indeed is supported by the cases adduced by Burge and Putnam, that one can only go from being a deferrer to a master by learning some new fact. If that is the case, the knowledge argument survives in a new form: by becoming a master of her concept, Mary learns new facts, so physicalism is false.

Closely related to the phenomenal concepts strategy is the claim that phenomenal knowledge, of the sort gained by Mary, is a form of indexical knowledge.¹⁶ There are certainly parallels between the knowledge argument and the puzzles surrounding first-personal reference and knowledge. I can know all the facts about the world from an objective point of view (one that doesn't employ indexicals) but I will still be missing something. I might know all the facts about Robert J. Howell but still lack the important knowledge that I am Robert J. Howell.¹⁷ Almost everyone agrees about this much, and

almost everyone agrees that this is metaphysically innocuous: everything here can be explained by the right semantics for indexicals, without positing anything mysterious. It is tempting to think that Mary's situation can be explained in the same way (Tye 1995; Perry 2001; Stalnaker 2008).

If Chalmers' master argument is successful against phenomenal concepts, it would be successful here as well. But there are further concerns. One is that if Mary's illumination is explained by the acquisition of this sort of new knowledge, then her revelations should keep coming. For she not only enters a new state of indexical knowledge when she leaves the room, she enters a new state a few seconds later when she sees another rose of the very same color. We are all, in fact, constantly entering into new states of indexical knowledge with the same old phenomenal states, but with no sense of significant epistemic gain. But Mary does have a significant epistemic gain, so Mary's case cannot simply be a case of new indexical knowledge. Furthermore, just as she doesn't keep gaining new knowledge when she is in a position to entertain new indexical beliefs, she doesn't lose the knowledge when she can no longer entertain the relevant indexical beliefs. Mary can return to her black and white room for the rest of her life, so that she is no longer in the position to have the crucial indexical knowledge of red experiences, but she will still know more than she did when she first occupied her room. So, even though Mary gains new indexical knowledge upon first leaving the room, she still knows something new when she loses that knowledge, so indexical knowledge cannot be all she gains.¹⁸

It is likely that both the indexical response and the phenomenal concepts response ultimately must rely on the claim that there is a special, knowledge-giving relation that we can hold to our own states by occupying them (Howell 2007; Levine 2006). This is, in essence, the acquaintance response (Conee 1985). Although few physicalists explicitly endorse it, this could be seen as the basic strategy in the various intentional fallacy responses: Mary knew all about the facts in scientific terms (knowledge by description?) and only upon exiting her room knew the same states by acquaintance (Russell 1910).

Something like acquaintance might very well ground the difference between Mary's knowledge in the room and her knowledge upon leaving. The question that faces the acquaintance theory is whether or not acquaintance has a place in the physicalist picture. There are two potential problems here. One is whether or not any of the plausible physical candidates to explain the acquaintance relation can do such a thing (Levine 2006; Levin 2007). The other relates again to Chalmers' master argument. There is a dilemma. If acquaintance can be fully explained physically, Mary should have no revelations upon leaving her room. If she has an *aha*-moment, however, it seems that she has at least learned something about the state of being acquainted with a phenomenal state – something she could before only speculate about.

In the face of such conflicting intuitions about the knowledge argument, it is tempting to tend towards a bit of epistemic humility. Perhaps, we are simply not in a position to evaluate whether or not the phenomenal truths are deducible from the physical truths, or perhaps we cannot really understand what possessing all the physical truths involves (Nagel 1974; McGinn 1989; Stoljar 2006). This is the Ignorance Response, and it comes in optimistic and pessimistic flavors. Optimistically, our ignorance is temporary. We are, perhaps, like Newtonians trying to comprehend relativity, in need of an Einstein to bring forth a paradigm shift. Things previously unimaginable become intelligible given the right theories, and perhaps we are simply waiting for the right theory of the phenomenal. More pessimistically, our current limitations might reflect a deep limit on our cognitive capacities. We are like monkeys contemplating calculus: we are simply intellectually not up to the task.

The ignorance response is attractive, but it should be embraced with caution. Depending on what we mean by ‘physicalism’, certain forms of the ignorance response might be conceding the point of the knowledge argument. Anti-physicalists do not, and should not, claim that phenomenal states will never be embraced by something called ‘physics’ or that there will never be a doctrine going under the name of ‘physicalism’ that provides some explanation of phenomenal states. Physics could change as could our practices of explanation. But if future science and explanation depart too much from the methods and principles of our best sciences as they now stand, and if they no longer explain things in terms of spatio-temporal structure and dynamics, then the physicalists will have received a merely terminological vindication. It would still be the case that the phenomenal escaped a certain sort of explanation which seemed adequate to explain the rest of the world. Under such circumstances it might be that the physical has become more phenomenal, rather than the phenomenal being reduced to the physical (Alter 2009).

Short Biography

Robert J. Howell is an Associate Professor of Philosophy at SMU. He has published numerous articles in epistemology and the philosophy of mind, and is the co-author (with Torin Alter) of *A Dialogue on Consciousness* (Oxford, 2009) and *The God Dialogues* (Oxford, 2010).

Notes

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¹ This confusion doesn’t seem to have tempted many professional philosophers, but many students make this mistake.

² This is a modified version of the argument presented in Alter and Howell (2009).

³ For discussions, though, see Tye (2000), Alter (2001), Alter and Howell (2009).

⁴ Horgan (1984).

⁵ In much of the literature, use of these strategies (especially the phenomenal concepts strategy) is tied to discussions of the necessary *a posteriori* (Kripke 1980). There are important issues there, but I don’t think many of them have to do with phenomenal knowledge *per se*. The point is made much simpler if these issues are left to the side.

⁶ As Stoljar (2005) notes, not all versions of the phenomenal concept strategy rely so heavily on the experience-dependence condition, but it seems likely that alternative conditions will yield similar results.

⁷ The conceivability argument against physicalism can basically be seen as making this point. See Chalmers (1996).

⁸ This would be an ironic source of error if the distinguishing feature of phenomenal concepts is the particularly direct access they give us to the states they present (Papineau 2002; Pereboom 2011).

⁹ Some versions might deny the first premise instead, claiming that the phenomenal truths are deducible but that Mary doesn’t possess the concepts required to perform the deduction.

¹⁰ This is not to say that there is not sufficient justification for belief in physicalism. But it might be that the justification is structured differently in these cases.

¹¹ Chalmers (2006: 172–3).

¹² Chalmers casts the argument in terms of conceivability, which would add unnecessary complications to our discussion. Here I try to translate his argument into the terms of the knowledge argument as I have presented it. His argument is on Chalmers (2006: 174).

¹³ Chalmers (2006: 175–5). This assumes a close link between deducibility and explanation. Defense and discussion of this assumption goes beyond the parameters of this paper.

¹⁴ Chalmers’s discussion involves the conceivability of zombies, and the comparative epistemic status of zombies and others. This is tough going, and perhaps a bit far out. I again, hopefully without violence to his points, try to translate his argument into our terms.

¹⁵ Again, Papineau’s argument is adapted to our terminology.

- ¹⁶ The indexical strategy is often seen to be a variant of the phenomenal concepts strategy. There is certainly overlap between the views, and many views might involve both, but there are a set of motivations and problems peculiar to the indexical theory.
- ¹⁷ The central papers for these issues are Lewis (1979), Kaplan (1989) and Perry (1979).
- ¹⁸ Different versions of the same point are made by Chalmers (2003, 2004).

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