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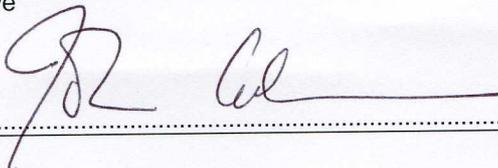
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LWP7 Introduction to Philosophy of Mind | DACE 2009-10
Assessment Essay by John Coleman 0709096 (3580 words)

According to Levine, there exists an explanatory gap between physical processes and consciousness. Why? What are the main philosophical positions regarding the gap? Do you think that any of these positions is better argued for than the rest? Which one or why not?

Contents

1 . Introduction	2
2 . Deny the gap	4
3 . Accept the gap	7
4 . Close the gap.....	11
5 . References	15

The Explanatory Gap

1 Introduction

In [1:para1] Joseph Levine (1999) begins by reminding us that *Materialism in the philosophy of mind is the thesis that the ultimate nature of the mind is physical; there is no sharp discontinuity in nature between the mental and the nonmental. Antimaterialists assert that, on the contrary, mental phenomena are different in kind from physical phenomena.*

Levine first introduced the term *explanatory gap* in 1983 when objecting to Kripke's antimaterialist assertion. In [2:p354] he wrote:

... I don't believe this [Kripke's] intuition supports the meta-physical thesis Kripke defends—namely, that psycho-physical identity statements must be false. Rather, I think it supports a closely related epistemological thesis— namely, that psycho-physical identity statements leave a significant explanatory gap, and, as a corollary, that we don't have any way of determining exactly which psycho-physical identity statements are true.

Summing up the *Metaphysical Implications* in [1:4th heading; para1] Levine reaches

The former [the explanatory gap] attempts to establish a more modest, epistemological thesis, to the effect that mental properties cannot be explained in terms of physical properties, though they nonetheless might be metaphysically reducible to physical properties.

Thus, Levine's *explanatory gap* was not intended as an objection to materialism, although he recognised antimaterialists would interpret it in that way. It doesn't rule out psycho-physical identity but it does show how difficult it is to provide a satisfactory explanation.

In [1:4th heading; para4] Levine continues:

The general idea is that the ultimate metaphysical nature of reality-including the nature of the mind itself-is independent of our cognitive access to it. So, the question now is how this materialist move concerning the limits of our cognitive access can be applied to the specific argument about the proper interpretation of gappy identities.

He concludes [1:4th heading; para9]:

The explanatory gap argument doesn't demonstrate a gap in nature, but a gap in our understanding of nature. Of course a plausible explanation for there being a gap in our understanding of nature is that there is a genuine gap in nature. But so long as we have countervailing reasons for doubting the latter, we have to look elsewhere for an explanation of the former.

I buy that. As a physicalist (and an erstwhile physicist, a *natural philosopher*) it seems more likely that we struggle to understand how qualia are physically realised than that they are realised by some supernatural substance and that physical causal closure is wrong.

In this essay I will consider some of the main views regarding the explanatory gap and comment on them from my own perspective. I have classified them under the headings *Deny the gap*; *Accept the gap*; *Close the gap*. My conclusion is that *Close the gap* is best, but that it may not be easy.

2 Deny the gap

This is quite easy to do if you are serious about psycho-physical identity because identity is a brutish thing. If two things are identical then each *just is* the other. There is no causal relationship (neither is caused by the other) and supervenience is not necessary (neither is supervenient on the other) because each *just is* the other.

David Papineau puts it very well in [3:6th heading; para1]:

If conscious properties are identical to material properties, then I say there is no mystery of why material properties "give rise" to conscious properties. This is because identities need no explaining. If the "two" properties are one, then the material property doesn't "give rise" to the conscious property -- it is the conscious property. And if it is, then there is no mystery of why it is what it is.

His thesis is that *identities need no explaining*. We do not normally ask *Why is water H₂O ?* or *Why is Tony Curtis Bernie Schwartz ?* [they are the same person]

. Once the identity is discovered no explanation is necessary, although before that time it may be (e.g. *Why are Tony Curtis and Bernie Schwartz never seen together?*).

The *Why is A, B?* identity question is not the same as asking *Why does A (or B) have the properties that it has ?* and indeed that question might have been instrumental in discovering the identity itself. This bears on the difficulty of establishing the physical identity of qualia because qualia are never defined in physical (or even functional terms). But I digress, some (e.g. Papineau) would simply say that there is no explanatory gap because identities need no explaining.

Another important issue with psycho-physical identity is whether we are talking about type identity or token identity. For two things to be actually identical they must both be particular instances (or tokens), concrete realisations of some abstract type. It follows that the identical tokens must be co-extensive in space (and time), because each *just is* the other. Both (Type and Token) identity theories of mind say that each token of a mental state is identical to a token of a physical state. That might identify my toothache now (say) with the physical state of my body now (including some stimulated C-Fibres maybe) but it doesn't say anything very general about pain (or what my toothache feels like).

Type identity theory goes further, it claims that every token of a mental type is identical to a physical token of the same physical type. In that sense the mental and physical types are identical. Thus type identity theorists might claim that pain is identical to C-Fibre stimulation, which seems like an impressive result. But that rules out multiple realisation and struggles to explain how pain 'feels

like' it does. Token identity theory, on the other hand, is more versatile. It seeks to say that while every token of a certain mental type is identical to a physical token of bodily state, the physical tokens may not be of the same physical type. This accommodates multiple realisability, which is necessary if dogs may feel pain, or even if we may feel pain in the absence of C-Fibre Stimulation (which seems quite likely to me, e.g. the pain of bereavement). But if qualia of a single type could be realised physically in different ways then what is it that characterises the single mental type (e.g. pain)? This time we can't say that pain *just is* a particular physical state because we have elevated pain to a mental type, not just a mental token, and admitted multiple realisability.

So, while I agree that *identities need no explaining* I can see that is not sufficient to deny the explanatory gap, because we are seeking to explain how mental *types* are realised materially in general, and we have barely scratched the surface on how that is done. No doubt very eminent neurophysiologists who are world experts on C-Fibre Stimulation have made good progress, but there is much to discover yet and jumping to conclusions on scant evidence may hold the job up.

There is a second, quite different, technique for denying the gap, as advocated by Dennet et al. That is simply to deny that qualia (i.e. *properties of conscious experience*) exist at all. In his *Quining Qualia* essay (1998) Dennet [4:6th heading; final sentence] reaches *So contrary to what seems obvious at first blush, there simply are no qualia at all.* Dennet's essay is very good and in it he seeks to systematically examine all the claims for qualia as *properties of conscious*

experience and show that actually *conscious experience has no properties that are special in any of the ways qualia have been supposed to be special.*

If qualia do not exist then the explanatory gap goes away because there is nothing to explain. But despite Dennet's erudite analysis I feel that his attempt to make it [4:1st heading; para5] ... *uncomfortable for anyone to talk of qualia--or "raw feels" or "phenomenal properties" or "subjective and intrinsic properties" or "the qualitative character" of experience--with the standard presumption that they, and everyone else, knows what on earth they are talking about.* is bound to fail.

From my own experience (where else?) I can recognise mental phenomena that seem to be what are referred to as qualia, including perception of colours; bodily sensations (e.g. pain); felt reactions or passions or emotions; felt moods etc – as listed in our DACE class.

So, embarrassed as we might be to talk about feelings that we cannot define well in physical (or functional) terms, I don't think we can dismiss qualia. In fact Dennet explicitly does **not** deny that *conscious experience has properties* he just wants to make it clear that qualia have no *special properties, in some hard-to-define way*. I am almost with him on that and agree with him when (I think) he suggests that qualia properties (like all mental phenomena) must be realised by virtue of material properties of the physical phenomena with which they are identical.

3 Accept the gap

In his introduction to discussion on the explanatory gap David Chalmers [5: para1] asserts that *Physical explanations have had extraordinary success*

*elsewhere in science. and that Given this track record one might well expect that a physical explanation of consciousness is on its way. He continues [5: para2]: But some have argued that any purely physical explanation of consciousness will be incomplete. Neurophysiology will very likely yield a systematic correlation between states of the brain and states of consciousness, but will this correlation be a complete explanation? It has often been suggested that no physical account tells us why there should be states of subjective experience –the direct experience of colors, pains, emotions, and other phenomenological aspects of our mental lives. Given any physical account, one can ask why **that** process should yield consciousness; and many have suggested that a physical theory alone cannot answer this question.*

Chalmers [5:Levine paragraph] says that Joseph Levine *thinks that the gap may be uncloseable, but that consciousness may be physical all the same. That is, there is an epistemological gap, but no ontological gap.*

Similarly, in *Thinking about Consciousness* [6: p1], David Papineau begins:

Consciousness is widely regarded as an intractable mystery. As soon as we start thinking about it, we find ourselves pulled in two quite opposite directions, and there can seem no good way of resolving the conflict.

On the one hand, it seems clear that consciousness must be a normal part of the material world. Conscious states clearly affect our bodily movements. But surely anything that so produces material effects must itself be a material state.

On the other hand, it seems absurd to identify conscious states with material states. Conscious states involve awareness, feelings, the subjectivity of

experience. How could mere matter on its own account for the miracle of subjective feelings?

*In the face of this dilemma, many contemporary thinkers counsel despair. They conclude that we lack the intellectual wherewithal to understand consciousness.... [6: p2] Why not just accept that having a subjective feeling is being in a material state? What would you expect it to feel like to be in that material state? Like nothing? Why? **That's** what it is like to be in that material state.*

This sounds a bit like *emergentism* as Kim[7: p223] explains it in *Phenomena; Consciousness: The "Explanatory Gap" and the "Hard Problem"* :

That the explanatory gap cannot be filled, or that the hard problem cannot be solved, is the central doctrine of emergentism. Psychoneural correlations are among the ultimate unexplainable brute facts, and ... accept them with "natural piety" – stop asking why and just be grateful that consciousness has emerged!

Kim is using David Chalmers' phrase *the hard problem* to mean the one that involves qualitative states of consciousness (aka *qualia*) which resist functional characterisation as opposed to *easy* functional concepts like memory. A functional definition of memory might be feasible but how to develop a functional description of first-person experiences like pain and fear etc?

Finally, Colin McGinn [8:p182] has described *Cognitive Closure*:

We are suffering from what I called "cognitive closure" with respect to the mind-body problem. Just as a dog cannot be expected to solve the problems of space and time and the speed of light, that it took a brain like Einstein's to solve, so

maybe the human species cannot be expected to understand how the universe contains mind and matter in combination. Isn't it really a preposterous overconfidence on our part to think that our species--so recent, so contingent, so limited in many ways--can nevertheless unlock every secret of the natural world? As Socrates always maintained, it is the wise man who knows his own ignorance.

In these four accounts we are encouraged to accept that the explanatory gap cannot be closed although the problem may be entirely epistemological. For completeness we should consider the possibility of an ontological solution, appealing to some kind of super-natural dualism (at least) to explain the apparent inefficacy of physicalism. In my view this route inevitably raises more problems than it solves because it conflicts horribly with everything I have come to accept about physical deterministic laws and causal closure. Epiphenomenalism doesn't seem to help either, if qualia were some kind of epiphenomenal side-effects then we must accept that all those *properties of conscious experience* are inefficacious, which I don't. I refer to my 'old friend' Donald Davidson [9:p207] when he says:

I start from the assumption that both the causal dependence, and the anomalousness, of mental events are undeniable facts. My aim is therefore to explain, in the face of apparent difficulties, how this can be. I am in sympathy with Kant when he says, 'It is as impossible for the subtlest philosophy as for the commonest reasoning to argue freedom away. Philosophy must therefore assume that no true contradiction will be found between freedom and natural necessity in the same human actions, for it cannot give up the idea of nature any more than that of freedom'.

Davidson is drawing an analogy between his problem of reconciling the apparent efficacy of mental **and** physical events events, with Kant's problem of reconciling free will and determination. Both Davidson and Kant were determined to succeed. Davidson's solution was his form of non-reductive physicalism including his *Principle of the Anomalism of the Mental*, and no psycho-physical laws. In his view mental events are efficacious by virtue of the physical deterministic properties of their material counterparts. It still seems like quite a neat trick to me, who needs overdetermination?

What does all this amount to? Should we just accept the explanatory gap on principle, that qualia etc must be realised materially but we can never understand how? I conducted my own thought experiment, trying to draw an analogy between self-examination of the eye by itself and the understanding of consciousness by the human mind. I asked myself the question *can an eye see inside itself ?* At first the answer would seem to be no, then how can we come to understand consciousness ? Then, for the sake of argument, I invented the auto-ophthalmoscope and began to see a way forward. Given the right tools and techniques (and a whole lot of research and development) the eye can see inside itself and, ditto, given time and perseverance we can hope to explain consciousness and qualia and all that difficult stuff. Let's not accept the explanatory gap just yet.

4 Close the gap

Some think this is easy, but I have my doubts about that. However I am enthusiastic about narrowing the gap at least. Going back to David Papineau in [6:p1], he does become more optimistic:

For myself, I think that all this gloom is quite misplaced. We don't need any fancy new concepts to understand consciousness. For there isn't anything really mysterious about it in the first place.

... [6:p3]

This book is an attempt to understand this dualist compulsion, and free us from its grip. A successful materialism must explain the compelling intuition that the mind is ontologically distinct from the material world. This anti-materialist intuition comes so naturally to us that we are unlikely to become persuaded of materialism simply by arguments. We can rehearse the considerations in favour, and show that the counter-arguments are not compelling. But as long as the contrary intuition remains, this all seems like a trick. There must be a flaw in the argument, we feel, because it is obvious that conscious states are not material states.

So a successful materialism must identify the source of this contrary intuition. It needs to explain why materialism should seem so obviously false, if it is indeed true.

Going back to David Chalmers in [5: Van Gulick paragraph] he says that Robert Van Gulick holds that there is a *prima facie* explanatory gap, but that it may eventually be closed. To close the explanatory gap, we need to revise our concepts, in a way that we cannot yet anticipate. With such a revision, it may no longer seem internally consistent to suppose that any physical process could take place without consciousness.

Van Gulick takes issue with Chalmers over the latter's conceivability arguments to show the nonmateriality of mind, particularly Chalmers' other world of

molecule-for-molecule duplicates (zombies) who are in every respect identical to humans – except that they lack consciousness:

[10:6th paragraph] *Dualists since Descartes have tried to use conceivability arguments to show the nonmateriality of mind. Descartes claimed that he could clearly and distinctly imagine his conscious mind continuing to exist in the total absence of his physical body. He thus concluded that the two could not be one and same. In recent years imagined zombie cases have been called upon to play a similar argumentative role.*

I don't have much time for this because I am a monist, there is no 'other substance' which realises consciousness. For me the notion of zombies is a non-starter, but it's good to see Van Gulick take Chalmers on. Van Gulick likens Chalmers to a mid-nineteenth-century vitalist who, mistakenly, concluded that because he could conceive of creatures which could not reproduce it must be logically possible that such creatures exist and therefore the ability to reproduce does not logically supervene on a creature's physical structure. The vitalist's notions were ill conceived [10:21st para] *because he had not the slightest grasp of what we now know to be the biochemical basis of that process, of how genetic information can be coded by sequences of DNA and RNA.* Which leads Van Gulick to ask *Are the concepts used by Chalmers and the neodualist more adequate than the vitalist's?*

Van Gulick reaches [10:23rd para]: *Recall the vitalist's concept of reproduction, which failed to include the idea of information transfer. Given the incompleteness of the vitalist's concept it is not surprising that he could not see how reproduction*

might be a fully material process. The situation, I believe is comparable with respect to the neodualist's concept of consciousness. Here too our current understanding of consciousness qua consciousness is far too incomplete to be able to say with any confidence how it might or might not be physically realized.

To his credit, Chalmer's included Van Gulick's paper in the explanatory gap session which he chaired at the Tuscon conference, *Towards a science of consciousness* (1999) [11], and to his credit Van Gulick acknowledged that the modern *functionalist has his own modest embarrassments.*

I have considered just a few of the main views and concentrated on those which do not imply the existence of an ontological gap, because I am not a dualist. In the end I am minded to adopt the position implied by David Papineau's great title *Thinking about Consciousness*. The very fact that we can think about consciousness offers hope for the future and I think it gives the lie to cognitive closure. Philosophy of mind has come quite a long way since Cartesian dualism but there is clearly a very long way to go. Natural science will help.

5 References

All references are hyperlinks to web resources, although some may require Shibboleth (or Glasgow University) credentials to access the full text.

1. [Conceivability, Identity, and the Explanatory Gap - Joseph Levine in \[11\]](#)
2. [Materialism and Qualia: The Explanatory Gap - Joseph Levine \(1983\)](#)
3. [Mind the Gap - David Papineau, King's College London](#)
4. [Dennett, Daniel C. \(1988\) Quining Qualia. In: Marcel, A. & Bisiach, E. \(eds.\) Consciousness in Modern Science, Oxford University Press.](#)
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6. [Papineau, David. Thinking about Consciousness. Oxford: Oxford University Press, 2002. Oxford Scholarship Online. Oxford University Press. 20 November 2009](#)
7. [Philosophy of mind. Kim, Jaegwon. 2nd ed. Boulder, Colo. : Westview Press, 2006.](#)
8. [Colin McGinn, The Making of a Philosopher, Page 182 \(Published 2002\)](#)
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10. [Conceiving beyond Our Means: The Limits of Thought Experiments - Robert Van Gulick in \[11\]](#)
11. [Toward a Science of Consciousness III The Third Tucson Discussions and Debates Edited by Stuart R. Hameroff, Alfred W. Kaszniak and David J. Chalmers \(1999\)](#)