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A PILL AGAINST EPIPHENOMENALISM

Patrick Spät

Abstract
This paper argues that epiphenomenalism – the view that physical states cause mental states, but not vice versa – is counterintuitive. Though we cannot prove its falsehood we can give strong reasons for not believing in inefficacious mental states. In doing so, this paper claims that the well-known counter-examples like arguments from the common sense or the theory of evolution are correct. Unfortunately, many arguments against epiphenomenalism do not contain empirical facts from the neurosciences. This paper tries both to do justice to this lack and to establish a new argument against epiphenomenalism: The placebo-effect provides good reasons to hold the view that mental states are efficacious in respect to an agent´s behaviour. On the one hand it is difficult for the epiphenomenalist to explain the placebo-effect without considering the causal effects of mental states, on the other hand there are well-founded empirical studies on the placebo-effect which support the contemporary claims against an epiphenomenal view.

In the age of naturalisation there are still hold several views that draw a somehow mystical picture of the world. One of them is *epiphenomenalism*, claiming that minds are all but powerful. This means that mental states are non-functional properties or mere by-products of the physical world respectively – with *no* causal effects on the physical. To put it in a nutshell: Following epiphenomenalism, physical states cause mental states, but not vice versa. As well-known, C. D. Broad – epiphenomenalist himself – defined this view as follows:

> x is epiphenomenal [means] x is an effect but itself has no effects in the physical world whatever. (Broad, 1925, p. 118)

In this paper we want to have a look whether this account really works. In doing so we will address questions concerning mental states and *behaviour*, so we will not consider other issues like *epiphenomenal qualia* (e.g. the position hold by Jackson, 1982. For discussions of epiphenomenal qualia c.f. Ludlow *et al*, 2004). What we want to investigate is whether mental states can have an effect on physical states or not. While some hold the later (e.g. Huxley, 1874; Broad, 1925; Campbell, 1970; Robinson, 1988, etc.), there are of course many straightforward arguments against epiphenomenalism – let us have a short look on them:

(1) One class of arguments against epiphenomenalism is that such a view seems to be very counterintuitive, because it goes against our common sense beliefs (e.g. Hodgson, 1996). This observation appears to be very compelling, for there are many convincing *intuitions* against epiphenomenalism – one of the standard objections goes as follows: Suppose I am holding my hand into a flame, but after some seconds I withdraw it because it hurts. For the epiphenomenalist my sensation of pain will play no causal role in my hand`s moving away. Of course, this answer is extremely counterintuitive – what would have make my hand`s moving away but my mental states? In order to answer this rhetorical question the epiphenomenalist easily gets on the wrong lane by using a Cartesian loophole – by establishing the idea that mental states are real but *also* causally inert, we`re re-building a *Cartesian Theatre* (c.f. Dennett, 1991 for arguments against a Cartesian Theatre). Thus epiphenomenalism has – besides many other problems – all the heavy burdens of dualistic approaches to the mind.

(2) Other objections to epiphenomenalism are made by appealing to the relationship between consciousness and the things we *say* and *judge* about consciousness (see Elitzur, 1989; Shepard, 1993 for this objection). An epiphenomenalist must hold that mental states are causally inefficacious to our utterances about consciousness. But how then can we *refer* to or *know* about consciousness? Suppose I am actually drinking some coffee and I utter the words "I`m having an experience of the coffee`s delicious taste". It is more than natural to suppose that my experience of the coffee`s taste explains the utterance of those words, i.e. I say or judge what I do *because* of the thing I experience! On the contrary an epiphenomenalist has to bite the bullet by claiming that my experience of the coffee`s taste has nothing to do with my utterance that I experience the taste.

(3) Some emphasize that there are strong proofs that mental states are evolved by natural selection – in this sense mental states play a significant role for organisms, which have to judge, to desire, to hope etc. in order to *survive* (see Popper & Eccles, 1977; Dennett, 1991; Hodgson, 1996 for this line of thought). This *Darwinian* objection to epiphenomenalism has much weight on its side, because on the one hand it provides an explanation of mental states via *biological functions* (which are conductive to survival), on the other hand there are obviously strong reasons to hold that almost nothing in nature is accidental or without any important function – especially nothing so complex and developed as consciousness. Ask

yourself for the *raison d´être* of your breathtakingly complex and wonderful inner life, i.e. of your mental states; is it really a mere by-product without any function? Why should not mental states be seen in the very same way as the e.g. immune system? Both help organisms to manage their environment by giving them the simple but powerful ability of problem-solving. Last but not least one might recall that the production of mental states costs the brain an enormous amount of energy - the expenditure of energy is more than 20 %. Would Mother Nature (basic principals: survival and energy saving) really engine such powerless by-products like mental states?

While we can see that (1), (2), and in particular (3) are well-argued and (in my opinion) correct accounts, some will still remain unconvinced. For example, D. Chalmers points out that (1), (2), and (3) rest more or less on mere *intuitions* and thus they unfortunately do not refute epiphenomenalism successfully (see Chalmers, 1996, p. 150-160 and Chapter 5 for reasons). Well, that is quite right. Where is the knockdown argument against epiphenomenalism? I do not think there will be one, though this is no match-point for the other side. As Dennett notes in a similar context:

> I can't prove that no such sort of consciousness exists. I also cannot prove that gremlins don't exist. The best I can do is to show that there is no respectable motivation for believing in it. (Dennett, 1991, p. 406)

The lay of the land is that the epiphenomenalist has to prove his counterintuitive view, too. But as a doubtful product straight from the armchair, it is questionable whether epiphenomenalism can be proven by a priori means. And while leaving the armchair in favour of the lab, hard times for epiphenomenalism will arise.

In order to have a look on the work that is done in the lab, I would like to put another example that is supposed to raise up new doubts on epiphenomenalism by giving an argument which is based on the placebo-effect (henceforth PE). The PE example will do justice to (1), (2), and (3), and it will provide a strong intuition why mental states *do* indeed cause physical states. The advantage of the PE example is that it is easy to understand and that it is more "concrete" than the current arguments à la (1), because the example does not exhaustively rest on verbal reports but also on empirical facts.

In a randomised placebo-study realized by J. B. Moseley and his team (see Moseley *et al*, 2002 for details), 180 people with osteoarthritis of the knee were divided into three groups: The first group enjoyed an arthroscopy lavage and the second group an arthroscopy debridement, but within the third group the arthroscopic operation was just simulated. In

doing so the patients of the third group were deceived in a large-scale way: There were all the usual procedures that take place during an real operation: OP-noises were simulated, placebo-medicaments were administered, the OP-team behaved like there was a real OP going on, etc.

Long story short, the straightforward result goes as follows:

> In this controlled trial involving patients with osteoarthritis of the knee, the outcomes after arthroscopy lavage or arthroscopic debridement were no better than those after a placebo procedure. (Moseley, 2002, p. 88)

The PE raises up big problems for an advocate of epiphenomenalism. What else should have caused the disappearing of the pain but mental states? From another placebo-study realized by F. Benedetti and his team (see Benedetti *et al*, 2003 for more facts) we know that opiates are responsible for the painkilling effect. So far so good, but why does the body produce them? In effect mental states did the job, i.e. the patients` mental states (of the third group) judged the OP-situation to be real and thus mental states *caused* the physical states (namely the body`s organs) to produce opiates.

[All this talk about "mental" and "physical" could sound like we are advocating a property- or even a substance-dualism here. But obviously this need *not* to be the case. Rather, these termini are thought for helping us to simplify the explanation of the PE. Furthermore it should be noted that the interpretation of the PE given here can go along with almost all theories about consciousness – but obviously *not* with epiphenomenalism.]

So besides of the (surely very reliable) patients` reports about the pain`s disappearing we have a "prove" for the physical effect – the production of opiates. Likewise, the assumption of efficacious mental states during the PE fits very good with explanation (3): Organisms are almost always such constituted that they choose the most comfortable way, or, to put it more daring: Organisms simple want to survive, and in achieving this aim mental states do a quite good job by "telling" us which options could help to realize a certain aim. In the case of the PE the patients` mental states judged the whole situation and close-fitting they recognized (of course wrongly, because they were deceived) that there seems to be some help against the uncomfortable pain in prospect.

The conclusion can be drawn as follows: I think that the PE gives us strong reasons for ruling out any epiphenomenal position which denies the causally efficaciousness of the mental. The cheated "victims" of the PE have had beliefs and these beliefs caused the body`s observable behaviour. Just imagine, to the contrary, that the patients would have been *informed* of the fact that there is a simulation going on – the PE would surely have failed! A

simple information – which is received and digest by *mental states* – would have make the PE failing. No beliefs, no PE. Taken this to be right the consequences are rather clear:

(i) If mental states have a causal effect on physical states, epiphenomenalism is wrong
(ii) Mental states have a causal effect on physical states

(iii) Epiphenomenalism is wrong

It would be interesting to see how an epiphenomenalist would explain the PE without considering efficacious mental states. Which entity, property or phenomenon should make the PE possible but mental states, i.e. mental beliefs, judgements, and processes? One might presumably object that in the case of the PE almost all processes go by *sub*consciously, but on the one hand the patients think consciously that there is a real OP going on, and on the other hand subconscious states are in effect mental states either! Another objection is that the PE is exhaustively explainable by the *neurons` behaviour*. But notice that (a) the problems of dualism arise, and that (b) in effect the neurons` behaviour *are* mental states!

Given that epiphenomenalism rests on two thesis, namely the (x) irreducibility of mental states and (y) the claim that mental states supervene on but do not cause in turn physical states, the most obvious reply to the PE example would be the following: The patients` beliefs are physical coded and it is *this* coding that does the causing.
To the contrary, if we take (x) *and* (y) for granted, we would be faced with the problem that we have to explain how (x) can provide (y). This is, we would have to assert a form of *interactionism* (c.f. Popper and Eccles 1977, or Swinburne 1986), i.e. that irreducible mental states cause physical states and vice versa.

In order to avoid interactionism *and* epiphenomenalism, we would have to question the dualistic account of (x). In other words we would have to show that (b) is correct, i.e. that mental states are reducible to brain activity. Thus we have to show that (z) the patients` mental states qua beliefs follow functional processes. That assumption (z) is correct could be provided by the following point:

The functional character of mental states during the PE procedure is “observable” in the lab. This is, all changes in mental states have a functional pendant in the brain activity. As T.D. Wager and his collegues have found out:

> In two functional resonance imaging (fMRI) experiments, we found that placebo analgesia was related to decreased brain activity in pain-sensitive brain regions, including thalamus,

> insula, and anterior cingulate cortex, and was associated with increased activity during anticipation of pain in the prefrontal cortex, orividing evidence that placebos alter the experience of pain. (Wager, 2004, p. 1162)

This empiric case shows that the PE and the brain activity qua mental states go hand in hand. To show that these mental states are not a mere by-product we could ask the epiphenomenalist the following question:

How could it be possible that the PE is exhaustively caused by the neurons` behaviour when there is at the same time a hocus-pocus going on? If epiphenomenalism is right, the neurons` behaviour (and not the mental states!) would have to be cheated by the placebo. We cannot prove that this is *not* the case, but we can raise the question how neurons which follow natural laws all-out can make a mistake in interpreting reality? If we take mental states to be efficacious, we can on the one hand close the picture of our worldview by giving the hocus-pocus has an explanation, on the other hand we can close the dualistic gap.

To put it in a nutshell, we can agree with the epiphenomenalist that all beliefs are physical coded. This physical coding follows strict natural laws. The PE is a case which *seems* to break natural laws, because the physical and hence neurons which follow natural laws all-out, cannot be cheated. But as we know mental states can be cheated (e.g. by all the illusions like the Kanizsa-Triangle). Thus the assumption of efficacious mental states could provide a satisfactory explanation of the PE.

An *analogy* might help: Given that physical states are a computer (the hardware) and mental states are the software, the software can be reduced to the hardware. Nevertheless, the computer cannot e.g. write an essay or play a movie without an input by the software. Furthermore the hardware could only be cheated by the software (e.g. by a computer-virus), though the software follows the same natural laws like the hardware.

Given these aspects it is time to over-think epiphenomenalism and its spooky consequences. Although we have not *proven* its wrongness here and will not be able to do this at all (like we have not proven – and will not be able to prove – the inexistence of gremlins), we have seen that we have got good reasons for believing in powerful minds.

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