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ORIGINAL ARTICLE

The Knowledge Argument and Epiphenomenalism

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Abstract Frank Jackson endorses epiphenomenalism because he thinks that his knowledge argument undermines physicalism. One of the most interesting criticisms of Jackson's position is what I call the 'inconsistency objection'. The inconsistency objection says that Jackson's position is untenable because epiphenomenalism *undermines* the knowledge argument. The inconsistency objection has been defended by various philosophers independently, including Michael Watkins, Fredrik Stjernberg, and Neil Campbell. Surprisingly enough, while Jackson himself admits explicitly that the inconsistency objection is 'the most powerful reply to the knowledge argument' he knows of, it has never been discussed critically. The aim of this paper is to evaluate the objection and to identify and consider its implications. The objection is alleged to be based on a causal theory of knowledge. I argue that the objection fails by showing that any causal theory of knowledge is such that it is either false or does not support the inconsistency objection. In order to defend my argument, I offer a hypothesis concerning phenomenal knowledge.

1 Introduction

Jackson introduced the knowledge argument against physicalism in his 1982 and 1986 papers. The argument purports to derive the conclusion that physicalism is false by showing that complete physical knowledge is not complete knowledge *simpliciter*. Given the conclusion of the argument, Jackson endorses epiphenomenalism, which he thinks is the most plausible form of nonphysicalism.

The knowledge argument has faced a number of objections over the last 27 years. Although many, if not most, philosophers think that the argument is fallacious, there

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is no consensus as to exactly where the flaw lies. Some contend that the intuition behind the argument is mistaken (Dennett 1991; Foss 1989); some contend that the argument erroneously conflates knowledge-how and knowledge-that (Lewis 1988; Nemirow 1990); some contend that it fails to distinguish knowledge by description and knowledge by acquaintance (Bigelow and Pargetter 1990; Churchland 1985, 1989; Conee 1994); some contend that it overlooks the unique nature of phenomenal concepts (Loar 1990, 1997; Chapter 1 of Tye 2000); and others contend that it relies on an illicitly narrow concept of the physical (Alter 1998; Stoljar 2001; Nagasawa 2008).[1]

Jackson thinks that none of the existing objections to the knowledge argument is compelling, *except* what I call the 'inconsistency objection'.[2] The inconsistency objection says that since epiphenomenalism *undermines* the knowledge argument, Jackson cannot hold simultaneously that epiphenomenalism is true and that the knowledge argument is sound.[3] This objection has been defended by various philosophers independently, including Watkins (1989), Stjernberg (1999) and Campbell (2003). Surprisingly enough, while Jackson himself, along with Braddon-Mitchell, acknowledges that the inconsistency objection is 'the most powerful reply to the knowledge argument' he knows of, it has never been critically discussed (Braddon-Mitchell and Jackson (1996), p. 134). The aim of this paper is to evaluate it critically and consider its implications. By examining causal theories of knowledge, upon which the objection is alleged to rely, I argue that the objection fails. In order to defend my argument I provide a hypothesis concerning phenomenal knowledge.

The structure of this paper is as follows. In Sect. 2 I briefly introduce the knowledge argument. In Sect. 3 I define epiphenomenalism. In Sect. 4 I explain the inconsistency objection in various different forms and formulate its basic structure. In Sect. 5 I discuss causal theories of knowledge, upon which the inconsistency objection is alleged to rely. I argue that, contrary to what proponents of the objection think, one cannot advance the inconsistency objection by appealing to standard causal theories of knowledge. In Sect. 6 I introduce a new causal theory, which focuses on phenomenal knowledge and is free from the difficulties of standard causal theories. In Sect. 7 I reject the new theory by developing an alternative hypothesis concerning phenomenal knowledge. I conclude the discussion in Sect. 8.

[1] For overviews of the debate on the knowledge argument, see Alter (1999, 2007), Stoljar and Nagasawa (2004) and Nagasawa (2009).

[2] After 16 years of defending the knowledge argument, Jackson announced in 1998 that he had changed his mind, stating that although the argument contained no obvious fallacy, its conclusion, that physicalism is false, must be mistaken. In this paper, I am concerned only with Jackson's original antiphysicalist position. See Jackson (1995, 1998, 2003, 2004).

[3] Strictly speaking, the inconsistency objection is not a response to the knowledge argument per se, but to the joint holding of cogency of the knowledge argument and epiphenomenalism. Jackson calls the inconsistency objection the '"there must be a reply" reply' because he thinks that the objection shows that there must be a successful physicalist reply to the knowledge argument without specifying exactly what the reply is. See Sect. 4 for Jackson's construal of the inconsistency objection.

2 The Knowledge Argument

Imagine Mary, a brilliant scientist who is confined to a black-and-white room. Although she has never been outside her room in her entire life, she has learned *everything* there is to know about the physical from black-and-white books and lectures on a black-and-white television. Mary's complete knowledge includes everything about the physical facts and laws of physics, which will include causal and relational facts, and functional roles; this is the beginning of the Mary scenario.

Physicalism is the metaphysical thesis that, in the relevant sense, everything is physical, or as contemporary physicalists often put it, in the relevant sense, everything logically or metaphysically supervenes on the physical. Thus, if physicalism is true, Mary, who has complete knowledge about the physical, must have complete knowledge *simpliciter*.

What will happen, Jackson continues, when Mary leaves her room and looks at, say, a ripe tomato for the first time? According to physicalism, she should not come to know anything new because she is already supposed to know everything about the physical. It appears obvious, however, that she will discover something new upon her release; namely, 'what it is like to see red', a phenomenal feature of her colour experience. This contradicts the physicalist assumption that Mary, prior to her release, has complete knowledge *simpliciter*. Therefore, Jackson concludes, physicalism is false.

Jackson (1986) provides a 'convenient and accurate way of displaying' the knowledge argument:

(1) Mary (before her release) knows everything physical there is to know about other people.
(2) Mary (before her release) does not know everything there is to know about other people (because she *learns* something about them on her release). Therefore,
(3) There are truths about other people (and herself) that escape the physicalist story. (p. 293)

Given the antiphysicalist conclusion of the knowledge argument, it is reasonable for proponents of the argument to be attracted by dualism. Jackson endorses property dualism; in particular, epiphenomenalism, rather than the infamous interactionism.

3 Epiphenomenalism

As McLaughlin (1989, 1993) says, there are at least two kinds of epiphenomenalism: token and type. Token epiphenomenalism says that physical events cause mental events but mental events cannot cause anything. Type epiphenomenalism says, on the other hand, that events cause other events in virtue of their falling under physical types and that no events can cause anything in virtue of their falling under a mental type. In what follows I refer to type epiphenomenalism by the term

'epiphenomenalism' because that is the version that Jackson endorses.[4] However, since type epiphenomenalism is more modest than token epiphenomenalism, most claims about the inconsistency objection in this paper are applicable to token epiphenomenalism as well.

Epiphenomenalism comprises three core theses: (1) mental events are ontologically distinct from physical events, (2) mental events are caused by physical events, in particular, brain processes, and (3) no events are causally efficacious on physical events in virtue of their falling under a mental type. What distinguishes epiphenomenalism from interactionism is (3). Interactionism denies (3) by claiming that mental events *are* causally efficacious on physical events and hence that the mental and the physical causally interact with each other. Arguably, this claim makes interactionism particularly implausible because it violates the causal closure of the physical. Whether or not epiphenomenalism is ultimately successful, at least it is free from this implausible claim. Hence, most contemporary dualists, including Jackson himself, prefer epiphenomenalism to interactionism.

It is important to note that many proponents of the knowledge argument are not predisposed to be epiphenomenalists. Indeed, they seem to accept epiphenomenalism rather reluctantly, as a result of their being convinced by the knowledge argument. Jackson (1982), for example, thinks that given that the knowledge argument defeats physicalism and that there is no obvious knock-down argument against epiphenomenalism, it is not unreasonable to be an epiphenomenalist. Chalmers (1996), to take another example, says that while he finds physicalism to be an elegant doctrine, given the strength of the knowledge argument (and the conceivability argument) he has to take epiphenomenalism seriously. However, the inconsistency objection says that their reasoning is illegitimate; if they endorse the knowledge argument they cannot simultaneously accept epiphenomenalism, and vice versa.

4 The Inconsistency Objection

Jackson endorses epiphenomenalism *because* he thinks that the knowledge argument defeats physicalism. However, the inconsistency objection says that the alleged success of the argument does not motivate epiphenomenalism. For, the objection says, epiphenomenalism and the knowledge argument are mutually inconsistent; epiphenomenalism undermines the knowledge argument, and vice versa.

As I noted earlier, what distinguishes epiphenomenalism from interactionism is its third core thesis:

> (iii) No events are causally efficacious in virtue of their falling under a mental type.

Such critics as Watkins (1989), Stjernberg (1999) and Campbell (2003) argue independently that (iii) undermines the knowledge argument.

[4] See Jackson (1982) for his endorsement of type epiphenomenalism.

Watkins tries to show the inconsistency between epiphenomenalism and the knowledge argument by arguing as follows: If (iii) is true, one's beliefs and memories about qualia would be just as they are whether there were qualia or not. That is, '[b]eliefs about qualia cannot be justified on the basis of qualitative experiences since those experiences do not cause those beliefs' (Watkins 1989, p. 160). It follows that if epiphenomenalism is true, then contrary to what the knowledge argument says, Mary *does not* acquire new knowledge about colour experience upon her release from the black-and-white environment but only unjustified beliefs. Therefore, if epiphenomenalism is true, the knowledge argument collapses.

Stjernberg argues as follows. If (iii) is true, qualia do not have causal power. Since knowledge and perception are notions interwoven with notions of causality, (iii) renders Mary unable to have knowledge about her colour experience. Therefore, if epiphenomenalism is true, the knowledge argument is unsuccessful. Conversely, if, as the knowledge argument says, Mary does acquire new knowledge upon her release, then her knowledge has to be endowed with at least some causal powers. However, it then follows that qualia cannot be epiphenomenal and that epiphenomenalism is false. Mary's acquisition of new knowledge upon her release motivates *physicalism* rather than epiphenomenalism, because it shows that qualia do have causal efficacy as part of the physical order of things (Stjernberg 1999, p. 5).

Campbell argues as follows. In describing Mary's situation, Jackson implicitly presupposes that Mary's newfound colour qualia do have causal efficacy. For instance, Jackson writes, "[W]hen she is let out of the black-and-white room or given a colour television, she will learn what it is like to see something red, say. This is rightly described as *learning*—she will not say, "ho, hum"." (Jackson 1982, p. 291). If Mary learns something new upon her release then surely the presence or absence of qualia does make a causal difference to the physical world, because she behaves differently than she would if she had never had a colour experience. "All of these descriptions of Mary learning something new, of having realizations, and presumably making exclamations (instead of saying "ho, hum"), encourage and exploit the intuition that qualia have causal efficacy" (Campbell 2003, p. 263). Therefore, if the knowledge argument is successful, epiphenomenalism is false.

It is important to note that all the three critics seem to overlook the following simple refutation of the inconsistency objection. The inconsistency objection interprets (3) as saying that no events are causally efficacious *in the physical domain as well as in the mental domain* in virtue of their falling under a mental type. However, there is another interpretation of (3), which is consistent with the traditional understanding of epiphenomenalism: no events are causally efficacious *in the physical domain* in virtue of their falling under a mental type. Since the main motivation for holding epiphenomenalism is to preserve the causal closure of the physical, epiphenomenalists are obliged to endorse the causal inefficacy of events that fall under a mental type *in the physical domain*. However, they are not obliged to endorse the causal inefficacy of events that fall under a mental type *in the mental domain*.

If epiphenomenalists accept the second interpretation of (3), i.e., that events in the physical domain, but not necessarily in the mental domain, are causally inefficacious in virtue of their falling under a mental type, then they can reject the inconsistency objection by claiming that Mary's colour experience, which is an event in the mental domain, does cause Mary's acquisition of knowledge about the experience, which is also an event in the mental domain. Of course, we cannot eliminate all the counterintuitive consequences of epiphenomenalism merely by allowing causal efficacy within the mental domain. For instance, epiphenomenalists still have to uphold the implausible claim that Mary's vocal exclamation is not caused by her qualia. However, this is a general difficulty that epipheonomenalism faces and is distinct from the inconsistency objection.

Curiously enough, Jackson does hold the second interpretation of (3). He says that he is reluctant to accept the 'classical epiphenomenalist position', according to which 'the mental is *totally* causally inefficacious'. He writes:

> For all I will say it may be that you have to hold that the instantiation of *qualia* makes a difference to *other mental states* though not to anything physical. Indeed general considerations to do with how you could come to be aware of the instantiation of qualia suggest such a position. (Jackson 1982, p. 133)[5]

In what follows, however, I assume, in favour of the inconsistency objection, that epiphenomenalists are willing to accept the first interpretation, i.e., no events are causally efficacious *in the physical domain as well as in the mental domain* in virtue of their falling under a mental type.

Although there are subtle differences in Campbell's, Stjernberg's and Watkins's formulations, the thrust of their arguments seems to be the same. They all claim that the knowledge argument and epiphenomenalism are mutually inconsistent because, given (3), contrary to what the knowledge argument says, Mary cannot acquire new knowledge about qualia upon her release. The structure of the inconsistency objection can be presented as follows:

(1) If epiphenomenalism is true, then qualia are causally inefficacious in virtue of their falling under a mental type.
(2) If qualia are causally inefficacious in virtue of their falling under a mental type then Mary cannot acquire new knowledge about qualia upon her release. Therefore,
(3) If epiphenomenalism is true, then Mary cannot acquire new knowledge about qualia upon her release.
(4) If the knowledge argument is sound, then Mary acquires new knowledge about qualia upon her release. Therefore,
(5) If epiphenomenalism is true, then the knowledge argument is unsound, and vice versa.

Jackson says that while the inconsistency objection does not tell us what is wrong with the knowledge argument, it 'seeks to show that there must be something wrong

[5] Thanks to Alter for drawing my attention to this passage.

with [the knowledge argument] somewhere'. He states that the objection seems 'to be the most powerful reply to the knowledge argument.' (p. 134)

Jackson takes the inconsistency objection to pose a dilemma for him. On the one hand, the knowledge argument seems to provide him with good reason to give up physicalism. On the other hand, however, he cannot hold epiphenomenalism, the most plausible form of antiphysicalism, because it appears to undermine the argument. How can we resolve this dilemma?

Let us return to the structure of the inconsistency objection. Premiss (1) is true by the definition of epiphenomenalism. As I have noted, the claim that qualia are causally inefficacious in virtue of their falling under a mental type is one of the three core theses of epiphenomenalism. Premiss (3) is simply deduced from (1) and (2). Premiss (4) comes from Jackson's description of the knowledge argument. In the knowledge argument, the falsity of physicalism is derived from the claim that Mary acquires new knowledge about qualia upon her release. The conclusion (5) is deduced from (3) and (4). Given that premisses (1) and (4) are both obviously true and the argument is valid, the only way that we can refute the inconsistency objection is to show that (2) is false. In the rest of this paper I argue that (2) is, indeed, false.

5 Causal Theories of Knowledge

Premiss (2) of the inconsistency objection says that if qualia are causally inefficacious in virtue of their falling under a mental type then Mary cannot acquire new knowledge about qualia upon her release. Conversely, it says that if Mary can acquire new knowledge about qualia upon her release, then qualia are causally efficacious in virtue of their falling under a mental type. This implies that the inconsistency objection assumes that Mary's knowledge about qualia has to be caused by the qualia in question. It seems to follow that the inconsistency objection presupposes a causal theory of knowledge.

Causal theories of knowledge are formulated in terms of the fact that makes proposition p true and one's belief that p. So, according to causal theories, for example, if S knows that there is a house in front of S, there is a certain causal relationship between the presence of the house and S's belief.

Watkins, Stjernberg and Jackson implicitly or explicitly acknowledge that the inconsistency objection is based on a causal theory of knowledge: Watkins considers the claim that the inconsistency objection only shows that if the knowledge argument is cogent then 'causal theories of knowledge are inadequate' (Watkins 1989, p. 160); Stjernberg remarks that the inconsistency objection is based on the idea that there is a strong connection between causation and knowledge (Stjernberg 1999, pp. 7–9); Jackson writes that the inconsistency objection is allied with the 'view about the connection between knowledge and causation' (Braddon-Mitchell and Jackson 1996, p. 134).

It is important to consider whether the inconsistency objection can really rely on a causal theory of knowledge. In what follows I argue that the objection *cannot* rely on it because any causal theory is such that it is either false or does not support the inconsistency objection.

The simplest causal theory of knowledge—call it the 'classic causal theory of knowledge'—holds the following conditional:

(C1) If S acquires knowledge that p then p is a cause of S's belief that p.[6]

So, for example, if Kate knows that a vase is in front of her then the presence of the vase in front of her is a cause of her belief that a vase is in front of her. Suppose, borrowing Alvin Goldman's example, that, unbeknownst to Kate, there is a laser photograph of the vase between the real vase and her (Goldman 1967, pp. 358–359). Suppose, moreover, that the following are the case: (1) Kate believes that there is a vase in front of her, (2) Kate is justified in believing that there is a vase in front of her (because she looks at the holograph), and (3) it is true that there is a vase in front of Kate. The traditional Lockean analysis of knowledge entails that Kate knows that there is a vase in front of her because according to the analysis, knowledge is justified true belief. However, we have a strong intuition that Kate *does not* know that. Unlike the Lockean analysis, the classic causal theory, which holds (C1), is consistent with our intuition; it correctly entails that since the presence of the real vase is not a cause of Kate's belief she does not know that there is a vase in front of her.

It is not entirely clear exactly what the implication of causal theories is for an analysis of knowledge. Watkins seems to assume that causal theories *replace* the justification condition in the Lockean analysis with the causality condition. On the other hand, Goldman, a prominent ex-defender of a causal theory, says in his seminal paper that he *adds* a causality condition as a fourth condition to the Lockean analysis of knowledge (Goldman 1967, p. 358). However, later in the same paper, Goldman provides the following analysis, which seems to *replace* the justification condition with the causality condition: 'S knows that p if and only if the fact p is causally connected in an "appropriate" way with S's believing p' (p. 369). Fortunately, we do not need to settle this issue here. All we need to do is to make the minimal assumption that causal theories of knowledge hold that the notion of causality is necessary for filling the gap between knowledge and true belief *simpliciter*.

However, proponents of the inconsistency objection cannot rely on the classic causal theory because it is defeated by numerous objections. Consider, for instance, the 'future knowledge objection', which appeals to a variation of a scenario introduced by Goldman (1967, pp. 364–365):

> Tom intends to go downtown on Monday. On Sunday, Tom tells Sally of his intention. Hearing Tom say he will go downtown, Sally infers that Tom really does intend to go downtown. Sally has good reason to believe that Tom is a reliable sort of person who rarely says what he does not mean. From these facts, Sally concludes that Tom will go downtown on Monday. Now suppose that Tom fulfils his intention by going downtown on Monday. Can Sally be said to have known that he would go downtown? If we ever can be said to have knowledge of the future, this is a reasonable candidate for it. So we can assume that Sally did know that proposition.

[6] In this paper, I focus only on a necessary condition for acquiring knowledge according to a causal theory of knowledge, so that my argument can be applied to as many theories of knowledge as possible.

If the classic causal theory of knowledge is true then Tom's going downtown has to be a cause of Sally's belief that Tom is going downtown. However, Tom's going downtown cannot be a cause, because when Sally forms the belief that Tom will go to downtown his intention to go downtown on Monday has not yet been fulfilled. The classic causal theory, which holds (C1), incorrectly entails that Sally did not know that Tom goes downtown, and, therefore, the theory fails.

In order to undercut the above future knowledge objection, Goldman (1967) introduces a new theory—call it the 'revised causal theory of knowledge'—which holds the following weaker conditional:

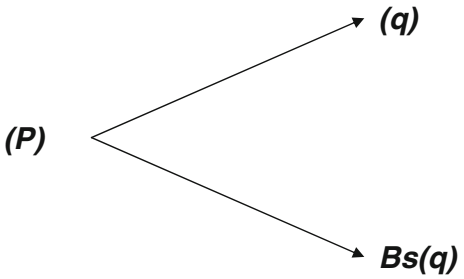
(C2) If *S* acquires knowledge that *p* then there is a causal *connection* between *p* and *S*'s belief that *p*.

Goldman explains (C2) as follows:

[(C2)] requires that there be a causal *connection* between *p* and *S*'s belief, not necessarily that *p* be a cause of *S*'s belief. *p* and *S*'s belief of *p* can also be causally connected in a way that they yields knowledge if both *p* and *S*'s belief of *p* have a *common* cause. (Goldman 1967, p. 364)

Let (*p*) be Tom's intending to go downtown on Monday, (*q*) be Tom's going downtown on Monday, and *Bs*(*q*) be Sally's belief that Tom goes downtown on Monday. Omitting various intermediate events we can schematise the above scenario as follows:

Fig. 1 The Sally Case



Again, the classic causal theory of knowledge, which holds (C1), entails incorrectly that Sally does not know that Tom goes downtown on Monday. For Tom's going downtown on Monday cannot cause Sally's believing on Sunday that Tom goes downtown on Monday. Hence, there is no arrow from (*q*) to *Bs*(*q*). On the other hand, the revised causal theory, which holds (C2), does not incorrectly entail that Sally does not know on Sunday that Tom goes downtown on Monday. For, while Tom's going downtown on Monday does not cause Sally's believing it on Sunday the two events still have a common cause; namely, Tom's intending to go downtown on Monday. The revised theory says that the indirect causal connection between (*q*) and *Bs*(*q*) via (*p*) suffices to provide a *causal connection* between Sally's going downtown on Monday and her believing that she goes downtown on Monday. Hence, there need not be a direct arrow from (*q*) to *Bs*(*q*).

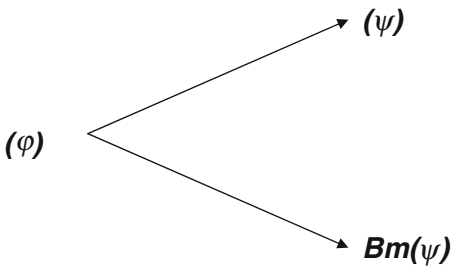
We have seen that while the classic causal theory of knowledge is vulnerable to the future knowledge objection, the revised theory is not. Now the crucial question is whether proponents of the inconsistency objection can appeal to the revised theory. The main difficulty for them here is that there are a number of objections to the revised theory.[7] However, I assume in this section, again in favour of the inconsistency objection, that the revised theory *is* true. Nevertheless, I will argue that proponents of the inconsistency objection cannot appeal to it.

Recall the Mary scenario. According to Jackson, Mary leaves her black-and-white environment, looks at a red object for the first time and comes to know what it is like to see red. Epiphenomenalists, such as Jackson, explain this scenario as follows: Before her release Mary is in a certain physical state; in particular, a certain brain state. As she comes out of her black-and-white environment and looks at a red object, her brain state causes, jointly with other relevant physical states, Mary's qualia as well as her belief about the qualia, which are nonphysical by-products.

Proponents of the inconsistency objection contend that epiphenomenalism undermines the knowledge argument because if, as epiphenomenalism says, qualia are causally inefficacious then Mary's belief about qualia is not caused by the qualia in question. That is, if epiphenomenalism is true, contrary to what the knowledge argument says, it is not the case that Mary acquires the knowledge about qualia *because* she has a new, colour experience.

Following the Sally scenario, we can schematise epiphenomenalists' interpretation of the Mary scenario. Let (φ) be Mary's brain states upon her release, (ψ) be Mary's qualia and $Bm(\psi)$ be a brain state that corresponds to Mary's acquisition of a relevant belief about qualia. Omitting intermediate events, we can obtain the following schema[8]:

Fig. 2 The Mary Case



Notice that Fig. 2 is structurally identical to Fig. 1. In the Sally case, the revised causal theory of knowledge denies the implausible claim that Sally does not know

[7] Skyrms's objection to the revised theory is particularly strong. See Skyrms (1967).

[8] In order to avoid complications and to emphasise the structural similarity between the Sally and the Mary scenarios I omit some relevant physical and mental events in both Figs. 1 and 2. (To take one example, strictly speaking, there should be intermediate brain states between (φ) and $Bm(\psi)$.) I can omit them legitimately because the revised causal theory says that as long as $Bm(\psi)$ and (ψ) have a common cause they are causally connected. For the complete, and more complex, schema for the Sally scenario see Goldman (1967), p. 365.

that Tom goes downtown on the ground that there is a causal *connection* between (q) and $Bs(q)$. By parity of reasoning, contrary to what the inconsistency objection assumes, the revised causal theory denies also the implausible claim that Mary does not acquire knowledge about qualia on the ground that there *is* a causal connection between (ψ) and $Bm(\psi)$. Although the qualia are not direct causes of Mary's beliefs about them there is certainly a causal connection between her belief and the qualia, and the revised theory of knowledge says that this causal connection is sufficient for acquiring relevant knowledge. Therefore, proponents of the inconsistency objection *cannot* appeal to the revised causal theory either.

At this point, proponents might provide the following response[9]: There is a crucial difference between the Sally case and the Mary case. In the Sally case, her future knowledge of Tom's going downtown does not rest simply on the fact that Tom's intention causes both Sally's belief and Tom's future action; it rests also on the fact that Sally knows that intentions generally give rise to the action intended. She can have such knowledge because she regularly has direct causal knowledge of such actions being performed. *Ex hypothesi*, however, Mary cannot have direct causal knowledge that brain states usually cause colour experience because she had never had a colour experience prior to her release.

While there is something right about this response, there is also something wrong about it. What is right about it is that there *is* a significant difference between the Mary case and the Sally case. What is wrong about it is that the difference is not relevant here. As the objection correctly says, although the Sally case involves general inductive knowledge about intentions the Mary case does not. However, this is simply because while the Sally case is a case about the future, the Mary case is not. This difference has nothing to do with the revised causal theory of knowledge. Again, the revised theory requires only a causal *connection* between p and one's knowledge that p and the Mary case satisfies the requirement to the same extent that the Sally case does.

Proponents of the inconsistency objection might also claim that my argument so far is a straw man, because the two causal theories of knowledge that I have discussed are weak and outdated. I do not exclude the possibility that there are more plausible and sophisticated causal theories of knowledge. I submit, however, that as long as the causal theory of knowledge in question is concerned with knowledge in general it does not support the inconsistency objection. We have learned that a causal theory of knowledge upon which the inconsistency objection relies has to satisfy the following two conditions: (1) it entails that Sally has knowledge that Tom goes downtown on Monday; (2) granted epiphenomenalism, it entails that Mary does not have knowledge about her qualia. We have seen that the classic causal theory of knowledge fails to satisfy (1). The causal requirement of that theory is so strong that it does not entail that Sally knows that Tom will go downtown on Monday. We have also seen that the revised causal theory of knowledge fails to satisfy (2). The causal requirement of the revised theory was so weak that it does not entail that, given epiphenomenalism, Mary does not have knowledge about her qualia. The failure of the classic causal theory of knowledge teaches us that we

[9] Thanks to an anonymous referee for this point.

cannot formulate the causal requirement in terms of a direct causal relationship. This means that, just as with the revised causal theory, we have to formulate a theory in terms of an indirect causal relationship. However, this makes the causality requirement trivial because everything is, at least indirectly, causally connected with everything. Proponents of the inconsistency objection are faced with a dilemma, in that they have good reasons for both weakening their causal theory and keeping it as it is.

The only possible way of avoiding these difficulties seems to be to give up formulating a causal theory of knowledge *in general* and formulate instead a causal theory of *phenomenal knowledge*.

6 Causal Theory of Phenomenal Knowledge

Proponents of the inconsistency objection seem to realise that causal theories of knowledge are not applicable to all kinds of knowledge. In particular, as we have seen in the Sally scenario, causal theories do not apply to knowledge about the future. Nevertheless, proponents of the inconsistency objection maintain that the knowledge argument is based on some causal theory of knowledge. Watkins admits, for example, that the classic causal theory is false if 'we can know of things which are not causally efficacious'. He claims, however, that the knowledge argument is still based on some causal theory because '[o]n Jackson's story…we are told that our beliefs about qualia are actually caused by brain states and would be the same whether the qualia exist or not' (Watkins 1989, p. 160). To take another example, Stjernberg admits that the classic causal theory is not applicable to knowledge of future events and abstract objects. However, he thinks that this is irrelevant to the inconsistency objection, because qualia are neither future events nor abstract objects. Similarly, Jackson, along with Braddon-Mitchell, calls the classic causal theory an 'unduly strong view about the connection between knowledge and causation'. Nevertheless, he says that Mary's new knowledge has to be caused by qualia because 'when we identify some particular happening as what leads us to revise our conception of how things are, typically it is important that this happening can be seen as caused by something that justifies our change of mind' (Braddon-Mitchell and Jackson 1996, p. 134).

It is clear now that proponents of the inconsistency objection need to introduce a new causal theory of knowledge such that (1) it is formulated in terms of a direct causal relationship and (2) its scope is narrow enough to undercut the future knowledge objection. Condition (1) needs to be satisfied because the inconsistency objection assumes that Mary's belief about qualia is caused directly by the qualia. Condition (2) also needs to be satisfied to overcome the weakness of the classic causal theory.

A causal theory that holds the following conditional—call it the 'causal theory of *phenomenal* knowledge'—satisfies these criteria nicely:

(C3) If S acquires phenomenal knowledge about qualia q, then q is a cause of S's phenomenal belief about q.

(C3) is similar to (C1) in the sense that it is formulated in terms of a direct causal relationship. At the same time, however, (C3) is no more vulnerable to the future knowledge objection than (C2) because (C3) does not cover knowledge about the future.[10] (There are a number of different analyses of phenomenal knowledge.[11] However, for the current discussion, it suffices to make only the minimal assumption that phenomenal knowledge is knowledge about qualia such as that which Mary acquires when she leaves her black-and-white environment.)

With the causal theory of phenomenal knowledge, one can advance the inconsistency objection as follows. If epiphenomenalism is true then qualia are causally inefficacious. If qualia are causally inefficacious then, given the causal theory of phenomenal knowledge, Mary cannot acquire new phenomenal knowledge through her colour experience upon her release. According to the knowledge argument Mary does acquire new phenomenal knowledge through her colour experience. Therefore, given the causal theory of phenomenal knowledge, if epiphenomenalism is true, then the knowledge argument is unsound, and vice versa.

7 An Alternative to the Causal Theory of Phenomenal Knowledge

The most critical difficulty with the appeal to (C3) is that we lack a positive argument for it. As we have seen, causal theories of knowledge fail, at least for some forms of knowledge. Moreover, many, if not most, philosophers believe that causal theories of knowledge in general are also untenable.[12] Even Goldman, once a staunch defender of a causal theory, has now abandoned it. It is far from obvious why a causal theory has to be true for phenomenal knowledge when it is not true for other forms of knowledge. It would be question begging if the theory were introduced for the sole purpose of defending the inconsistency objection. In the following, moreover, I explore an alternative, plausible hypothesis about phenomenal knowledge that undermines the inconsistency objection.

Again, the causal theory of phenomenal knowledge holds (C3), viz., if *S* acquires phenomenal knowledge about qualia *q*, then *q* is a cause of *S*'s phenomenal belief about *q*. That is, according to the theory, having a direct causal relationship with *q* is a necessary condition for one to have phenomenal knowledge about *q*. In order to undermine the inconsistency objection, we can reject this theory by showing that it is not necessary to have any causal connection at all, even an indirect one, between qualia and relevant phenomenal knowledge.

In most *non* phenomenal cases, it appears impossible to acquire knowledge that *p* without having any causal connection with *p* because, ordinarily, knowledge and the object of knowledge are ontologically distinct. Consider, for example, the knowledge that there is a house in front of *S*. In order for *S* to acquire such

[10] Some proponents of the inconsistency objection might think that (C3) should cover not only phenomenal knowledge, but also other kinds of knowledge. All that is required, they might claim, is to exclude knowledge about the future from the scope of (C3). I set this point aside because what I say in the main text is applicable to any thesis that holds at least (C3).

[11] See, for instance, Chalmers (2004), Nida-Rümelin (1995, 1998), and Tye (2000).

[12] See, for example, Paxon (1974), Sharpe (1975), and Skyrms (1967).

knowledge, it appears that there has to be at least an indirect causal connection between *S's* knowledge and the presence of the house because these two entities are ontologically distinct; while *S's* knowing that there is a house in front of *S* corresponds to a specific brain state that *S* is in, the fact that there is a house in front of *S* is a specific state of affairs that persists independently of *S* as the knowing subject. Even if *S* learns from someone else that there is a house in front of *S*, there still is an indirect causal connection between *S's* knowing that there is a house in front of *S* and the presence of the house. As we have seen, causal theories of knowledge are contentious. In particular, it is contentious whether it is always necessary to have a causal connection between knowledge and the object of knowledge. I suggest, however, that even if a causal connection *is* necessary in an ordinary, nonphenomenal case, contrary to what the causal theory of phenomenal knowledge says, it is unnecessary in a phenomenal case because there is no causal gap between phenomenal knowledge and objects of phenomenal knowledge, i.e., qualia. This is because qualia and phenomenal knowledge maintain an unusually intimate ontological relationship.

How intimate is the relationship between phenomenal knowledge and its objects? One might suggest that they have the strongest possible intimate relationship, namely identity:

> The Identity Thesis: *S*'s having qualia *q* is identical to *S*'s having relevant phenomenal knowledge about *q*.

Hossack (2002) defends a version of the identity thesis. His says that 'a state is conscious iff it is identical with introspective knowledge of its own instantiation' and 'each state of which one can be conscious is numerically identical with one's introspective knowledge of the occurrence of that very state' (p. 163). He mentions that similar theses are endorsed by Thomas Reid and Franz Brentano.

If the identity thesis is true, then we do not need to worry about causation between phenomenal knowledge and its object, because there is no causal gap between them to be filled. We can simply reject the causal theory of phenomenal knowledge by saying that, since having qualia and having phenomenal knowledge of them are one and the same thing, qualia do not have to be causally efficacious in order for a subject to have phenomenal knowledge.

However, unfortunately, the identity thesis is untenable. Consider a specific phenomenal experience of, say, being in pain. The identity thesis entails that if *S* is in pain, then *S* knows that *S* is in pain or *S* knows what it like to be in pain. Here the identity thesis faces the following counterexamples[13]

(1) Some subjects (e.g., infants and animals) can be in pain without knowing that they are in pain or knowing what it is like to be in pain because they do not have the capacity to form any knowledge.
(2) Some subjects who do have the capacity to form certain knowledge can be in pain without knowing that they are in pain or knowing what it is like to be in

[13] I am grateful to an anonymous referee for raising these four counterexamples.

pain because they do not have the capacity to form knowledge of their own phenomenal experiences.

These counterexamples undermine the identity thesis by showing that, if one lacks a relevant capacity, one could be in pain without knowing that one is in pain or knowing what it is like to be in pain. In response to these counterexamples, proponents of the identity thesis might bite the bullet and insist that, whether they are infants or animals, if subjects have the capacity to have phenomenal experiences they also have the capacity to form knowledge of their own phenomenal experiences. That is, infants and animals *can* know that they are in pain or what it is like to be in pain as long as they can have a painful experience. Whatever the merits of this response, it cannot save the identity thesis because there are further counterexamples:

(3) Some subjects who do have the capacity to form knowledge of their own phenomenal experiences can be in pain without knowing that they are in pain or knowing what it is like to be in pain because they do not exercise the capacity on a particular occasion due to overexcitement, inattention or distraction.

(4) Some subjects who do have the capacity to form knowledge of their own phenomenal experiences and do exercise the capacity on a particular occasion can be in pain without knowing that they are in pain because they might be primed in such a way that they miscategorise a pain as something else, such as an itch.

These examples show that the identity thesis fails even if we limit ourselves to cases where subjects clearly have the capacity to form knowledge of their own phenomenal experiences (e.g., adult people). Even if one does have the capacity one could be in pain without knowing that one is in pain or knowing what it is like to be in pain because one could fail to instantiate the capacity appropriately. Given that the identity thesis is a claim about identity, it is impossible to block these counterexamples merely by amending the scope of the thesis with additional clauses.

The failure of the identity thesis leads us to a more plausible account of phenomenal knowledge. The key strength of the identity thesis is that it correctly captures our intuition that the relationship between ordinary knowledge and its object is not analogous to the relationship between phenomenal knowledge and its object. In an ordinary, nonphenomenal case it seems that there has to be a causal chain that links one's knowledge and its object, while in a phenomenal case such a causal chain is unnecessary. This is because in a phenomenal case, as opposed to a nonphenomenal case, knowledge and its object occupy the same epistemic space of the knowing subject. On the other hand, the key weakness of the identity thesis is that, as the above counterexamples show, despite their intimate relationship phenomenal knowledge and its object cannot be one and the same thing. Their relationship has to be slightly weaker than identity. These observations show that what we need is a thesis that entails that while qualia and phenomenal knowledge are not the same thing there is still some very intimate relationship that does not causally separate qualia and phenomenal knowledge about the qualia. I submit that the following thesis suffices:

> The Constitution Thesis: *S*'s phenomenal knowledge about qualia *q* is partly constituted by *q*.

According to the constitution thesis, since there is an intimate constitutive relationship between phenomenal knowledge and its object, there is no causal gap between them. It is important to emphasise that phenomenal knowledge is constituted only *partly* by qualia. If it were constituted *wholly* by qualia, then the constitution thesis also would be vulnerable to the above counterexamples to the identity thesis. If, as the causal theory of phenomenal knowledge assumes, a direct or indirect causal relationship is sufficient to bridge knowledge and its object, then a more intimate constitutive relationship between phenomenal knowledge and its object must surely be sufficient. The constitution thesis is hypothetical but nevertheless plausible. In particular, it correctly characterises the idea that qualia are directly accessible by a knowing subject unlike objects in the external environment, without committing the problematic idea that qualia are numerically identical to phenomenal knowledge.

One might claim at this point that the constitution thesis is incomplete because it does not explain exactly how one can form phenomenal knowledge by virtue of having a phenomenal experience. However, in order to undermine the inconsistency objection we do not necessarily need to provide such an explanation. All we need is to provide an alternative to the causal theory of phenomenal knowledge that satisfies the following conditions: (1) it is plausible; (2) it explains why a causal connection is unnecessary between qualia and corresponding phenomenal knowledge; (3) it is not susceptible to counterexamples, in particular, to the above counterexamples to the identity thesis. The constitution thesis satisfies all of these conditions. Nevertheless, in what follows, I introduce briefly a possible account of the formation of phenomenal knowledge that is consistent with the constitution thesis. This account is most notably endorsed by Chalmers.

Chalmers defends a version of the constitution thesis. He writes, '[I]f what I have said is correct, the connection between experience and phenomenal belief is tighter than any causal connection: it is constitution' (Chalmers 2003, pp. 255–256). As this quote shows, his focus is primarily on phenomenal belief rather than phenomenal knowledge. However, given that (phenomenal) knowledge is a form of (phenomenal) belief we can reasonably derive from Chalmers's claim that phenomenal knowledge is also constituted by phenomenal experiences or qualia.

Chalmers explains the justificatory process of phenomenal belief by advancing the following thesis:

> The Justification Thesis: When a subject forms a direct phenomenal belief based on a phenomenal quality, then that belief is *prima facie* justified by virtue of the subject's acquaintance with that quality. (Chalmers 2003, p. 249)

There are two crucial terms in the above formulation of the thesis. The first is 'acquaintance'. Acquaintance is a special epistemic relationship that a subject forms naturally with phenomenal experiences or qualia. This relationship gives the subject evidence for her corresponding phenomenal beliefs. With the underlying constitutive relationship between phenomenal beliefs and qualia, acquaintance allows the

subject to justify her phenomenal beliefs non-causally. While acquaintance is not itself a justificatory relation, it allows the subject to justify her phenomenal beliefs given the right cognitive background (Chalmers 2003, pp. 251).

One might think that Chalmers's appeal to the notion of acquaintance is problematic because the notion of acquaintance is normally used to *undermine* the knowledge argument that Chalmers (and other epiphenomenalists) intends to defend with it. As I mentioned at the beginning of this paper, some critics claim that the knowledge argument is not cogent because it fails to recognise the difference between knowledge by description and knowledge by acquaintance. Once this distinction is in place, they say, the knowledge argument no longer refutes physicalism. However, even if we assume that Chalmers uses the notion of acquaintance in the same way as the critics do it does not follow that he has to accept the objection to the knowledge argument in question. He might eliminate the objection by rejecting the distinction between knowledge by description and knowledge by acquaintance or the application of the distinction to the knowledge argument.[14]

The second key phrase in Chalmers's justification thesis is '*prima facie*'. The qualification '*prima facie*' is important for the justification of phenomenal beliefs because we should not commit to the claim that the justification of phenomenal beliefs is always guaranteed. The justification thesis allows the possibility that *prima facie* justification is overridden by other factors, such as overexcitement, inattention, distraction and miscategorisation. While Chalmers's focus is mainly on the *justification* of phenomenal beliefs we can make a parallel claim about the *formation* of phenomenal beliefs as well. When a subject has a phenomenal experience a corresponding phenomenal belief is *prima facie* formed by the subject. However, such a claim does not commit to the idea that a phenomenal experience always leads to a corresponding phenomenal belief. As the counterexamples to the identity thesis imply, there are cases in which a subject fails to form a phenomenal belief or fails to justify a phenomenal belief because of the lack of a relevant capacity or other factors that prevents the subject from forming a phenomenal belief or justifying such a belief. Chalmers notes that in order for a phenomenal belief to be *prima facie* justified, three important conditions need to be satisfied: (1) the epistemic content of the direct phenomenal belief must mirror the quality of the experience; (2) the phenomenal belief must be appropriately constituted by the experience; (3) the subject must be acquainted with the justifying quality (Chalmers 2003, pp. 250–251).

The constitution thesis is plausible, particularly if Jackson's epiphenomenalism is true. As I noted in Sect. 4 above, Jackson's epiphenomenalism is epiphenomenalism about only specific mental properties; namely, qualia.[15] That is, Jackson's epiphenomenalism is formulated on the basis of the alleged ontological distinction between the phenomenal and the nonphenomenal. If such epiphenomenalism is true,

[14] Thanks to an anonymous referee for this point. For criticisms of the objection that appeals to the distinction between knowledge by description and knowledge by acquaintance see Alter (1998) and Stoljar and Nagasawa (2004).

[15] Jackson (1982, p. 133).

it is reasonable to think that there are also corresponding epistemic differences between phenomenal knowledge and nonphenomenal knowledge. Conversely, if, as the inconsistency objection assumes for the sake of argument, Jackson's epiphenomenalism is true, it is unreasonable to take it for granted that there is no corresponding epistemic distinction whatsoever between the acquisition of nonphenomenal knowledge and that of phenomenal knowledge.

Once we accept the constitution thesis, it is easy to see where the inconsistency objection goes wrong. Recall the formulation of the inconsistency objection in Sect. 4. Premiss (2) of the objection says that if qualia are causally inefficacious then Mary cannot acquire new knowledge about qualia. Now we are ready to reject this premiss. Prior to her release, Mary is in a certain brain state. As she comes out of her room and looks at a colour object, she comes to be in a new brain state. This is a purely physical process that is consistent with epiphenomenalism. Subsequently, the new brain state causes her to have certain qualia. Again, this process does not violate epiphenomenalism because epiphenomenalism allows physical events to cause qualia. Here, in order for Mary to succeed in acquiring corresponding phenomenal knowledge, there does not have to be a causal relationship between the qualia in question and phenomenal knowledge about the qualia. For, according to the constitution thesis, there is no causal gap to be filled between Mary's qualia and her relevant phenomenal knowledge; her phenomenal knowledge is constituted by the qualia. Therefore, the inconsistency objection fails to show that epiphenomenalism and the knowledge argument are mutually inconsistent.

8 Conclusion

I close this paper by summarising the discussion. First, I introduced various versions of the inconsistency objection, defended by Watkins, Stjernberg and Campbell independently, and formulated its general structure. Second, I argued that the inconsistency objection could not appeal to standard causal theories of knowledge. On the one hand, while the classic causal theory of knowledge supports the objection, it is undermined by a counterexample. On the other hand, while the revised causal theory of knowledge avoids the counterexample, it is too weak to support the inconsistency objection. Third, I introduced the causal theory of phenomenal knowledge, which is neither susceptible to the counterexample nor too weak to support the inconsistency objection. I argued, however, that the theory was untenable on two grounds: (1) we lack a positive argument on the basis of which to hold the theory; and (2) there is a hypothesis, the constitution thesis, concerning the relationship between phenomenal beliefs and phenomenal knowledge that undermines the theory.

The inconsistency objection is, at first glance, very powerful. Even Jackson, an inventor of the knowledge argument, finds it compelling. However, once we examine its epistemological credentials carefully the objection turns out to be highly dubious.

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