

THE KNOWLEDGE ARGUMENT AND THE REFUTATION OF PHYSICALISM

Marián KUNA

The article examines the viability of so-called 'the knowledge argument' that was designed to prove the irreducibility of the subjective, phenomenal aspect of experience to the physical. It is argued that this argument can successfully be defended against its criticism. Its critics are represented here by two physicalist approaches: the mode of presentation hypothesis (here Paul Churchland), and the ability hypothesis (here David Lewis and Laurence Nemirow). The defense of the general soundness of the knowledge argument is based on some important insights on the issue in question of Frank Jackson and Howard Robinson. It is argued that the physicalist counterarguments to the knowledge argument seem inadequate. The article concludes that it appears that the knowledge argument has still kept a significant amount of its initial force.

1. Introduction

There are some serious problems for materialism. The existence of consciousness is one of them and it poses a very serious challenge to the materialist ambition to reduce the mental to the physical. Some non-materialists have pointed out to the existence qualia – information that is by its very nature non-physical. So called 'the knowledge argument' is an ingenious device designed to demonstrate their existence and so also to prove the irreducibility of the subjective, phenomenal aspect of experience¹. Since presented the argument has attracted a significant attention as among its opponents so among its defenders.

In this essay I would like to examine the question of whether the knowledge argument can successfully be defended against its criticism, and so also to examine its strength against physicalism. In doing so, I will proceed through the following steps. First, I will sketch Frank Jackson's version of the argument. Second, I will describe various important physicalist objections

¹ Philosophers differ with regard to the status (plausibility) of mental experiments in philosophy, and in the philosophy of mind in particular. Silvia Gálíková in her illuminative article provides several arguments for the relevance of mental experiments showing the variety of ways philosopher may benefit from them (12), 92-93)

that were supposed to show that physicalism can accommodate the intuition from which the argument derives its appealing force. I have chosen two physicalist approaches, one that may be labelled as the mode of presentation hypothesis and represented here by Paul Churchland; the other goes under the heading of the ability hypothesis and was produced by David Lewis and Laurence Nemirow. Finally, I will defend the general soundness of the knowledge argument using some important insights on the issue in question of Frank Jackson and Howard Robinson. I will suggest that the physicalist counter-arguments to the knowledge argument seem inadequate. I will conclude that it appears that the knowledge argument has still kept a significant amount of its initial force.

2. Mary before and Mary after – the Knowledge Argument for Qualia

Frank Jackson's version of the knowledge argument was developed to demonstrate that physicalism is false, for, as he puts it, 'there are certain features of the bodily sensations ... which no amount of purely physical information includes' ([3], 469). He uses the example of Mary – a scientist (a neurophysiologist) investigating the world from a black & white room exclusively via black & white TV set. She is a person who acquired *all* physical information about the world so that she knows what is physically going on in human beings when they see some particular colour. Jackson's crucial claim is that after her release from her black & white environment Mary learns something new and so additional. This enables him to conclude that if this is so then physicalism (that assumes that scientific picture captures *all* the possible information of the world) is false ([3], 471). His argument runs as follows:

1. Physicalism claims that all (correct) information is physical information.
2. One (e.g. Mary) who have all the physical information can learn something more about the world.
3. There is some (correct) information that is non-physical.
4. All the physical information does not suffice to provide a complete picture of the world.
5. ∴ Physicalism is false.

Now, it is clear that if this argument is valid and sound it may have a devastating effect on the physicalist ambition to account for all there is to know relying exclusively on a means made available by physical science and expressed in its vocabulary. Some physicalists being aware of this have spent a significant effort to show that there must be something wrong with the argument. Before I look more closely at some of them, in the next section, it

is noteworthy, for instance, that Jackson's argument assumes (in his first premise) some particular definition of physicalism². Moreover, as the discussion over the argument has proven premises of this argument can be read (and so disputed) in more than one way. Though there may be an impression that Jackson's critics have challenged the argument conclusively, I believe that after some clarification the opposite might be the case. That the latter is the case rather than the former I will try to demonstrate in what follows.

3. Some Physicalist Responses to the Knowledge Argument

Various counterarguments have been produced against the knowledge argument. It is partly because it seems highly plausible to insist that every physicalist must deny that once someone has all the possible physical knowledge about the world there is anything more she can learn about it. However, this is not to say that they must deny that that person may learn (or acquire) *something* new. There are at least two physicalist approaches to this. Churchland represents here one of them claiming that this something that Mary learnt after she left her black and white room were not new facts but old facts presented in a new way. The other approach is developed by Lewis and Neimirow who claim that Mary gained some new know-how as an *ability* which is, however, different from acquiring knowledge of some new facts about the world.

Now, before I say anything substantive about the force of these physicalist challenges it is important to have a clear picture about what they amount to. First, I will go through the mode of presentation hypothesis, and after that I touch the ability hypothesis.

3.1 The Mode of Presentation Hypothesis (Churchland)

Paul Churchland argues resolutely against the arguments that any materialistic neuroscience cannot *in principle* reduce qualitative features of our experience to objective explanatory framework of physical science ([1], 8). Before he deals with the knowledge argument directly he defends the very possibility of scientific intertheoretic reduction. In order to support his case he emphasizes the contingent character of any existing conceptual framework that is

² It has to be noticed that Jackson is quite careful here as he realises difficulties in defining physicalism. His approach is to illuminate the issue in the course of the exposition of his own argument ([3], 469)

gradually being replaced by new and better frameworks³ ([1], 14). Now, if this is so, Churchland argues, we may “[c]onsider ... the possibility of learning to describe, conceive, and introspectively apprehend the teeming intricacies of our inner lives within the conceptual framework of matured neuroscience” ([1], 16). This is to suggest that problems with the reduction of mental states to neurophysiological states may be overcome.

Given these assumptions Churchland goes on to examine in detail Jackson’s anti-reductionist example of Mary. His objections to the example proceed as follows. He first offers, what he calls, a “conveniently tightened” version of Jackson’s argument that goes as follows:

- (1) Mary knows everything there is to know about brain states and their properties.
- (2) It is not the case that Mary knows everything there is to know about sensations and their properties.

Therefore, by Leibniz’s law,

- (3) Sensations and their properties \neq brain states and their properties.

Churchland argues that the argument suffers from the intensional fallacy, as Jackson’s point seems to be that “knows *about*” is transparent and extensional context. However, for Churchland this is not the case. He lists two more ‘shortcomings’ of Jackson’s argument.

1) “knows about”, even if transparent in both premises, it is not *univocal* in both of them. However, it is argued unless they are univocal the validity of Jackson’s argument is threatened. This is because ‘knowledge’ in the first premise (to master a set of propositions) is different from ‘knowledge’ in the second premise (to represent some property in some pre- or sublinguistic medium of representation) ([1], 23). Now, if this is so, it is possible to argue that the difference between these two kinds of knowledge is to be seen in “the different *type* of knowledge each has of *exactly the same thing*” ([1], 24). This is to say that the very variety of modes how a thing may be known should not be confused with variety of things. Churchland concludes that once this ambiguity is removed from Jackson’s argument it does not work against materialism anymore⁴.

³ Churchland provides examples in support of his use of the idea of theoretical and perceptual change pointing to the figures like astronomer, and wine taster whose discriminatory ability can be in principle improved immensely ([1], 14-5)

⁴ Churchland explicitly accuses Jackson of an illegitimate use of this variety of modes of knowledge. Moreover, he claims that even if Jackson’s argument were sound it would prove *too much*, for it could be used against dualism as well ([1], 24)

2) Jackson's assumption that "even a utopian knowledge of neuroscience *must* leave Mary hopelessly in the dark of the subjective qualitative nature of sensations not-yet-enjoyed" ([1], 25). Churchland reads this as the claim about Mary's inability to imagine what the relevant experience would be like, and adds that any plausibility of such a claim is derived from Jackson's failure to consider adequately what to know *everything* there is to know as far as physical brain is concerned amounts to.

This expresses Churchland's optimism that some neuroscientific information can provide Mary with knowledge about the relevant qualia⁵. This is to claim "[i]f Mary has the relevant neuroscientific concepts for the sensational states ... but she has never yet been *in* those states, she may well be able to imagine being in the relevant cortical state" ([1], 26). Churchland's discussion of the knowledge argument leads him eventually to conclude that Jackson *either* rules out this possibility in advance (which is, however, difficult to see how) *or* must accept that his argument fails.

3.2 The Ability Hypothesis (Lewis, Nemirow)

Lewis and Nemirow employ a different strategy to eliminate the subversive nature of the knowledge argument. They try to demonstrate that it is possible to start from the sound core of the argument but arrive at conclusions that are compatible with materialism.

David Lewis acknowledges that having an experience is a very important, but denies that it is the only possible way to know what experience is like⁶ ([5], 500). Before he provides his own solution to the problem he analyses in detail what he calls the hypothesis of phenomenal information (HPI). It is important to figure out what this label is meant to represent as it is later on contraposed to Lewis's suggested solution – the ability hypothesis.

HPI postulates the existence of *phenomenal information* – one that is irreducible to physical information. Then, the only way to gain the former is to have experience. Lewis, being aware that if HPI is true then materialism is false, takes pains to show that it is possible that information about experience is not phenomenal information (phenomenal in the sense that we can be

⁵ He places a significant hope into "the changes in our introspective apprehension of our internal states that could follow upon a wholesale revision in our conceptual framework for our internal states" ([1], 25)

⁶ The impossibility to transform science lessons into something we gain in experience is for Lewis not necessary but only a contingent truth ([5], 501)

informed about it only by having new experience but not via lessons)⁷ ([5], 505, 507).

What is also worth noticing is Lewis' comment on Jackson's knowledge argument that it takes materialism as a necessary truth whereas materialists take their materialism, according to Lewis, only as a contingent truth and claims that "[o]ur minimal Materialism must be a *restricted* supervenience thesis: within a certain class of worlds, which includes our actual world, there is no difference without physical difference. Within that class, any two possibilities just alike physically are just alike *simpliciter*" ([5], 507-8). Lewis does not stick to the illusion that one can grant HPI and remain a materialist, and so by pointing to the alternative hypothesis he wants to preserve his physicalist commitment. If so, how?

He puts forward two claims: First, HPI is more peculiar and so less tempting hypothesis, and second, the ability hypothesis does justice to the intuition of indispensability of experience for knowing what is something like ([5], 509). The peculiar character of HPI is related to the fact that it opposes not only to materialism but also something different from materialism – for instance – to parapsychology⁸. This is to say that "[if] there is such a thing as phenomenal information, it isn't just independent of physical information. It's independent of every sort of information that could be served up in lessons for the inexperienced. For it is supposed to eliminate possibilities that any amount of lessons leave open" ([5], 511). Second peculiar aspect of HPI is according to Lewis the fact that it seems to be a priori impossible to propose any alternative to phenomenal information. Finally, another source of peculiarity of phenomenal information is related to its isolation from various other kinds of information ([5], 512).

The peculiar character of HPI leads, Lewis argues, not only materialists to the need of its rejection. He believes that materialists can do that via using the ability hypothesis (AH) ([5], 514). It asserts that one attending some new experience does not gain some new and subjective fact but rather she gains abilities – here abilities to remember and imagine along with an ability to recognize again the experience perceived previously. So the ability gained "is an ability to gain information if given other information. Nevertheless, the information gained is not phenomenal, and the ability to gain information is

⁷ For Lewis it makes no difference if we substitute 'raw feels', feeling, qualia, intrinsic character of experience etc. for 'experience', for the same problems reappears under these heading as well ([5], 505-6)

⁸ Lewis puts emphasis on the fact that "[o]ur intuitive starting point wasn't just that *physics* lessons couldn't help. It was that *lessons* couldn't help" ([5], 511).

not the same thing as information itself" ([5], 515). Another ability that is gained is "the ability to imagine related experiences that you never had" ([5], 516). Now, all these abilities one can gain *only* through experience. However, to gain them, for Lewis, is not to acquire some new information, or, in other words, it is *knowing-how* rather than *knowing-that*. After saying this, Lewis does not find surprising at all the lessons cannot convey what experience can as whereas the former concerns information the latter concerns abilities and "[k]nowing-that does not automatically provide know-how"⁹ ([5], 516).

Lewis claims that the two hypotheses (HPI and AH) and mutually exclusive and HPI is no more than an illusion, one that stands in need of explaining. His explanation runs as follows: Our usage of the word (knowledge) is ambiguous, for there are two senses associated to it, namely: one in the sense of knowing-that and the other in the sense of knowing-how. Moreover, ability and information is usually gained at the same and pure cases of either are rather exceptions. This explains our confusion when a new ability is mistakenly taken as gaining a new piece of information. However, Lewis is aware of the fact that defenders of phenomenal information will not deny that experience is *also* a means of gaining the abilities he has identified. But the point of disagreement is where they argue that "it is because we gain phenomenal information that we gain abilities" ([5], 517). The fundamental point of difference between the defender of AH and the one of HPI is then that whereas the former claims that in experience we acquire special phenomenal facts the latter denies it.

Another advocate of AH is Lawrence Nemirow. On the one hand he claims that Jackson is *right* to object to Feigl's picture of the cognitive role of acquaintance, but he is making *wrong* conclusion from this fact on the other¹⁰. Jackson's conclusion is based, according to Nemirow, on three philosophical errors, namely: first, the treatment of an ability as a propositional knowledge; second, the confusion of logic and grammar; finally, the mischaracterization of imagining¹¹.

Nemirow's way to challenge the knowledge argument is to attack its inferential validity. This is to reject that it is correct to infer from the premise

⁹ Lewis does not deny, however, the contribution of information to know-how, his only point is that it usually does not contribute sufficiently ([5], 516)

¹⁰ Herbert Feigl a physicalist for whom the physicalist framework is essentially objective and can account for the problem of the subjective aspect of experience by denying its plausibility ([6], 491)

¹¹ Nemirow claims that this is done by "equating the act of imagining the experience of a quality with the act of intellectually apprehending the quality itself" ([6], 492)

that physical theorizing cannot fully capture 'what it's like' the conclusion that there is a special sort of knowledge about the world. In doing so it is omitted that "the vocabulary of knowledge also applies to abilities" ([6], 492). Nemirow argues for the equation between knowing what's like and knowing how to imagine as a way to refute the knowledge argument. His argument goes as follows:

1. The knowledge argument assumes that science cannot convey what's like to see colour.
2. Science does not seek to instil imaginative abilities.
3. ∴ The knowledge argument is *wrong* in concluding that physical science cannot describe certain information about seeing red.

This is to say that proponents of the knowledge argument are mistaken in treating 'knowing what's like' as propositional knowledge rather than an ability. This assumption makes their argument invalid and the second proposition of Nemirow's own argument is to be a remedy for their mistake ([6], 493). He further supports his case by pointing to the explanatory power of the ability equation¹². Nemirow claims that knowing 'what it's like' is a linguistically inexpressible ability (e.g. to see a colour) that may be, however, communicated (e.g. colour can be visualized) provided that the following three mental actions are performed ([6], 493):

1. Direct visualizing the colour itself.
2. Remembering a visual experience of colour.
3. Visualizing or remembering similar colours and interpolating.

Those unable to perform these mental operations (the uninitiated) cannot be told 'what it's like' to see a colour, and this account is to be taken as applying to any case where knowing 'what it's like' is involved ([6], 494). Nemirow then uses his ability equation to move to his ability analysis. It is argued that one's ability to visualize a colour (e.g. green) is to be taken as interchangeable with her knowledge of the experience of seeing what that colour (e.g. green) is like.

This is not the whole story, however, as Nemirow understands that he has to explain why the idea that 'what it's like' is irreducibly non-physical information about experience is intuitively so appealing. He proposes the following two points:

¹² This equation, according to Nemirow, explains why the vocabulary of knowledge is appropriate when 'what it's like' is at stake, why we need to attribute subjectivity to the experience, and why knowing 'what it's like' is linguistically inexpressible ([6], 493)

- 1 “Knowing what an experience is like is the same as knowing how to imagine having the experience.
2. It is intuitively appealing, albeit incorrect, to analyze the act of imagining an experience of an instance of a certain universal as the intellectual apprehension of the universal itself” ([6], 495).

Whereas 1. is Nemirow’s ability equation, 2. is a dismissal of the idea (illusion) that “imagination grants direct access to universals” ([6], 495). Imagining is functionally useful and that explains why we are tempted by the aforementioned idea. The two propositions (1, 2) then enable him to conclude that knowing ‘what it’s like_____’ “is an ability that is appealingly analyzed as the ability to apprehend a universal” ([6], 496). For Nemirow the equation of knowledge of what an experience is like with the ability to imagine is the way to pay due attention to the cognitive significance of acquaintance ([6], 498).

To sum up: I examined in this section two possible ways of replying the challenge posed by Jackson’s knowledge argument. Both deny that as far as one has all the possible physical knowledge of the world there is any important information about it left out. Whereas the first approach, that of Churchland, suggests that what may be gained in experience is not any new knowledge but only an access to the old information in some new way, the second approach, elaborated by Lewis and Nemirow, stresses that although something new is gained in experience it is not a new piece of information but rather some new abilities.

Now, I believe it is fundamental to consider what can be and what has been already responded to this criticism by proponents of the knowledge argument such as Frank Jackson and Howard Robinson. To this issue I now turn.

4. Is the Physicalist Response Compelling?

“I grant that I have no *proof* that Mary acquires on her release, as well as abilities, factual knowledge about the experiences of others... My claim is that the knowledge argument is a valid argument from highly plausible, though admittedly not demonstrable, premises to the conclusion that physicalism is false”
 Frank Jackson ([4], 295)

The success of the knowledge argument against its main rival – the physicalist account of mind depends heavily on the ability of its defenders to formulate convincing responses to physicalist objections. So, what is on the agenda?

Defenders of the knowledge argument must show not only that those physicalist objections do not apply to the argument, but they also have to

demonstrate that the argument does help in establishing the conclusion that physicalism is false¹³. So, they have to show that:

- i. it does not misrepresent physicalism,
- ii. experience provides us with something more than a new mode of presentation of the old facts,
- iii. what is crucial about experience is not that it provides us with some new abilities.

I will touch each of these three important issues in what follows.

4. 1 The Nature of Physicalism Revisited

The question of how physicalism is to be understood as well as what sort of truth it is supposed to be has proven as a fundamental one. The point is related to the first premise of the Jackson's argument where it is stated that Mary has all the physical information there is to know about the world and she can still learn something more about it when released from her black & white environment. It is important to be clear about what it means to 'know all the physical information there is to know'. We have seen Jackson's cautiousness in using this controversial label. We have also seen Churchland's accusation that the knowledge argument's adherents do not take seriously enough the promise of some significantly improved conceptual framework of matured neuroscience as far as our mental states are concerned.

Fortunately, we have at our disposal Jackson's view on the question how complete is the complete physical knowledge of Mary. He says her physical knowledge is physical in a wide sense of the word and it "includes everything in *completed* physics, chemistry, and neurophysiology, and all there is to know about the causal and relational facts consequent upon all this. including of course functional roles" ([4], 291). This seems to challenge strongly Churchland's hope in some better, future and completed science. For Jackson's point is not only that *current* science faces an immense difficulty in capturing the subjective aspect of experience, rather his claim is that *any*, however improved, physical science fails to account for this aspect¹⁴. Then

¹³ This is an obviously a more moderate claim than to suggest that the argument itself is to lead to this conclusion, for as Howard Robinson rightly asserts "the knowledge argument itself is not a complete refutation of physicalism . . . [but it shows] that a reductive physicalist is forced to adopt a hard-line behaviouristic view of experience" ([7], 182) He holds that that in order to complete the argument an independent refutation of behaviourism is required with no appeal to this argument ([7], 182).

¹⁴ Jackson reiterates that physicalism does not claim that our world is *largely* but that it is *entirely* physical ([4], 291)

again, if physicalism were right Mary could not learn anything new there is to know. Moreover, as this is highly counterintuitive it is plausible to claim that physicalism appears false.

4.2 The Inadequacy of the New Mode of Presentation Hypothesis

That experience contributes to our knowledge of the world in something that is more than the presentation of the old facts in some new way is another important task for non-physicalist. Churchland's argument is their natural target as he tries to prove the opposite. Now, let me touch here Jackson's clarifications of his position against the charges mounted against it by Churchland. First, Jackson argues that Churchland misunderstands the argument when he reads it as Mary's inability to *imagine* what it's like to see a colour. Jackson's point is not about her power of imagination, but her inability to *know* that. This inability counts against the truth of physicalism. Second, the nature and not intensionality of Mary's knowledge is not what is at stake. Jackson's emphasizes that proper following all the logical rules would not save her from lacking the information she acquires in experience. Finally, Mary's information deficit about the experiences of others is more disquieting point than it is the lack of her own experience. After she is released she realizes "how impoverished her conception of the mental life of *others* has been *all along*" ([4], 292).

Moreover, Jackson replies Churchland's three objections¹⁵.

1. Though he accepts that the Churchland's version of the argument involves a dubious use of the Leibniz law (see 3.1), he strongly refuses to subscribe to it and points to its inaccuracy. Jackson offers the following formulation of the 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 physical 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) which escape the physicalist story" ([4], 293).

¹⁵ I talk here only about the reply to the first two objections as the last one is relevant for the subsequent section.

This reformulation shows that before her release she knows everything physical there is to know and after release she *learns* something more. If this is so, to know everything physical is *not* to know everything there is to know. So what matters here, according to Jackson, is not the mode in which knowledge is presented but it is its very content ([4], 293).

2. Jackson also dismisses Churchland's second objection that there must be something wrong with the argument as it proves too much, namely it can be used effectively against dualism as well. Jackson does not see his own argument flawed, for the premise of the knowledge argument expresses physicalist conviction that it is possible to have everything there is to know before Mary's release, which if attributed analogously to dualism is implausible ([4], 295).

4.3 The Inadequacy of the Ability Hypothesis

Can there be said anything to the moderate claim that though experience gives us some new knowledge the point of anything what is really new in it is some ability? There are, I believe, two ways, of dealing with the ability hypothesis. As we have seen before, this position seems to be relatively close to the knowledge argument as it acknowledges that in experience some *new knowledge* is acquired. The point of difference is that whereas the adherents of AH stick to the view that the crucial part of this knowledge is just *know-how* (some imaginative ability) the defenders of the knowledge arguments believe that what is crucial for Mary after her release are not new abilities but some knowledge-*that* (factual knowledge) she was previously deprived of¹⁶. The first possibility is to attend to detail of the hypothesis and try to show that it can be resisted. The second approach is to reject it altogether as irrelevant. Whereas the latter is done by Jackson, the former is one pursued by Howard Robinson¹⁷.

Now, Jackson's simple reply to the ability hypothesis objection to the knowledge argument is to point to the implausibility of the suggestion that *all* Mary acquire after her release are some abilities [4].

Robinson's discussion of the objections is much more detailed than that of Jackson. He approaches the problem, first, via demonstrating the validity of

¹⁶ This is exactly Jackson's point ([4], 294).

¹⁷ Howard Robison presents his own example of a deaf scientist that can, however, for the purpose of this paper be seen as interchangeable with Mary – a scientist deprived of her chromatic visual experience ([7], 1993)

the argument ([7], 160-2). After doing this he goes on to examine its soundness. He concentrates on the second premise of his formalized argument that states that "2. Unlike those who can hear, *DS* [a deaf scientist] does not know the phenomenal nature of sound" ([7], 160). For this premise is one every physicalist must reject. But he or she must accept that *DS* lacks some knowledge and at the same time to reject that this something is an *object* of knowledge, and rather to claim that s/he lacked a *mode* of knowing ([7], 164). Now the ability hypothesis is one possible development of this. Robinson accepts that in this way "the argument is neutered" but something important is lost as the driving force of the argument was that having an experience is an opportunity to learn something about how things empirically are and cannot be reduced to the knowledge *how*. This is, for Robinson, just a form of behaviourism ([7], 164). He also claims that physicalist somehow cannot avoid talking about *DS*'s information deficit in terms of the ability hypothesis ([7], 172). Then, Lewis' argument, for instance, is just a functionalist improvement on behaviourism, which is, however, functionalism that is

"still a very behaviouristic theory, because the psychological value of a functional state consists entirely in its potential for modifying behaviour, even if only indirectly, through other functional states. This is not importantly different from allowing that a disposition is modified by the presence of another disposition ([7], 173).

However, as Robinson emphasizes, that behaviouristic theories of mind can be seriously challenged (*ibid.*). One such an approach, namely Robinson's own, is to say that "behaviouristic approaches are viciously third-personal; ... they present a third personal perspective on something that is essentially first-personal, namely, the viewpoint of conscious subject" ([7], 174). This enables him to conclude later on that any physicalist account of the issue in question is either reductive or behaviouristic. However, since both fail the physicalist cannot refute successfully the aforementioned second premise of the argument ([7], 181-2).

In overview: in this section I have touched the question of viability of the physicalist response to the knowledge argument. I identified and examined three important issues the defenders of the argument have taken seriously, namely, first, the nature of physicalism; second, the mode of presentation hypothesis; and finally, the ability hypothesis. I have used the arguments of Frank Jackson and Howard Robinson in order to claim that the advocates of the knowledge argument do not misrepresent the nature of physicalism, and they have resources successfully to respond to the both aforementioned hypotheses. First, it was reiterated that the critique of physicalism is not

directed only against current physical science, but it will apply to any possible future science. Second, it has been argued that even though Mary has all the physical knowledge there is to know, she still *learns* something after her release that does escape to the physicalist picture. This something cannot be reduced to mere a mode of presentation, for it is its content that is crucial for the respective experience. Finally, whereas Jackson dismisses the ability hypothesis as implausible Robinson uses his own example of a deaf scientist to demonstrate, first, the validity of the knowledge argument; and second, the soundness of its premises. The latter further argues that some formulations of the ability hypothesis are nothing more than a functionalist improvement on behaviourism, and so what is more it shares the very shortcomings of behaviourism. An important one is the fact that it applies third-personal perspective to something essentially first-personal. It seems that these arguments have significantly deprived the physicalist theses of their initial plausibility against the knowledge argument.

5. Conclusion

I started this essay suggesting that consciousness is a serious problem for the reductive ambition of materialism. The knowledge argument that helps to make the case for the existence of qualia was examined here as from the perspective of its critics so from the one of its defenders. In my examination of this argument I went through the following steps. First, I sketched Jackson's version of it. Second, I described various important physicalist objections that were supposed to show that physicalism can accommodate the intuition from which the argument derives its appealing force. I dealt with two physicalist approaches, namely, the mode of presentation hypothesis by Churchland; and the ability hypothesis by Lewis and Nemirow. Both approaches denied that as far as one has all the possible physical knowledge about the world there is any important information about it left. Churchland maintained that what may be gained in experience is not any new knowledge but only an access to the old information in some new way. Lewis and Nemirow developed a thesis according to which in spite of the fact that something new is gained in experience it is not a new piece of information but rather some new abilities. Finally, I engaged in a defence of the knowledge argument via the examination of the viability of the physicalist response to it. I scrutinized three issues, namely, first, the nature of physicalism; second, the mode of presentation hypothesis; and finally, the ability hypothesis. Jackson's and Robinson's arguments were used the knowledge argument does not suffer from misrepresenting physicalism, and the both foremen-

tioned hypotheses can be responded as well. It has been argued that something Mary learns after her release is neither reducible to mere a mode of presentation nor a new ability. I also touched Robinson's case for the validity and soundness of the argument. He held that the ability hypothesis depends on, and shares the problems of behaviourism. All this seems to indicate some inadequacy in the physicalist counterarguments to the knowledge argument. This enables me to conclude that it appears that the knowledge argument has still kept a significant amount of its initial force.

*Catholic University in Ružomberok
Department of Philosophy
Hrabovská cesta 1
034 01 Ružomberok
Slovakia
e-mail: Marian.Kuna@phil.ku.sk*

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