

## What does the zombie argument prove?\*

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### *Abstract*

In this paper I argue that the first and the third premises of the zombie-argument cannot be jointly true: zombies are either inconceivable beings, or the possible existence of them does not threaten the physicalist standpoint.

The tenability of the premises in question depends on how we understand the concept of a zombie. In the paper I examine three popular candidates to this concept, namely zombies are creatures who lack consciousness, but are identical to us in their a) functional organization, b) entire physical makeup, and c) microphysical structure. The main aim of the paper is to argue that none of these conceptions conveys a consistent zombie-concept to us, which, at the same time, would be dangerous for physicalism. In the conclusion I argue that the source of this failure can be found in the logical fallaciousness of the argument, namely the premises simply presuppose the truth of the conclusion.

### *Keywords*

zombie argument, zombies, physicalism, physical properties, phenomenal properties, consciousness

### *Introduction*

One of the most influential anti-physicalist arguments for decades has been the so-called zombie-argument. The main structure of the argument is as follows:

- (1) Zombies are conceivable.
- (2) If zombies are conceivable then zombies are possible.
- (3) If zombies are possible then physicalism cannot be true.

Therefore: Physicalism is not true.

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In what follows I would like to argue that either the first or the third premise is false. In other words, they cannot be jointly true: zombies are either inconceivable beings, or if they were conceivable, the possible existence of them does not threaten the physicalist standpoint.

Of course, everything turns on how we understand the concept of a zombie. Two things are absolutely clear: zombies do not possess any phenomenal properties and are physically identical to us, normal human beings with phenomenal consciousness. But it seems entirely not clear, what this 'physical identity' means, i. e. what the common feature is. In what follows, I will examine three possible candidates to the role of this feature, namely a) functional organization, b) entire physical makeup, and c) microphysical structure. However, I will argue that none of them conveys to us the desired result, that is, a consistent zombie-concept which makes these creatures conceivable and meanwhile dangerous for physicalism. Before I begin to present the argumentation, I would like to warn the reader against expecting detailed analyses of the premises of the argument. Since I do not argue against the tenability of the second premise but for the thesis that, at least in some readings, the concept of a zombie is plainly inconsistent, in this paper I do not investigate the various concepts of conceivability, possibility and the entailment relation between them. I also remain neutral in the various notions of physicalism, be it any kind of type-identity or of supervenience or entailment based one. By the following argumentation I will try to show that the zombie argument is logically fallacious in a simple way, namely that the premises of it presuppose the truth of its conclusion. From this reason nothing will hang on these fine-grained differences between the different meanings of the mentioned concepts. The reader can understand them as her favorite interpretation demands it.

#### *A) Functional identity*

What kind of stuff is a zombie? Here are some suggested definitions from the literature:

“[u]nlike those in films or witchcraft, they are exactly like us in all physical respects but without conscious experiences” (Kirk 2015); “[c]reature physically and functionally identical to us, but who have no consciousness” (Marcus 2004: 477.); “human replicas who nonetheless lack phenomenal consciousness” (Güzeldere 1997: 35.); “someone or something physically identical to me (or to any other conscious being), but lacking conscious experiences altogether.” (Chalmers 1996: 94.); a zombie is “physically, functionally and behaviourally identical to us” (Marcus 2004: 482.), “but [...] has no conscious experience”

(Chalmers 1996: 96.). The possibility of such a creature is supposed to imply that physicalism is not true, i. e. that in the actual world phenomenal consciousness is not a physical phenomenon.

I do not see why. Let us substitute for the term 'consciousness' or 'conscious experience' in the above formulations the expression 'left arm'. Can we conceive or imagine<sup>1</sup> a creature who is in all other (physical, functional and behavioral) aspects identical to us, but has no left arm? Of course, we can. And if we think that the conceived creature possibly exists, does the possibility of this being imply that the property of having a left arm is not a physical property? I think nobody would agree with this claim. Then why do some of us still think differently in the case of phenomenal consciousness?

Of course, there is an obvious reason why we are unwilling to regard having a left arm as a nonphysical property: it plays a salient behavioral and functional role in our everyday physical stories. If you did not have a left arm, you would lack one of the ways of scratching your nose, and the ways of scratching your nose are surely physical properties. So, you and your 'no-left-arm twin' could not be functionally and behaviorally and hence physically the same. In contrast, it is an essential part of the notion of zombies, that they are functionally (and behaviorally) identical to us. So, the analogy does not work. Therefore, it seems tempting to define zombies and the zombie world in the terms of functional identity. This interpretation of the concept of a zombie would look like this:

(Zombie<sub>f</sub>): A zombie is such a creature, or a whole zombie world is such a world that it has all the functional organizations we have, or our world has, but nonetheless has no consciousness altogether.

But are our zombie twins really functionally identical to us? Many thinkers take it for granted that it is possible for something to share our exact functional organization and yet not be conscious. Here is for example how David Chalmers describes the process of becoming a zombie who is supposed to be functionally identical to me: "If the silicon isomorph without conscious experience is conceivable, we need only substitute neurons for silicon in the conception while leaving functional organization constant, and we have my

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<sup>1</sup> The difference between these notions does not matter for my purposes in this paper.

zombie twin.” (Chalmers 1996: 97.) Or a concise formulation of it from another author: “[I]t should be possible to take away that special consciousness (whatever it is) and leave all the *other brain functions* intact.” (Blackmore 2006, 6-7. italics is mine) However, what does this ‘other brain functions’ mean? The functions of the brain, except the function which is responsible for phenomenal consciousness? But if giving rise to consciousness is one of the functions of the brain then my zombie counterpart cannot be functionally identical to me. Or take Chalmers’ story: if we really had left functional organization constant during the process, then the being resulted would not be a zombie twin of me. Before the operation, my neurons gave rise to consciousness, so their functional organizations, which we preserve during and after the process, entails that I have conscious experiences. If we really leave this functional organization intact, then the resulting creature will have conscious experiences, too.

If we accept the simple and innocent assumption that conscious experiences or phenomenal properties originate in some way from the state of a person or her brain, then it will be a contradicting characterization to speak of a being who has no conscious experiences, but nonetheless functionally identical to another one, that has conscious experiences. We identify the functional roles a state plays with the causal inputs and outputs of that state, and regarding the harmless assumption mentioned above, it seems clear that giving rise to phenomenally conscious experiences is a part of the causal profile of a person or her brain. Consequently, to conceive a creature functionally identical to us, but has no consciousness altogether, is nothing more than trying to conceive a creature functionally identical and at the same time not identical to us.<sup>2</sup> Because of this contradicting

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<sup>2</sup> In order to avoid a possible misunderstanding, it should be noted that I do not argue here against the well-known absent qualia arguments against *functionalism*, as they are presented for example in the classic papers of Ned Block (see Block 1978, 1980). One assumption of these arguments is that functionalism, if it aims to be a nonempty, nontrivial theory of mental states, cannot mention the very state to be defined as a functional state in the description of the proposed functional role. For example, they cannot say that to be in pain is nothing more than to be in a state which – beside other causal relations – gives rise to painful experiences. Such a theory would be circular and therefore trivial and empty. However, if functionalists do not allude in their definitions to the very conscious experiences which they try to define, it seems to lead to no contradiction in

characterization, in this reading of the concept of them zombies are obviously inconceivable. So, the first premise of the argument becomes false. Moreover, this result has nothing to do with the much-discussed question of epiphenomenalism, since we can avoid it only by postulating phenomenal properties as causally and nomologically totally isolated from all other (physical) properties of our world, and from each other. Iff the actual world is indeed such a Leibnizian one in this respect, then the zombie-world could have the same functional organization as the actual one without possessing phenomenal properties. However, I do not think that any supporters of the argument would like this interpretation of the zombie-concept.

### *B) Physical identity*

However, we can skip the difficult questions about functional identity, because if the zombie-argument is indeed an argument against physicalism, then it is not enough to conceive zombies as behaviorally and functionally identical to normal human beings, since almost all physicalists accept that merely behavioral or (on some level) functional duplicates of ourselves might lack consciousness. So, let's turn to another example, which does not raise the question of functional identity: let us substitute for the term 'consciousness' in the definitions of a zombie mentioned at the beginning of the paper the expression 'vermiform

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any of these cases if the suggested functional state is not accompanied by the conscious experience in question. So, it seems to be at least logically possible to conceive two creatures who are both in *this functional state*, but one of them has no conscious experiences. Nevertheless, this does not mean that they are functionally identical to each other in an *absolute sense*. Even if it was true that a qualitative feature *F* belongs to the inner structure of a state *S*, but does not belong to the inner structure of the functionally identical state *S'*, there must be a component state of *S*, which gives rise to *F*, and no functionally identical state of it could be found in *S'*, since in the latter nothing gives rise to *F*. In other words, even if two creatures are functionally alike at the level of the functional state in question, there must be some functional difference between them at some other level which explains their difference in consciousness. On the different levels of functional states and descriptions see: Lycan (1987: 38-41.). I owe this remark to Katalin Farkas.

appendix'<sup>3</sup> Can we conceive a creature who is identical to us in all physical aspects, but has no vermiform appendix? Of course, we can! She would look the same from outside and behave and function exactly like us. And if we think that the conceived creature possibly exists, does this possibility entail that the property of having vermiform appendix is not a physical property? It would be a strongly counterintuitive result. Then, again, why does the same entailment seem compelling to many excellent thinkers in the case of phenomenal consciousness?

You might think that I am cheating with these examples of substitution. For example, you might think that a creature without a vermiform appendix has quite different spatial or molecular structure than we, conscious beings have. Spatial and molecular structure are surely among the physical features of the organism, so she cannot be a zombie in the usual sense. However, we can say almost the same in the case of the usual zombies: my zombie twin will have quite different experiential structure than me. And, what is of utmost importance, we cannot decide in advance that experiential structure is not a physical feature of the human being, because of the simple reason that this is just the point the argument has to prove.

Let me explain this from another point of view. You probably think that I have misunderstood something: in the definition of a zombie, the word 'but' must not be read as 'except' or 'save for', rather as a simple 'and'. So, the task is not to conceive beings physically identical to us, except that they have no conscious experiences, but to conceive beings who are physically identical to us and, notwithstanding this identity, they have no conscious experiences. You probably agree with David Chalmers' formulation, who writes:

The form of the argument is not, "One can imagine physical state *P* without consciousness, therefore consciousness is not physical state *P*." The form of the argument is rather, "One can imagine *all* the physical facts holding without the facts about consciousness holding, so the physical facts do not exhaust all the facts."

(Chalmers 1996: 131., italics in the original)

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<sup>3</sup> I suppose here that this part of caecum has no specific physiological function. As far as I know, it is a debated question in human biology.

Or you might agree with Robert Kirk, who claims that “zombies must be like normal human beings in *all* physical respects, and they must have the physical properties that physicalists suppose we have.” (Kirk 2015, italics is mine) Consequently the right interpretation of the concept of a zombie is the following:

(Zombie<sub>p</sub>) A zombie is such a creature, or a whole zombie world is such a world that has all the physical properties we have, or our world has, and nonetheless has no consciousness altogether.

But wait a little! Physicalists suppose that to have conscious experiences is one of the physical properties we have (that is why they are called ‘physicalists’), so they surely think that consciousness is a physical phenomenon. Consequently, they have to think that in a world physically identical to ours, facts about consciousness do indeed hold. The defender of the zombie argument should not exclude facts about consciousness from the extension of the concept of ‘all physical properties’ in the definition of zombies, since this move would obviously beg the question: one cannot state the conclusion of an argument in one of the premise of it, without making the argument circular and thus trivial.

In this situation, physicalists will be in trouble, since it is entirely unclear what they have to imagine when they are conceiving zombies. Compare the situation to the one in which we try to solve the famous problem whether the tomato is a fruit or a vegetable!<sup>4</sup> Would we consider the following argument persuasive? “Try to conceive a greengrocer who sells literary all kinds of vegetables, but nonetheless sells no tomatoes at all! If you can conceive such a greengrocer (and you surely can), then it will be possible. And if such a zombie-greengrocer, or a whole zombie-greengrocer world is possible, then the tomato cannot be a vegetable. To be a tomato is not a specific determinate property of the determinable property of ‘to be a vegetable.’” I think you would not take this argument to be sound if you believe that the tomato is a vegetable, as for example I do. You would probably think that

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<sup>4</sup> The problem arises from the fact that the fruit-vegetable distinction is not a botanical one and does not belong to any other sciences. And although the tomato has more biological features of a typical fruit than of a typical vegetable, in everyday parlance most language-users call and take it a vegetable.

when you should conceive the greengrocer who sells all kinds of vegetables, you will conceive her as selling also tomatoes, since it is a vegetable. And you would be in trouble when in addition you have to conceive that she does not sell tomatoes. In sum, how you conceive the zombie-greengrocer depends on what your answer had been to the original question whether the tomato is a fruit or a vegetable.

The situation is the same in the case of phenomenal consciousness. For the physicalists, zombies who are physically identical beings to us, will, at the same time, have consciousness and lack it. Consequently, from a physicalist point of view, such a definition of zombies is clearly contradictory, so they are plainly unconceivable, again. In sum, in this reading of the zombie-concept, if you are a physicalist, nothing compels you to accept the first premise of the argument.

### *C) Microphysical identity*

However, there is another, further way of defining zombies, and this one seems to be the most promising. Just a few sentences later from the definition quoted at the beginning of the paper, Chalmers describes his zombie twin in a rather different way, as a molecule for molecule identical counterpart of him who is “identical in all the low-level properties postulated by a completed physics”, but nevertheless “lacks conscious experience entirely”. (Chalmers 1996: 94.)<sup>5</sup>

In connection to this definition, first of all, I have to lay down that the reference to completed physics makes the definition just as empty as the former was. While it is a quite difficult question, what is the exact reference of the term ‘completed physics’, I think it can be securely said that completed physics would be the discipline by which we can describe and explain all physical phenomena. And it is another very difficult question what does ‘low-

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<sup>5</sup> See also: Marcus (2004: 482), who claims that zombies have every property that can be reductively explained in terms of basic physics. However, this phrasing seems circular in just the same way as the one that alludes to all physical properties. One of the goals of the zombie argument is to establish that phenomenal properties cannot be explained reductively in terms of basic physics, so one cannot postulate in the definition of zombies that they only have properties which can be explained reductively, and phenomenal properties are not among them.



level properties' mean, but it seems plausible to me, that low-level or basic physical properties are the ones from which all other physical properties can be deduced. In sum, alluding to the low-level basic properties of the completed physics in the course of describing the zombies is just the same as attributing all physical properties to them.<sup>6</sup> This definition therefore may contain even the phenomenal properties themselves, so it could be as contradictory as the former ones. It is much more unambiguous therefore to allude to the currently known basic elements of physics, or some rational cautious expansion of them. Then the new definition will look like this:

(Zombie<sub>m</sub>) A zombie is such a creature, or a whole zombie world is such a world that has all the currently known basic elements and properties we have or every such entities postulated by physics of our world and nonetheless has no consciousness altogether.

This formulation seems to be much better than the former two, which referred to functional or simple physical identity, because it contains no plain contradiction. We do know that phenomenal properties do not belong to the known basic elements or properties postulated by current physics, so it is clear what to conceive when we should conceive zombies in this sense.<sup>7</sup>

However, though this concept of a zombie is viable, the third premise of the argument will not be necessarily true in this reading. To see this, let us consider what follows from the supposed fact that there could be such a zombie world, and therefore phenomenal consciousness cannot be reduced to, or does not logically supervene on currently known microphysical and other low-level physical facts? Chalmers' best-known answer is the following:

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<sup>6</sup> Or, the completed physics can be seen as the true and final science of every real-world phenomena, from which it follows that phenomenal properties are *per definitionem* physical ones; see Montero (2009: 182-83.).

<sup>7</sup> I do not mean by this claim that zombies in this sense are surely conceivable. There could be covert contradictions in this concept of a zombie, too. I only claim that this concept is not so obviously contradictory that would make it impossible to seriously consider the question of conceivability.

[...] we must acknowledge that a truly final theory needs an additional component. [...] Perhaps we might take experience itself as a fundamental feature of the world, alongside space-time, spin, charge, and the like. That is, certain phenomenal properties will have to be taken as *basic* properties. (Chalmers 1996: 126. italics in the original)

In other words: if zombies as molecule for molecule identical twins of us are indeed possible, then we will have to acknowledge that consciousness is something extra, a brute fact about us that is not entailed by microphysical particles and low-level properties. However, it does not follow from all this that this brute fact is not a physical fact. That conscious episodes in us are not physical states or processes.<sup>8</sup> In one paragraph Chalmers acknowledges that it might be tempting for someone to classify consciousness as a physical phenomenon, by reason of that if it is fundamental it must be physical. However, he believes it is “more natural to consider experience as a fundamental property that is not a physical property, and to consider the psychophysical laws as fundamental laws of nature that are not laws of physics” (Chalmers 1996: 128-129.) on the ground that „[e]xperience is not a fundamental property that physicists need to posit in their theory of the external world.” (Ibid.) I do not see why it would follow from the argument that it is more natural to take consciousness as a non-physical property than a physical one. If it really turned out that phenomenal consciousness must be a basic part of the fundamental theory of our universe, just in the same sense as space-time, spin, charge and similar properties are parts of this theory, why would it be unnatural to classify it as a physical property just like the other ones? Nothing in the argument compels us to assent to this claim.

Let me illustrate this point with another example! At one point during his argumentation Chalmers draws up an analogy between phenomenal consciousness and electromagnetism (Chalmers 1996: 127-128.). In the nineteenth century it was discovered that the latter cannot be reduced to the already known physical (mainly: mechanical) facts. Therefore,

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<sup>8</sup> Unless one defines physical properties as identical to or metaphysically necessarily supervenient on the currently known microphysical and other basic properties postulated by physics This definition would be extremely restrictive and, as such, unusable, since it does not allow the discovery of new basic physical properties.

properties such as electromagnetic charge and electromagnetic force, and laws such as Maxwell's Laws had to be taken as fundamental properties and fundamental laws. According to Chalmers, the same story has to be told about conscious experiences and psychophysical laws after it turns out, via the zombie argument, that they cannot be reduced to the known microphysical facts and fundamental physical laws. However, Chalmers does not take the analogy further and ask: after they proved to be fundamental no one was inclined to classify electromagnetic properties and laws as nonphysical phenomena, so why should we do it with consciousness and psychophysical laws? Why cannot we take them to be physical phenomena? Somewhat later Chalmers says that "[j]ust as Maxwell sacrificed a simple mechanistic worldview by postulating electromagnetic fields in order to explain certain natural phenomena, we need to sacrifice a simple physicalistic worldview in order to explain consciousness." (Chalmers 1996: 169). However, the sacrificing of the physicalistic worldview seems to be an unsupported and unreasoned reaction to the supposed irreducibility of consciousness to microphysical properties. Even if we had to acknowledge perhaps that phenomenal properties are extra brute facts relative to microphysical properties, this situation would not compel us to sacrifice the physicalistic worldview, just as it did not in the case of electromagnetism. The analogy rather suggests that we would sacrifice maybe the behavioristic, functionalistic or perhaps intentionalistic "worldview", which are really incompatible with the fact of irreducibility, at least according to Chalmers. Consequently, even if a zombie world microphysically identical to our world is possible, it does not follow from this that possessing consciousness is not a physical property, and that physicalism is false.<sup>9</sup> Therefore, the third premise of the argument is not true on this reading of the concept of a zombie. I do not know whether there is an answer to the question why the defenders of the argument think that to have consciousness or phenomenal properties is not a physical property, but it seems quite clear to me that the fact that they cannot be deduced from microphysical facts cannot in itself provide any answer.

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<sup>9</sup> Barbara Montero stresses the same point with another example when she writes that „if physicalism is compatible with the existence of a fundamental wave function, why should it be incompatible with the existence of fundamental mentality?“ (Montero 2013: 107.). See also Montero (1999: 185-86., 2009: 176-77.)

## Conclusion

In sum: Either the first premise of the argument contains, at least from a physicalist point of view, an inconsistent concept of a zombie which makes them inconceivable (in the case of readings as creatures functionally or simply physically identical to us), or the third premise is simply false (in the case of the reading of the concept as a creature identical to us regarding the known basic physical properties). Therefore, the argument does not work as an anti-physicalist argument, in contrast to an anti-behaviorist<sup>10</sup> or anti-functionalist one. The reason is nothing else, I think, but that in contrast to a behavioristic or a functional property, we do not understand what it takes to be a physical property. So, my argumentation can be seen as an application of the problem of the concept of 'physical'<sup>11</sup> to the zombie argument.

It is notable, that in the very first article in which the zombie argument has appeared, Robert Kirk wrote the following: „[...] 'physical replica' can be defined thus: *y as at  $t_2$  is a physical replica of  $x$  as at  $t_1$*  if and only if every non-relational description in the purely physical vocabulary which applies to  $x$  at  $t_1$  applies also to  $y$  at  $t_2$ .” (Kirk 1974: 137, italics in the original) Kirk admits that he cannot precisely define what could be the extent of this physical vocabulary, moreover, that the richer this vocabulary is, the less interesting the thesis. However, he does not „think that the difficulty of specifying the favoured vocabulary is serious.” (ibid) Maybe it is indeed not a difficult task, however one gets the impression that terms refer to conscious experiences and their phenomenal properties are excluded by the defenders of the argument from this vocabulary without any explicit reasoning. For example, Kirk writes a little bit later, that he “shall assume for the sake of simplicity that if Zombie replicas are logically possible, the descriptions which fail to apply to them are descriptions of sensations. Obviously, such descriptions are likely candidates, if any are [...].”

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<sup>10</sup> It is telling that in his famous first zombie article, Robert Kirk introduces his argumentation against materialism with a counterargument against logical behaviorism, namely with an example of a man-like behaving puppet. See: Kirk (1974: 143-144.).

<sup>11</sup> This problem was explicated by (among others) Carl G. Hempel (Hempel 1980.), Tim Crane and D. H. Mellor (Crane-Mellor 1990), Andrew Melnyk (Melnyk 1997), and Barbara Montero (Montero 1999, 2009). See, for example Montero's remark about the inverted and absent qualia arguments: “How, in fact, can we even have intuitions about these cases unless we know what counts as a physical duplicate?” (Montero 1999: 186.)

(Kirk 1974: 141-142.) In other words: if there were non-physical descriptions, they are the sensational descriptions. Or more emphatically: if there were non-physical properties in the world, they are the sensational, that is phenomenal properties. And this is quite obvious without any argument. The same unreasoned assumption can be observed in the case of missing phenomenal properties from the description of the causal profile of a brain-state when we define its functional role, or from the extension of the term 'all physical properties', or in the supposition that if they were happened to be fundamental properties, they cannot be physical ones. In sum: the zombie argument does not prove, rather presupposes the non-physical nature of conscious experiences.

Keith Frankish summarizes the moral of his excellent paper about the so called anti-zombie argument in the claim that "the zombie argument offers no independent reason to reject physicalism." (Frankish 2007: 650) I concur with him on this conclusion. I think the only workable way in which a dualist can prove that consciousness is not a physical phenomenon is by stating what conditions a physical property has to satisfy, i. e. what are the necessary and jointly sufficient conditions of being a determinate property of the determinable property of being physical, and then to show that to be phenomenally conscious fails to satisfy one or more of these conditions.<sup>1213</sup> The zombie argument does not undertake anything even resembling this task.

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<sup>12</sup> For similar methodological opinions see Montero (2009: 175. 5. fn.) and Frankish (2007: 659-660.).

<sup>13</sup> For example, Eric Marcus begins to argue in such a way when he claims that phenomenal properties are first person properties and suggests that this is essential about the fact that they cannot be reduced to basic physical properties. Zombies are identical to us from the third, but not from the first-person point of view. (Marcus 2004: 482-483.) And perhaps Chalmers also refer to this feature when he writes in the passage quoted above that conscious experiences have nothing to do with the description of the external world. However, this feature of supposed essential subjectivity plays no role in the zombie-argument. The argument tries to reach its conclusion merely by the logical or metaphysical possibility of a zombie-world which lacks phenomenal properties altogether and does not rely on the supposed essential features of these properties.

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