Duško Prelević

ACCESS GRANTED TO ZOMBIES

ABSTRACT: In his “Access Denied to Zombies”, Gualtiero Piccinini argues that the possibility of zombies does not entail the falsity of physicalism, since the accessibility relation can be understood so that even in S5 system for modal logic worlds inaccessible from our world are allowed (in the case in which the accessibility relation is understood as an equivalence rather than as universal accessibility). According to Piccinini, whether the zombie world is accessible from our world depends on whether physicalism is true in our world, which is something that cannot be answered in a non-question-begging way. In order to show this, he recalls a well known strategy of making a parody of the zombie argument. After pointing out that Piccinini’s strategy of parodying the zombie argument renders his former strategy, based on the distinguishing between the two notions of accessibility, redundant, I recall the two ways of handling parodies of the zombie argument. In addition, I argue that persisting on the distinction between accessibility understood as an equivalence and universal accessibility in dealing with the zombie argument relies upon accepting modal dualism (a view that there are two spaces of possibilities rather than one), which is something usually dismissed for methodological reasons (simplicity in particular). Given that Piccinini has not provided new arguments neither in favour of modal dualism nor in favour of parodying the zombie argument, the conclusion he infers remains unsupported by the premises he uses.

KEYWORDS: the zombie argument, the accessibility relation, modal dualism, parody.

Much ink has been spilled by physicalists trying to handle the zombie argument. This intriguing argument was introduced by Robert Kirk (1974), and further elaborated by David Chalmers (Chalmers 1996; 1999; 2010), who used the epistemic version of the two-dimensional semantics setting up the argument to the effect that the burden of proof has been shifted to physicalists. Physicalists try to attack Chalmers’s argument in many ways.
debate between “zombists” and “anti-zombists” is still alive, and it affects many issues in epistemology, semantics and modal metaphysics.

Recently, Gualtiero Piccinini (2015) has proposed a critique of the zombie argument, which, on one hand, relies upon using some earlier known strategies of dealing with the argument, while, on the other hand, it raises some interesting questions concerning possible worlds semantics on which the argument is arguably based. Piccinini’s main point is that philosophers engaged in the debate typically neglect a commonplace in possible world semantics with respect to the nature of accessibility relation. In what follows, I will present briefly Chalmers’s zombie argument, Piccinini’s criticism of this argument, and my criticism of Piccinini’s criticism.

1 Chalmers’s Zombie Argument: A Brief Sketch

Physicalism is a view that everything is physical. This view can be spelled out in many ways, and a less committing way is to say that the language of physics is (at least in principle) capable of describing all the facts about the universe, while the language of any other science is at best a redescriptions of the same reality (see, for example, Robert Kirk’s formulation of “minimal physicalism” in Kirk 2006). Physicalists typically think that non-physical facts cannot belong to the fundamental level of reality: At best, non-physical properties might supervene on physical properties, which means that once all physical facts (plus the laws of physics) are fixed, everything else will be settled as well.

The zombie argument is directed against physicalism. Roughly, the argument starts with the premise that zombies – our physical duplicates who, unlike us, do not have phenomenal consciousness – are conceivable, continues with the principle that conceivability entails metaphysical possibility, ending up with the conclusion that metaphysical possibility of zombies undermines physicalism, in one way or another. Presented in such a coarse-grained way, the argument is liable to counterexamples, such as Kripkean necessary a posteriori statements and inscrutable truths, which primarily seem to undermine the thesis that conceivability entails metaphysical possibility.

In order to handle potential counterexamples, Chalmers spells out his argument in a more fine-grained way (see, for example, Chalmers 2010, for more details). The relevant notion of conceivability he uses in constructing the argument is of ideal positive primary conceivability, that is, conceivability of a counter-actual scenario (or a counter-actual situation), which verifies the statement under consideration, and which is undefeatable by better reasoning. By understanding conceivability in this way, Chalmers shifts the burden of proof to those who believe that zombies are inconceivable, since now they should find a hidden contradiction in the zombie scenario. Given that primary conceivability does not rely upon empirical information, “p is conceivable” is defined either as “it is not a priori that not-p” or as “p is true in at least one scenario”.

Another distinction drawn by Chalmers is between primary possibility and secondary possibility, that is, between the truth in a possible world considered as actual and the truth
in a counterfactual world when the actual world has already been fixed. Given that prima-
ry conceivability and primary possibility do not rely upon empirical information, a natural
hypothesis is that either they are co-extensive or, at least, that primary conceivability entails
primary possibility. The next step Chalmers wants to make is to infer secondary possibility
from primary possibility. Whether this is feasible or not depends on the semantics of con-
cepts involved in propositions analyzed: within a two-dimensional semantic framework,
which Chalmers uses to articulate the zombie argument, it depends on whether primary and
secondary intensions of phenomenal concepts and microphysical concepts coincide or not.

According to Chalmers, there are cases in which primary and secondary intensions
of expressions do not coincide, as well as cases in which they do. For example, primary
intension of “water” is something like the “liquid with such-and-such properties”, while
its secondary intension is “molecular structure H₂O”. This would take to support Kripkean
explanation of modal illusions, since it seems primarily possible that the liquid qualita-
tively indistinguishable from water is composed of XYZ, while this is not secondarily
possible because in the actual world water is composed of H₂O molecules. On the other
hand, phenomenal concepts, like pain, seem to be such that their primary and secondary
intensions coincide: in the case of phenomenal concepts it looks that there is no contrast
between appearance (here it would be painfulness) and reality. The same seems to hold for
microphysical terms, the meanings of which are usually equated with the role they play in
a given theory. Since phenomenal and microphysical concepts are involved in the descrip-
tion of the zombie scenario, primary possibility of such a scenario entails its secondary
possibility, which leads to the rebuttal of physicalism.³

Chalmers anticipates how a counterexample to his zombie argument should look:
an a posteriori true proposition with necessary primary and secondary intensions. Such a
proposition Chalmers calls the “strong necessity”. However, strong necessities, according
to Chalmers, presuppose modal dualism, a view that there are two distinct spaces of pos-
sibilities, one of which is the space of sui generis metaphysical modality. That is because
primary conceivability is related to the space of logico-conceptual possibilities, while, if
there are strong necessities, the space of metaphysical possibilities ought to be counted as
an independent domain.

However, Chalmers (1999: 483) thinks that there are good reasons to reject strong
necessities: they would be brute and inexplicable; there are no clear cases of strong ne-
cessities (in any case, ordinary Kripkean cases of necessary a posteriori statements do not
belong to this category); we should disallow them for the sake of simplicity, and so on.
Although some philosophers disagree with Chalmers in that respect (see, for example,
Kallestrup 2006, Vaidya 2008, for more details), it is almost a common view that, in the
context of the debate, the burden of proof is on those who endorse modal dualism and
strong necessities rather than on those who reject them. That is probably because modal

³ In addition, Chalmers argues that even if primary and secondary intensions of phenomenal and
microphysical concepts do not coincide, his argument would succeed. For more details, see Chalmers
dualism is taken to support physicalism, while modal monism licenses its rejection, which
renders physicalism a view that requires a more complex explanation than alternative
views (Chalmers 1999).

In effect, Chalmers has shifted the burden of proof to physicalists’ side: now, they
should show either that zombies are inconceivable, or find convincing examples of strong
necessities, or try some other strategy (see Prelević 2013, for more details).

2 Piccinini’s Criticism

Now, let us turn to Piccinini’s criticism of the zombie argument. Piccinini tries to
challenge the zombie argument by allowing its proponents as much as possible. He is
ready to accept, for the sake of the argument, that zombies are both conceivable and pos-
sible, yet he challenges the claim that zombie worlds are accessible from our world. This
challenge is motivated by a proper understanding of the accessibility relation, which is a
widely accepted tool in semantics for modal logic, and which is, according to Piccinini,
neglected in the debate over the validity of the zombie argument. In what follows, Piccini-
ni’s criticism will be briefly sketched.

Let us start with some preliminary remarks on the nature of accessibility relation in
modal logic. As it is well known, the accessibility relation is a binary relation on possible
worlds, and it can be reflexive, transitive, and symmetric. Kripke’s breakthrough in modal
logic, based on the distinguishing between worlds and models (Kripke 1963), enables us to
understand the difference between various systems of modal logic as a difference in prop-
erties of the accessibility relation on the set of possible worlds. For example, the strongest
system S5 is the one in which accessibility relation is reflexive, transitive, and symmetric;
in the system S4 accessibility relation is reflexive and transitive; in the Brouwerian system
it is reflexive and symmetric; in the system T it is just reflexive, and so on. Depending on
which accessibility relation holds in a given system, some formulae are counted as axioms
or theorems of the system, while some other formulae are not (see, for example, Hughes
and Cresswell 1968, for more details).

Given that in the system S5 there are no absolutely inaccessible worlds, Piccinini
points out that the zombie argument is based on accepting system S5. Otherwise, accept-
ing a weaker system of modal logic would allow inaccessible possible worlds, which
would open the possibility for the zombie world to be inaccessible from our world. This
would make the possibility of zombies compatible with the truth of physicalism, since,
on the one hand, it would be possible that physicalism is true both in the actual world and
in any other world accessible from it, while, on the other hand, the zombie scenario still
could be true in a possible world inaccessible from the actual world.

In fact, this point was first emphasized by Peter Marton as soon as Chalmers had
voiced his version of the zombie argument (see Marton 1998, for more details). Marton
is also credited to be the first who constructed a parody of Chalmers’s zombie argument
that will be sketched in due course. Further, there are already known views that the logic of
metaphysical possibility is different from the logic of, let us say, logical possibility, in
a sense in which the latter requires at least system S4, while the former requires a system
weaker than S4. Kripke’s essentiality of origin principle is sometimes taken to invalidate
the S4 axiom $\Box p \rightarrow \Box \Box p$ (see Salmon 1986, Vaidya 2008). Piccinini’s contribution to the
debate consists in claiming that even if we accept S5 system for modal logic, it would not
automatically follow that a zombie world is accessible from our world. Namely, Piccinini
notices that logicians usually draw the distinction between accessibility considered as an
equivalence relation on the set of worlds and universal accessibility (that holds between any
two possible worlds) (Piccinini 2015: 5). The latter implies the former, but not vice versa.
Namely, it is possible to construct two systems of possible worlds in such a way that in both
systems the accessibility relation is reflexive, transitive and symmetric, and that these sys-
tems are separated from each other. In that case, although within each system every world
would be accessible from any world, no world in one of the systems would be accessible
from any world that belongs to the other. If so, then it would be possible to construct a mod-
el in which our world belongs to the system of possible worlds in which both physicalism
is true and S5 system holds, and another system of possible worlds, independent of the pre-
vious one, to which the zombie world belongs. This would make the truth of physicalism
compatible with the possibility of zombies even within S5 system. Thus, appealing to the
system S5 does not guarantee by itself that the zombie argument goes through.

In addition, Piccinini argues that assuming that a zombie world is accessible from
our world would beg the question against physicalism, since the accessibility of a zombie
world would already show that physicalism is not true in every accessible world. Accord-
ing to him, if one is ready to accept that there is a zombie world accessible from our world,
then an analogous argument which leads to the opposite conclusion could be constructed.
In other words, it would be possible to make a parody of the zombie argument.

Indeed, Piccinini recalls some earlier known attempts of parodying the zombie ar-
ument that will be assessed in the next section. The main idea behind such a strategy is
that there are no good reasons to believe that the first premise of the zombie argument, in
which it is claimed that the zombie scenario (or the zombie situation) is ideally positively
primarily conceivable, ought to be preferred to the first premise of its parody, in which it is
claimed that a pertinent scenario (or a situation) that goes in favour of physicalism is ide-
ally positively primarily conceivable. That is because Chalmers’s notion of ideal positive
primary conceivability, mentioned in §1, is defined in such a way that the burden of proof
is on those who claim that something is not ideally positively primarily conceivable rather
than on those who claim the opposite.

In a nutshell, the zombie argument, according to Piccinini, relies upon neglecting
the distinction between accessibility considered as an equivalence relation and universal
accessibility, something which is not immune to parodying. If these insights are correct,
then Chalmers’s zombie argument would be neutralized.
3 There Is Nothing New under the Sun

In the previous section we have seen the main ideas on which Piccinini’s criticism of the zombie argument is based. In what follows, some worries about such criticism will be presented.

At first glance, it seems very strange that Piccinini combines two lines of criticism, one of which concerns the nature of the accessibility relation, and the other the possibility of parodying the zombie argument. For if the parody of the zombie argument goes through, Piccinini’s main contribution to the debate over the validity of the zombie argument would turn out redundant, since the parody itself would be sufficient for dismissing or neutralizing the zombie argument with our without the distinction between the two notions of accessibility. Namely, if it is possible to make a parody of the zombie argument, then either a general principle (in particular, a thesis that conceivability entails metaphysical possibility) on which the zombie argument is based would not be true, or the whole argument would be neutralized, given that the conceivability of zombies does not seem to be, at least prima facie, more plausible than the conceivability premise of its parody.

However, anti-dotes to parodies of the zombie argument have been proposed more than once (see, for example, Chalmers 1999; Prelević 2015, for more details). First, it should be noticed that by now the two strategies of parodying the zombie argument have been proposed. Let us sketch them briefly. One attempt of making a parody of the zombie argument starts with the conceivability of physicalism, that is, by conceiving of a scenario in which necessarily, everything is entailed by the totality of microphysical truths plus the laws of physics. If such a scenario is conceivable, then, by the same principle used in the zombie argument, it is metaphysically possible that necessarily everything is entailed by the physical base. By using S5 theorem $\Diamond \Box p \rightarrow \Box p$, which is, arguably, assumed in the zombie argument, this would license the truth of physicalism (see Yablo 1999, for more details).

Chalmers has responded to this parody by noticing that, at best, it relies on accepting modal dualism, which ought to be dismissed for the reasons described in §1 (Chalmers 1999). Namely, it seems more plausible to hold that zombies are ideally positively primarily conceivable than to hold that physicalism is ideally positively primarily conceivable, since the latter claim amounts to a view that physicalism is true in all scenarios (which means that physicalism is a priori true), given that physicalists claim that the physical base of our world necessitates all the truths about the world. Yet, ideal conceivability of the zombie scenario would take to support the opposite claim, and, as it was pointed out in §1, the burden of proof is on those who think that something is not ideally conceivable. In view of this fact, physicalists could allow that zombies are conceivable, denying at the same time that they are either primarily possible or secondarily possible. Yet, this would lead to accepting strong necessities (because in that case the zombie scenario would be conceivable but both primarily and secondarily impossible) and modal dualism, views that have been rejected by Chalmers for the reasons mentioned in §1.

Another way of making a parody of the zombie argument has been proposed by Keith Frankish (2007), and its main merit is that it does not rely upon accepting modal
dualism. Frankish begins his argument by introducing anti-zombies, beings defined as our “bare physical duplicates”, who are conscious as we are, but whose all properties are already determined as being of a physical kind. Then he infers metaphysical possibility of anti-zombies from their conceivability, and, by using the metaphysical supervenience principle (according to which necessarily, if two entities are physically identical, they are identical in every respect) which is presupposed in the zombie argument as well, he concludes that our world is an anti-zombie world. This would lead to the conclusion that our world is entirely physical.

However, Frankish’s parody is not uncontentious either. One strategy of dealing with this parody is based on stressing the disanalogy between the conceivability of zombies and the conceivability of anti-zombies. On closer scrutiny, anti-zombies would be conceivable only if we are capable of conceiving scenarios (maximally consistent epistemic hypotheses), since the totality-clause (“no properties of non-physical kind”) is essentially involved in their description. Yet, many philosophers doubt that we are capable of conceiving scenarios, since they require massive idealizations. On the other hand, given that the totality-clause is not essentially involved in the description of zombies, their conceivability can be spelled out in terms of conceiving situations (parts of scenarios) instead of conceiving scenarios, which can serve as a good starting point for the defence of the zombie argument (see Prelević 2015, for more details).

Given that Piccinini has not contributed anything new in the debate over the validity of any of the two parodies above, we can conclude that his appeal to them not just makes his first strategy of dealing with the zombie argument (based on a pertinent understanding of the accessibility relation) redundant, but it needs further justification as well.

Now, let us turn to Piccinini’s main point, which concerns the accessibility relation. Piccinini is well aware of the fact that logicians typically do not bother with the distinction between the two notions of accessibility (accessibility understood as an equivalence and as universal accessibility), probably for reasons of simplicity. Namely, it seems that, without giving further reasons, there is no need to postulate two different spaces of possible worlds, both of which with the structure of the system S5. However, Piccinini thinks that philosophers engaged in the debate over the validity of the zombie argument typically neglect such a distinction, which appears to be unjustified. He says (Piccinini 2015: 5):

“When we formulate the semantics of S5 for purely logical purposes, the difference between the two methods (universally-based and equivalence-based) is often unimportant and gets ignored even in textbooks... ...But, when evaluating substantive modal claims, this difference is critical - assuming without argument that accessibility is universal runs the risk of ignoring our best way to explicate metaphysical possibility.”

Although in this passage it is not said what is meant by “our best way to explicate metaphysical possibility”, a natural guess is that here Piccinini has in mind a view accord-
ing to which metaphysical possibility has a different source from, let us say for the sake of simplicity, logical possibility. In other words, Piccinini probably holds that modal dualism is our best way to explicate metaphysical possibility. However, we have seen in §1 that philosophers have different thoughts on this issue, and that Chalmers himself has provided reasons for preferring modal monism over modal dualism. Yet, if modal monism is true, then, like in the case of modal logic, there would be no need for postulating the two separated spaces of possible worlds.

Thus, postulating the two spaces of possible worlds would seem plausible in this context only if we have already accepted modal dualism, which would by itself be sufficient for dismissing the zombie argument. Like in the case of parodying the zombie argument, Piccinini has not provided new arguments in favour of modal dualism. Thus, his argument remains unsupported by his premises.

Now, let us try to be charitable to Piccinini’s enterprise as much as possible and understand it as an attempt of providing an account of how physicalism can be true rather than as an attempt of providing a straightforward argument for physicalism. This strategy would be reminiscent to so-called “phenomenal concept strategy” in philosophy of mind. The latter strategy consists in providing an account that enables us to show how physicalism can be true despite the explanatory gap between the physical and the mental. According to one such account, phenomenal concepts are indexicals that pick out physical processes through indexical modes of presentation (see, for example, Perry 2003, for more details). Likewise, it might be the case that Piccinini just wants to provide a model in which the zombie argument would not work.

However, unlike the phenomenal concept strategy, Piccinini’s strategy of dealing with the zombie argument does not have initial plausibility. Although there have been many critiques of the indexical account of phenomenal concepts by now (see, for example, Chalmers 2010), such an account is worth considering because, after all, there are cases outside philosophy of mind in which it does seem plausible that objective properties can be picked out by indexical modes of presentations. Indexicals, like “now” and “here”, seem to belong to this category. On the other hand, postulating two separated spaces of possible worlds seems rather ad hoc, since, as we have shown above, logicians typically do not bother to distinguish between equivalence accessibility and universal accessibility. So, it remains unclear why we should draw such a distinction when evaluating the zombie argument either. An answer to this question might be that making such a distinction would be reasonable once one have independent grounds to believe that the space of metaphysical possibilities differs from the space of logical (or conceptual) possibilities. As stressed earlier, Piccinini has not provided further reasons that justify such a claim.

Ironically, in one place Piccinini emphasizes that we should first establish which facts hold in a pertinent system of worlds, and, depending on this, only later determine which accessibility relation best suits metaphysical modality. Doing otherwise would be, according to Piccinini, “putting the cart of semantic machinery before the horse of truth”
But almost the same line of criticism can be directed against Piccinini’s attack on the zombie argument, since he has not provided any example that would motivate his appealing to the distinction between the two notions of accessibility (which departs from the standard philosophical practice). As an illustration, let us recall Nathan Salmon’s view that the logic of metaphysical modality requires a system weaker than S4 (Salmon 1986). Salmon claims this because he holds that the principle of the essentiality of origin is plausible, as well as that it falsifies the S4 axiom, $\Box p \rightarrow \Box \Box p$. Namely, if it is essential (according to the essentiality of origin principle) that if a table $A$ is carved from a particular piece of material, it is necessarily carved from the same piece of material. However, it seems that this table would not change its nature had it been carved from a slightly different piece of material. If so, it is not necessary that the table $A$ is necessarily carved from the piece of material it is carved from in the actual world. Although this interpretation of the essentiality of origin principle (as well as the essentiality of origin principle itself) is not universally accepted among philosophers, Salmon’s interpretation illustrates that philosophers typically prefer, *ceteris paribus*, logical systems that are more in accordance with their prevailing intuitions. Bearing this in mind, in the absence of any (at least prima facie) convincing example, Piccinini’s appeal to the two notions of accessibility relation in evaluating the zombie argument appears to be putting the cart of semantic machinery before the horse of truth about the structure of modal space, this time by adopting a more complicated ontology with two separated spaces of possibilities instead of one.

These considerations suggest that, at best, Piccinini has just presented a model in which the zombie argument could have failed, but he has not provided any further reasons to believe that the zombie argument really fails. The conclusion he has inferred with respect to the validity of the zombie argument remained unsupported by the premises he used.

Duško Prelević  
University of Belgrade, Faculty of Philosophy

**References:**

Chalmers, David.  
Prelević, Duško.


**Pristup zombijima omogućen**

**(Apstrakt):**

U svom tekstu “Access Denied to Zombies”, Đualtijero Pićinini navodi argumente u prilog tezi da mogućnost zombija ne povlači lažnost fizikalizma, pošto se relacija dostiživosti može shvatiti tako da su i u sistemu S5 modalne logike dozvoljeni nedostiživi svetovi u odnosu na naš svet (u slučaju da se relacija dostiživosti shvati kao ekvivalencija, a ne kao univerzalna dostiživost). Pićinini smatra da to da li su zombiji dostiživi iz našeg sveta zavisi od pitanja da li je fizikalizam istinit u našem svetu, a ovo pitanje se pak ne može rešiti a da se unapred ne pretpostavi ono što bi tek trebalo dokazati. Da bi to pokazao, on podseća na dobro poznate pokušaje konstruisanja parodije na argument na osnovu zamislivosti zombija. Nakon ukazivanja na to da Pićininjeva strategija parodiranja argumenta na osnovu zamislivosti zombija čini suvišnom strategiju koja je zasnovana na razlikovanju relacije dotiživosti shvaćene kao ekvivalencije i univerzalne dostiživosti, u ovom radu se podseća na poznate mogućnosti izlaženja na kraj s navedenim pokušajima parodiranja. Takođe, argumentuje se u prilog tezi da istrajavanje na razlikovanju između relacije dostiživosti shvaćene kao ekvivalencije i univerzalne dostiživosti počiva na prihvatanju
modalnog dualizma (teze da postoje dva nezavisna prostora mogućnosti umesto jednog), koja se obično odbacuje iz metodoloških razloga (jednostavnosti, pre svih). Imajući u vidu to da Pićinini nije naveo nove argumente niti u prilog modalnog dualizma, niti u prilog mogućnosti parodiranja argumenta na osnovu zamislivosti zombija, zaključak koji je izveo ostaje nepotkrepљen premisama od kojih je pošao.

Ključne reči: argument na osnovu zamislivosti zombija, relacija dostiživosti, modalni dualizam, parodija.