

The Insignificance of Empty Higher-order Thoughts

Abstract

A crucial move in Kripke's modal argument is his assertion that awareness of pain is essential to pain. Lycan has argued that Kripke's assertion is not consistent with higher-order theories of consciousness. Ironically, Lycan's defense of higher-order theories against Kripke's argument is predicated on the fact that they allow for empty higher-order states: states of higher-order awareness that represent the presence of non-existent lower-order states. This very feature has been the focus of recent critics of higher-order theories, including Ned Block, who argue that it leads to absurdities. So the possibility of empty higher-order states is taken by different sides to be both the salvation and the destruction of higher-order theories. I will argue that both sides are mistaken. First, empty higher-order states only seem problematic when higher-order theories are misconstrued. Second, I will argue that Lycan's appeal to empty higher-order states is not ultimately effective. His critique is successful against Kripke's argument as he presented it, since Kripke does not address the case of empty higher-order states. However, it is possible to adjust Kripke's argument so that it is compatible with that possibility.

Keywords

consciousness, higher-order theories, modal argument

1. Introduction

If you follow recent discussion of higher-order thought theories of consciousness, it seems clear that empty higher-order thoughts are their biggest threat. According to the simplest gloss, David Rosenthal (2005, 2011) says that mental states are conscious when they are the object of a higher-order thought. A prominent criticism of higher order theories is based on the apparent possibility that higher order states can either misrepresent first order states, or occur without the first order states that they represent.¹ In the later case the higher order states are typically called 'empty'. There is an ongoing debate about whether such cases render such theories incoherent or implausible.² Reading this literature gives the distinct impression that empty higher-order thoughts ('empty HOTS') are the biggest obstacle to the acceptance, or at least acceptability, of higher-order theories.

Participant in this debate over empty HOTS typically overlook the other, very different role that empty higher-order states play in a response to Saul Kripke's (1971) modal

¹ I am referring to higher-order theories, such as Rosenthal's (2005) and Lycan's (1987), in which the higher order content belongs to a distinct state. When I refer to higher-order theories I mean this kind unless I specify otherwise.

² See Neander (1998), Block (2011) and Wilberg (2010) for versions of this critique, and Rosenthal (2011) and Berger (2014) for a defense, though the literature is extensive.

argument. Kripke claims that our knowledge of external objects is mediated, but we have immediate knowledge of conscious mental states like pains. Being in pain is itself sufficient for being aware of your pain. This is a crucial step in his argument that pains cannot be identified with any type of physical state. Lycan (1974, 1987) pointed out that according to higher-order theories such as his own, our knowledge of our own mental states is in fact mediated by distinct higher-order states. Since it is possible to have a higher-order state without the first-order state it represents, you can seem to have pain without really being in pain. Lycan is describing nothing other than empty higher-order states, and arguing that higher-order theorists have a uniquely effective response to the modal argument because their theories allow for these empty states.

Are empty higher-order states a vulnerability for higher-order theories, or are they a strength? I will argue that the answer is 'no'. First, defenders of higher-order theory are right to dismiss the empty higher-order state issue as a pseudo-problem. I will argue that once you properly understand the reasoning behind higher order thought theory, you will see why there is nothing strange about empty HOTS for a higher-order thought theorist. Second, Lycan's move certainly does defeat the specific argument Kripke presents in *Naming and Necessity*. I will show, however, that Kripke's argument can be adjusted to counter it. A materialist cannot refute Kripke's modal argument without addressing his deeper claims. The debate over whether pains are epistemically mediated is also a red herring. In order to properly evaluate higher order theories we need to set aside debates over empty HOTS.

2 Empty HOTS as a Weakness

2.1 Motivating Higher-order Theories

One way to describe the contemporary status of theories of consciousness is to describe the theories themselves. First, of all, there are first order theories and higher-order theories. Focusing only on the higher-order theories, there are occurrent and dispositional theories, theories of higher order thought and higher order perception, and theories where the higher order state is intrinsic and distinct from the first order state. However, this sort of taxonomy obscures what is really at stake, and why anyone endorses any of these theories.

It is more enlightening to begin with debate over the explanandum rather than the explanans. On one end of the spectrum is Galen Strawson (2006), who thinks consciousness is essentially phenomenological, so that any attempt to reduce consciousness to non-conscious phenomena reveals a failure to grapple with consciousness itself. On the other end are explicitly eliminativist theories, such as those defended by Paul Churchland (1981) and Patricia Churchland (1986) which reject the notion that our folk notions correspond to any mental reality.

Higher-order theories are based on a conception of consciousness that falls somewhere in between. David Rosenthal (2011) begins his reply to Ned Block (more on Block later) by saying that, "A state's being conscious is a matter of mental appearance – of how one's mental life appears to one. If somebody is in a mental state but doesn't seem subjectively to be in that state,

the state is not conscious” (p. 431). As I look out my window I see leafless tree branches against a grey sky. The fact that I see those tree branches is a mental phenomenon that requires explanation. However, there is a second phenomenon that also requires explanation: that *it seems to me that I am seeing* those tree branches. It would be possible for me to see, and yet, for it not seem to me that I see anything. We can find a clear example that involves audition. As I type right now I can hear a dishwasher running. I’m sure that I have been hearing it, without interruption, for the last several minutes, but I only just now realized that I am hearing it. That is paradigmatic example of the transition from nonconscious to conscious perception, since I just gained a new mental appearance of perceiving.

One could attempt to reinterpret my example of non-conscious perception in two different ways. First, one could claim that I didn’t truly hear it before, since hearing must be a conscious state. My non-conscious sound-detection falls short of hearing in some key respect. Second, one could claim that I did hear it before, but since all hearing is conscious, I actually heard the washing machine consciously. Both moves are motivated the assumption that all mental states are conscious, and this assumption leads them astray. The first strategy runs aground on the fundamental similarity between the conscious and non-conscious cases of sound detection. Both types of perception provide the hearer with the same types of information, although in nonconscious cases the signal is often weaker (Lau 2008). The second reply faces the objection that it didn’t seem to me beforehand that I was hearing any dishwasher, so it must not have been conscious. One could insist that it did, in fact, seem to me that I heard it at the time, despite my denial, but without corroborating evidence that move is just not compelling.

The critical starting point for Rosenthal (2011) is that I seem to have (we can set aside for now the question of whether I really do) unmediated access to my current state of mind (p. 432). By seeing the tree I gain access to facts about the tree. That is visual perception. In addition, I also seem to have unmediated access to my state of mind. That is consciousness.³ The job of a theory of consciousness is to explain why it seems to me that I have unmediated access to my state of mind. If that is the job, then it seems very tractable. In general appearances/seemings and reality can diverge, and consciousness is just a special class of seeming – it is the way my mind seems to me. We should expect that the states responsible for my mental reality are distinct from the states responsible for mental seemings.⁴ The tree is distinct from the perception of the tree, and similarly, perceiving is distinct from seeming to perceive.

Higher-order awareness theories have a very simple explanation for consciousness. We can call my perception of the tree a first order state. This state makes me aware of the tree, but

³ To be more precise, this is what Rosenthal (2005) calls ‘state consciousness’, the phenomenon of having conscious mental states. State consciousness is sometimes confused with creature consciousness (being awake) and transitive consciousness (awareness of an intentional object), theories of consciousness are generally theories of state consciousness.

⁴ It is important to keep in mind, however, that mental seemings are themselves part of mental reality. This point will be very important as the discuss develops.

does not, by itself, make it seem to be that I have that awareness. This is called a first-order state. In order for it to seem to me that I see the tree – for it to seem to me that I am in that first-order state, I need to have a higher-order state. We call this a higher-order state because it represents the occurrence of another state. In this case, the higher-order state represents the occurrence of my perception of the tree. If I represent myself, via this higher-order state, as currently perceiving the tree, then it will seem to me *that I perceive the tree*, just as my perception of the tree itself makes it seem to me *that there is a tree*.

There is extensive debate about the nature of the higher-order state. Lycan (1987) argues that it is a perception of the first order state, while Rosenthal (2005) argues that it is a thought about that state. I will not discuss that disagreement further, since their theories are, for the sake of this paper, similar enough. They both deny that mental states are intrinsically conscious, and they both argue that mental states become conscious in virtue of a distinct mental state with assertoric mental attitude. I will often focus on higher-order thought theory, but the moves that I lay out on either side would be relevant for either.

2.2 Full and Empty HOTs

I consciously hear the dishwasher running, but according to higher order theories my auditory perception itself is not responsible for my conscious experience. Instead, that experience is entirely determined by a distinct higher-order state. This may seem to be a fundamental mistake. How could my perception be metaphysically divorced from my perceptual experience?

The case of empty HOTs is designed to make this problem more vivid. If the higher-order state is entirely responsible for conscious experience, then it should be possible to have the higher-order state without the first-order state that it represents – an empty HOT. The higher-order state has the content, perhaps, that “I am in pain,” despite the fact that I am not. What does Rosenthal say in this situation? As long as my higher order thought does not seem to have arisen via observation or inference (Rosenthal 2011, 423), I will have a conscious pain. So, in that situation, I am not in pain, but I have a conscious pain. When you put it like that it is hard to dispute Ned Block’s (2011) claim that the view is unworkable.

However, higher-order theorists can simply respond: “Don’t put it that way!” That way of framing the empty HOT case is not quite inaccurate, but it is highly misleading. Jacob Berger (2014) pointed out very clearly what critics of Rosenthal typically misunderstand. State consciousness, despite the misleading term, is not a property of states. When my auditory perception of the dishwasher becomes conscious, the higher-order state does not have any effect on the first-order state. Instead, the higher-order state has an effect on me: it makes me aware that I have an auditory perception. This follows directly from Rosenthal’s conception of consciousness as the phenomenon of mental appearances. When a mental state becomes conscious, your mind now appears to be in that state, when before it did not appear to be.

What about empty HOTs, those conscious states that paradoxically do not exist? When you frame them in terms of mental appearances the paradox disappears. If you have a HOT with

the content, “I am in pain,” then it will seem to you as though you are in pain. If, at the same time, you lack the first order state, then you are not really in pain. There is no need to say that there is a non-existent state that is nonetheless conscious. Instead, just say that your mind appears to be different from the way it really is.

Once we avoid misleading characterizations, it becomes clear who should and who shouldn't accept higher-order theories. First of all, higher-order theories reject the Cartesian view that the mind is necessarily the way that it appears to be. If you accept the Cartesian view, then that is already sufficient reason to get off the boat. Second, higher-order theories take the phenomenon of consciousness to be nothing other than the phenomenon of mental appearances. Once mental appearances are explained, there is nothing more for a theory of consciousness to do. If you reject this conception, then you should not be a higher-order theorist. Third, if you think that having an intentional state with an assertoric mental attitude, and content about one's own mind, is sufficient for having a mental appearance (for making your mind seem to be a certain way), then you should be a higher-order theorist. If not, you probably need some other sort of theory.

If you want to argue against higher-order theories, you would do well to argue that the mind is identical to the way that it appears to be. Or, argue that consciousness is something other than mental appearances. Or, argue that higher-order states are not sufficient to create mental appearances. Any of those could lead to a productive discussion.

3 Empty HOTs as a Strength

3.1 The Modal Argument

After concluding that empty HOTs do not pose any sort of threat to higher-order theories, we will now consider whether they might instead provide salvation. Specifically, does the fact that higher order theories allow for empty higher-order states give them a unique and effective response to anti-materialist arguments? That is exactly what Lycan (1974, 1987) proposed.

Kripke argued in *Naming and Necessity* (1972) that proper names and natural-kind terms are rigid designators, and therefore all identity statements that use two of these terms are necessarily true if true at all. Furthermore, Kripke takes conceivability to imply possibility. If someone can conceive of A's existing without B, then it is possible for A to exist without B.⁵ Taken together, these claims appear to undermine claims of *a posteriori* identity. 'Heat' and 'molecular motion' are presumably natural-kind terms, so if 'heat = molecular motion' is true at

⁵ This interpretation of Kripke is wide-spread, though still controversial. For alternatives see Byrne 2007 and Papineau 2007. Both deny that Kripke is committed to conceivability's implying possibility, though they disagree about the actual nature of his argument. I take the usual interpretation to be accurate, but I will not defend it. For present purposes it is sufficient that I capture the argument as Lycan, Rosenthal and many others have seen it.

all, it is true in all possible worlds in which heat occurs. But it may seem conceivable that heat could exist without molecular motion. Given Kripke's assumptions, this would falsify the identity.

Kripke has a stock response for dealing with such cases. Any individual who claims to imagine the occurrence of heat without molecular motion is confused. The sensation of heat mediates our knowledge of heat itself. What the challenger actually imagines is the sensation of heat, which is an epistemic mediator of heat, without any molecular motion. In general, when someone claims to imagine the occurrence of A without B, he or she might really be imagining the epistemic mediator of A occurring without B.

Identity theorists identify pain with C-fiber firing (or some other type of neural state). Kripke claims that both 'pain' and 'C-fiber firing' are rigid designators; so if 'pain = C-fiber firing' is true, then it is necessarily true. It seems that we can imagine a pain that is not a C-fiber firing. Given Kripke's assumptions, this is a prima facie reason to doubt that pain is really C-fiber firing. Can this problem be resolved in the same way as with heat and molecular motion?

It could if we were not actually imagining a pain that is not a C-fiber firing, but an epistemic mediator of pain occurring without any C-fiber firing. However, Kripke claims that there is no distinct epistemic mediator for pain. To be in pain is to be aware of having a pain, and vice versa. If so, the strategy that works for other cases of necessary identities known a posteriori fails for pains, and some other mental states as well. Kripke concludes that these mental states are not identical with any physical states.

3.2 Lycan's Response

If Lycan's higher-order view is correct, then he can defend the theory that pain is C-fiber firing in the same way that Kripke defends the theory that heat is molecular motion. Kripke denied that anyone could imagine the occurrence of heat without molecular motion. Instead, what the challenger really imagines is the occurrence of heat without the sensation of heat. Analogously, Lycan asserts that anyone who claims to imagine having a pain without any C-fiber firing is confused. The challenger is really imagining the awareness of pain, which on Lycan's hypothesis is a suitable higher-order representation, and can occur without any C-fiber firing. The higher-order representation could occur in the absence of any actual pain, which would be the case (by hypothesis) if there were no C-fiber firings. So the challenger is actually imagining a state of affairs perfectly compatible with the identification of pains with C-fiber firings.

This is not the only critique of the modal argument that Lycan makes. He also contests the view that 'pain' is rigid (1987: 14). This is a very different kind of objection. When Lycan asserts that pains are epistemically mediated he makes a delicate surgical defense of materialism - denying one feature of Kripke's argument while leaving the rest of the apparatus intact. Denying that psychological terms are rigid, by contrast, is more like amputating a limb.

It is often more appealing to make a minimally invasive critique, so it would be preferable for higher order theorists if the former move were sufficient by itself. They are already committed to denying pains are intrinsically conscious, so this defense against the modal argument seems to come for free. The remainder of the paper explores whether the higher order move really is sufficient, only considering more aggressive strategies at the end.

3.3 Retreat to Higher Ground

Kripke never presents a response to this move, perhaps because he finds the identification of pain with awareness of pain so obvious. But there are effective moves that Kripke could make which follow naturally from Lycan's application of the apparatus in *Naming and Necessity*.

Follow Lycan in taking awareness of pain to be distinct from pain. This gets around the problem for pains, since by hypothesis they do have distinct epistemic mediators. But at the same time, it suggests a new problem. What about the awareness of pain? According to materialists it too is identical with some type of physical state or other. Let's call those physical states D-fiber firings, for lack of a better term. The identification of awareness of pain with D-fiber firing raises problems parallel to those we had with pain and C-fiber firing. 'Awareness of pain' and 'D-fiber firing' are presumably natural-kind terms, so 'awareness of pain = D-fiber firing' is necessary if true at all. And it seems as though we can imagine having an awareness of pain without any D-fiber firings. This gives us a *prima facie* reason to deny that awareness of pain really is D-fiber firings.

So the question arises, is awareness of pain itself epistemically mediated? Materialists face a dilemma. If they hold that awareness of pain is not epistemically mediated, and follow Lycan's application of the *Naming and Necessity* apparatus, then Kripke immediately wins. If you seem to imagine having an awareness of pain without having D-fiber firing, then that really is what you imagine, and it really is a possibility. The awareness of pain cannot be D-fiber firing after all. And since 'D-fiber firing' is just a stand-in for whatever neuroscientists will eventually tell us is the neural correlate for awareness of pain, awareness of pain cannot be identical to any type of physical state.

The other option is to claim that our awareness of pain is also epistemically mediated. Perhaps it is mediated by a third-order representation, resulting in a kind of introspective awareness.⁶ Bracketing any dispute over whether such states exist, this proposal only postpones defeat. The same move that Kripke makes concerning pain, and could make concerning awareness of pain, he could make yet again for third-order awareness of pain. According to materialists, states of third-order awareness must again be identical with brain states. However, we can imagine that they occur without any proposed neural correlates. The materialist is back in the same place again, no better off than before. Either third-order awareness has no epistemic

⁶ David Rosenthal (2005: 28-29) explains introspective awareness by appealing to this sort of third-order state.

mediator, or it does have one. In one direction lies immediate defeat, and in the other a vicious regress.

Lycan (1987: 13) does anticipate that his initial move might lead to a regress. In response, he appeals to Armstrong's (1981) view that each level of higher order awareness requires a distinct physical mechanism to implement it, and any individual will have a finite number of such mechanisms. This argument shows that no one has infinite levels of higher order awareness, which seems to be the regress that he meant to address. However, this does address the dilemma presented above. Lycan claims that some level of awareness is as high as we go, but it is still necessary to explain how we are aware of those highest-order states. A challenger might claim to imagine being in such a state without the proposed neural correlate. Lycan cannot reply in the standard higher order manner, that epistemic access is mediated by higher order states, since in this case there are no higher order states. He also cannot say that these states lack a distinct epistemic mediator, since given the established rules that would amount to conceding defeat.

3.4 Another Round

There is one more move that Lycan or a like-minded theorist could make without contesting substantive features of Kripke's apparatus. Perhaps, following Lycan and Armstrong, there is some level of higher-order awareness that is as high as we can go, given the limits of our psychology. Let it be the third-order awareness mentioned above, but which level it might be makes no difference here. Lycan can avoid the first horn of the dilemma, immediate defeat, by denying that we are directly aware of our third-order states. At the same time he can avoid the second horn of the dilemma, the regress, by denying that we are ever aware of third-order states via a fourth-order state, and indeed that we ever could be.

Instead, we become aware of the existence of third-order states in a third-person manner, by inferring their occurrence from our own behavior. This could work in different ways, but perhaps the easiest would be by listening to our own speech. We might hear ourselves say, 'I am aware of my pain.' The awareness of pain is itself, by hypothesis, a second-order state, since it is the epistemic mediator of pain. If we are aware of that second-order state then we must have yet another state, a third-order state. The fact that we verbally reported a second-order state implies that we are aware of it, so we can infer on the basis of that speech act that we are in fact in a third-order state.⁷ This may seem a rather arcane inference to make, but then again, we are rarely aware of our third-order states. Perhaps this explains why.

This story suggests a way to avoid both horns of the modified modal argument. When a dualist asks whether third-order awareness of pain is identical with some type of brain state, a

⁷ This is reminiscent of Dretske's (1994) displaced-perception theory of introspection. Dretske, however, takes introspection to be a special case of displaced perception, in which subjects have privileged access to their mental states. It is crucial to this account that subjects access their mental states in a third-person, fallible manner.

materialist can say yes. The dualist then says that we can imagine having such third-order awareness without its neural correlate, giving us prima facie reason to doubt that identity. A materialist, however, could deny that we really imagine having third-order awareness without the relevant brain state. Instead, lacking first-person access to our third-order awareness, we imagine inferring from one of our own speech acts that we are in such a state.

However, this might be a false inference. It is possible to say, 'I am aware of my pain' without actually being in a state of third-order awareness. Normally we will make that type of utterance when we really are aware of being aware of our own pain - in other words, when we are in a state of third-order awareness. But in some cases we may speak insincerely, or our speech may result from self-deception. Any inferences based on those sorts of speech acts will be mistaken. So if a challenger claims to imagine having third-order awareness of pain without the relevant neural correlates, Lycan could say, 'You have no direct epistemic access to third order states. You must be imagining inferring the existence of a third-order state from a speech act, and that speech act might be insincere or self-deceptive. Therefore, you might not be imagining being in such a state after all.'

This move would successfully avoid the regress, but a challenger is not likely to be satisfied. When Kripke says in *Naming and Necessity* that we are really imagining one thing rather than another, he is careful to propose an alternative that sounds plausible. It is not completely implausible that there are cases where we apparently imagine heat but really imagine the sensation of heat. But it is quite another thing to be informed that we did not imagine having third-order awareness, but instead imagined inferring the existence of such a state on the basis of an insincere or self-deceptive speech act. Would we not be aware that we were imagining hearing a speech act? Why was it insincere or self-deceptive? Perhaps answers could be provided, but the whole line of reasoning seems dubious. Mind-body materialism deserves a stronger defense.

3.5 A Brutal Finish

As we have seen, the regress can be prevented, though at the cost of testing our credulity. However, even this move is vulnerable to another, more ruthless dualist attack, put forward by Kripke himself. Forget C-fibers and D-fibers. Kripke (1971: 161) says that we can apparently imagine pain without any neurons whatsoever. A materialist might reply that Kripke only seems to imagine having a pain without neurons. Instead, he imagines having the awareness of pain without having any neurons.

This response worked before, when the question was whether we can imagine pains without C-fibers. Lycan suggested that we only seem to imagine pain without C-fiber firings, while really imagining the awareness of pain without C-fiber firing. The latter is perfectly compatible with the necessary identity of pain with C-fiber firing. However, the awareness of

pain, according to the materialist, is identical with some type of neural state.⁸ If the Kripke really imagines the awareness of pain without any neurons whatsoever, then that would, on Kripke's apparatus, falsify any such identity, and with it identity theory in general.

Recall the assumptions that Lycan accepted from Kripke. Whatever we can imagine is possible. If it seems that we can imagine something, we can be mistaken only if we confuse the presence of something with the presence of its epistemic mediator. Kripke says we can imagine a being that has pain without a human brain, perhaps without any body at all. Lycan, according to the rules he accepted, can only deny this by claiming that he is imagining a being that is aware of pain without having a brain. But for a materialist this is no improvement. It does not matter whether pain is nonphysical, or awareness of pain is nonphysical. Neither conclusion is acceptable to a materialist.

4 Conclusion

It is natural that Lycan, in his attempt to defeat the modal argument, began by taking on-board the model of conceivability and possibility that Kripke developed in *Naming and Necessity*. In the years since its publication this model has become something of an industry standard, and it is generally preferable when making an argument to avoid unpopular commitments.

Lycan's response to Kripke proves no more effective than using empty HOTs to attack higher-order theories. Adopting a higher order theory of consciousness is not sufficient for defending materialism against Kripke's argument. Kripke framed his modal argument in a manner that begs the question against higher order views, but it can be reframed to address this weakness. Defenders of materialism need to dig deeper, and contest some of Kripke's more popular views. Just as critics of higher-order theory ought to redirect their attacks, higher-order critics of Kripke's argument need to do the same. Does conceivability imply possibility? Are 'pain', and similar psychological kinds terms, rigid designators? Lycan himself asks these sorts of questions, though he does so after making a more broadly palatable critique based on his higher order theory. If they desire to defeat the modal argument, even higher order theorists need to lead with these less palatable critiques.

⁸ Strictly speaking, materialist versions of functionalism do not require that mental states be identical to neural structures. However, if it is possible to imagine mental states without any neurons, it is presumably also possible to imagine them without any physical structures that have a suitable functional organization, so the argument should be equally applicable to functionalist theories.

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