

Naturalism, theism, and multiply realizable mental states

KEVIN VANDERGRIFF

Department of Philosophy, California State University Sacramento, Sacramento, California, 95819, USA
e-mail: kevinvandergriff@yahoo.com

Abstract: Paul Draper has argued that the scientific evidence for the dependence of mental states upon brain states provides a good reason for thinking that theism is very probably false because the extreme metaphysical dualism implied by theism makes it antecedently likely, if God exists, that minds should be fundamentally non-physical entities. However, Draper's argument assumes that what makes God's mind a mind is the immaterial stuff it is made of. But that assumption is potentially faulty. Why? Because, if functionalism is true, then all conceivable minds are fundamentally functional entities identified by what they do, rather than by what they are made of.

Introduction

According to Paul Draper, naturalism is the hypothesis that the physical world has ontological priority over the mental world; that there would be no mental entities if there were no physical world to produce them.¹ Theism, on the other hand, is the hypothesis (i) that there exists at least one immaterial mental entity that is not in any sense ontologically dependent upon the physical world for its existence, and (ii) that there wouldn't be any physical entities if this immaterial mental entity – in particular, a single person who is omnipotent, omniscient, and omnibenevolent – didn't produce them.² Given these incompatible hypotheses about what is ontologically prior to everything else, Paul Draper has argued that the scientific evidence for the dependence of mental states (of all sorts) upon brain states is *much* more likely on the assumption that naturalism is true, rather than on the assumption that theism is true.³ Though Draper does not formalize his argument, we can, by constructing an inductive argument comprised of three premises and a conclusion.⁴

According to the first premise, it is a scientific fact that all known mental states are dependent upon brain states for their existence:

thanks . . . to contemporary science, specifically neuroscience . . . It is now known that conscious states of all sorts, and even the very integrity of our personalities, are dependent to a very high degree on physical processes occurring in the brain. Although neuroscientists have not, in my opinion, proven that brain states and mental states are identical, they have discovered overwhelming evidence for an invariable correlation between the two. In short, nothing mental (and human) happens unless something physical happens . . . While all of this is *compatible* with substance dualism, it is very strong evidence for the position that human consciousness and personality are properties of brains or nervous systems or bodies rather than properties of immaterial substances.⁵

Using 'E' to stand for the statement 'It is a scientific fact that all known mental states (human and animal) are dependent upon brains states for their existence', the first premise can be abbreviated as follows:

(1) E is known to be true.

'E' is important because it is an explicit affirmation of the causal primacy, or priority, of the physical in relation to the mental that is entailed by the very definition of naturalism.

The second premise is that 'E' is *much* more likely on naturalism than on theism:

Theism implies an extreme metaphysical dualism – a mind existed prior to the physical world and was responsible for its existence. Thus on the assumption that theism is true, it is *antecedently* [emphasis added] likely that minds are *fundamentally nonphysical entities* [emphasis added] . . .⁶ and thus [theism] makes it *much* more [emphasis added] likely than naturalism does that, like God's mind, human minds are immaterial substances. Thus, the evidence for the existence of such substances is evidence favouring theism over naturalism . . . Just as evidence for the existence of immaterial minds favours theism over naturalism, so too evidence for their nonexistence favours naturalism over theism.⁷

Notice that Draper thinks 'E' is *much* more probable on naturalism, rather than on theism, because the extreme metaphysical dualism implied by theism somehow makes it *antecedently* likely that all minds should be *fundamentally* non-physical entities. By antecedently, Draper means 'independent of the observations and testimony that together constitute the primary evidence upon which we know about . . .',⁸ the dependence of the mental upon the physical from contemporary neuroscience.⁹ However, apart from *assuming* that the only or most plausible way to interpret what makes God's mind a *mind* is by the immaterial stuff it is made of – rather than, say, by the mental functions it performs (e.g. what it does) – I see no good reason (based on what Draper says) to think God's mind, if God exists, makes it *antecedently* likely that minds of all sorts should be *fundamentally* non-physical entities. So, granting that assumption is correct (for now), and if we let 'T', 'N', and '>!' stand for theism, naturalism, and 'much more probable than', then the second premise can be abbreviated as follows:

$$(2) \Pr(E/N) \gg \Pr(E/T)$$

From these first two premises (if they are true) it follows that some people (those who know E to be true) possess very strong evidence supporting naturalism over theism. Nevertheless, even if the evidence relating to the physical basis of human (and animal) mental states is much more probable on naturalism than on theism, that doesn't imply that the final probability of naturalism is higher than the final probability of theism, unless the intrinsic probability of theism isn't much more probable than naturalism.

According to Draper, the intrinsic probability of a hypothesis tells us the absolute prior probability of a hypothesis before we consider the evidence for that hypothesis, and is determined entirely by how much it says (e.g. how *modest* it is), and how well what it says fits together (e.g. how *coherent* it is). No other factors affecting probability, apart from modesty and coherence, could be intrinsic to the hypothesis. Draper has argued elsewhere that naturalism is at least as coherent as theism, and much more modest.¹⁰ For the sake of argument, we can grant both that Draper's theory of intrinsic probability is correct, and that it shows that theism is (at best) not intrinsically more probable than naturalism. As such, we need to add a third premise to the argument which can be abbreviated as follows:

$$(3) \text{Theism is not intrinsically more probable than naturalism.}$$

With the addition of this third premise, the following more interesting conclusion can be drawn:

$$(4) \text{Other evidence held equal, naturalism is } \textit{much} \text{ more probable than theism.}$$

Of course, theism and naturalism cannot both be true. Therefore, while it does not follow from the conclusion of this argument that, other evidence held equal, naturalism is very probably true (since naturalism is just one of the ways that theism can be false), it does follow that, other evidence held equal, theism is very probably false. So, Draper's Argument is perhaps better described as an argument against theism rather than as an argument for naturalism, though of course, in some sense, it is both.¹¹

However, in order for Premise two – $\Pr(E/N) \gg \Pr(E/T)$ – to be well-grounded, a certain background assumption needs to be plausibly true, namely, that the only or most plausible way to interpret what makes God's mind a *mind* is by the immaterial stuff it is made of, rather than by the mental functions it performs (e.g. what it does). If that background assumption is plausibly true, then Draper is correct to claim that the extreme metaphysical dualism implied by theism makes it antecedently likely, if God exists, that minds should be fundamentally non-physical entities – from which it would follow that the scientific evidence for the dependence of mental states upon brain states provides good reason for thinking that theism is very probably false. But that background assumption is potentially

faulty. Why? Because the received view in philosophy of mind and cognitive science sees minds of all sorts (physical and non-physical) as *essentially* functional entities – identified by what they *do*, rather than by what they are *made of* – which are conceivably capable of having both physical and non-physical realizers. Thus, as I shall argue in what follows, *if* metaphysical functionalism is true, then another and more plausible way to interpret what makes God’s mind a *mind* is by the mental functions it performs, rather than by the immaterial stuff in which it is realized – from which it follows that Premise two is not well-grounded.

In particular, the rest of the article is structured as follows: in the next two sections I introduce the core tenet of metaphysical functionalism, according to which mental states are *essentially (de dicto)* functional states; as well as the main argument offered by functionalists who think that tenet is true, namely, the multiple-realizability argument. After that, I explain and defend why the conceivable spectrum of multiple-realizability should include physical and non-physical realizers. Next, I explain (i) the only two ways in which what makes God’s mind a mind could be the immaterial stuff it is made of, and why (ii) if metaphysical functionalism is true, and physical and non-physical realizers of mental states are conceivable, then another and more plausible way to interpret what makes God’s mind a *mind* is by the mental functions it performs – rather than the immaterial stuff in which it is realized – from which it follows that Premise two is not well-grounded. Finally, the succeeding two sections see a consideration of two objections to my overall argument followed by a conclusion.

Metaphysical functionalism

Functionalism has entrenched itself as the received view in contemporary philosophy of mind (and cognitive psychology):

After more than thirty-five years of debate and discussion, versions of functionalist theories of mind originating in the work of Hilary Putnam, Jerry Fodor, and David Lewis still remain the most popular positions among philosophers of mind on the nature of mental states and processes.¹²

As Peter Godfrey-Smith reports, ‘[m]ost recent philosophy of mind has been “functionalist” in *some sense or other* [emphasis added]’.¹³ This statement implies that there are multiple versions of functionalism. Indeed, Thomas Polger has proposed a careful and rigorous taxonomy of functionalist theories (e.g. metaphysical, intentional, semantic, explanatory, methodological, and theoretical) and concludes, ‘My taxonomy is able to distinguish over one hundred variations; probably there are more.’¹⁴ Fortunately, for the purposes of my overall argument, we do not need to develop the canonical formulation of each and every variety of functionalism Polger categorizes in order to stay within the mainstream of philosophy of mind, for as Polger notes: ‘Metaphysical functionalism is the central doctrine [of functionalism] and probably the most widely endorsed.’¹⁵ However, given the

different versions of metaphysical functionalism that there are, 'Functionalism should be regarded not so much as a particular *view* as a general *strategy* for analysing mental phenomena.'¹⁶ In other words, it is the received view in philosophy of mind that whatever the ideal functionalist theory turns out to be, it will vindicate the core tenet of all versions of metaphysical functionalism, namely, that: mental states *are* functional states.¹⁷ This is a metaphysical claim because it is a theory about the nature of mental states. Thus, metaphysical functionalism answers what is perhaps the most fundamental question in philosophy of mind (e.g. what sort of thing is a mind?) by saying that minds, or mental states, are *essentially* functional states. In other words, what makes something a mental state of a particular type does not depend on its internal constitution (what it is made out of), but rather on the way it functions (what it does); or the causal role it plays, in the system in which it is a part.¹⁸ Indeed, the version of metaphysical functionalism that gets the most attention in the literature is causal role, or Input/Output ('I/O') functionalism.¹⁹ Because of this, I will utilize causal role (or 'I/O') functionalism to explain the general strategy of metaphysical functionalism henceforth.

Causal role (or 'I/O') functionalism claims that a mental state M is individuated entirely by inputs, outputs, and their causal relations to other states:²⁰ 'A specification of input and output, <i, o>, will define a particular mental state: for example, <tissue damage, aversive behavior> defines pain, <skin irritation, scratching> defines itch, and so on.'²¹ Put simply, a mental state is triggered by particular inputs and has a particular causal role in virtue of its causing other mental states, and together with other mental states, in causing behaviour. This implies that a mental kind just is a *functional kind*, or a *causal-functional kind*, since the 'function' involved is to fill a certain causal role.²² That is, mental kinds just are functional kinds, and what all instances of a given mental kind have in common is that they serve a certain causal role distinctive of that kind, and that is all.²³

For example, in human beings, perhaps mental states like pain and pleasure are realized by brain states, processes, properties, or events. However, knowing everything there is to know about brain states, processes, properties, or events doesn't tell us anything *essential* about the nature of mental states because organisms with very different brains, or with no brains at all, could also have mental states like pain and pleasure, just as long as they realize mental states that play the same causal or functional roles. Hence, one might say that a functional kind only has a 'nominal essence', given by its defining causal role, but no intrinsic essence, or no set of necessary and jointly sufficient properties shared by all actual and possible instances of it.²⁴ As such, mental states are *essentially* things that have certain functions; they are fundamentally *functional entities*. Put simply, mental states are identified by what they *do*, rather than by what they are *made of*. Hence, metaphysical functionalism entails that mental states remain in place no matter the underlying ontology that realizes them, so long as they function appropriately.

Whether this 'substrate-neutral' entailment of metaphysical functionalism conceivably includes physical and non-physical realizers will be explored and

defended in the next two sections, which cover the main argument offered in support of metaphysical functionalism (the argument from multiple realizability), and the conceivable spectrum of multiple realizability.

Multiple realizability

While there have been multiple arguments offered in support of metaphysical functionalism,²⁵ the main argument defended by functionalists is the argument from multiple realizability. To illustrate the concept of multiple realizability, consider mousetraps. The function of a mousetrap is to trap mice, and there are many different kinds of mousetraps, built in different ways, using different methods and materials, that can fulfil that function. Everything that traps mice, no matter what it is made of, counts as a mousetrap. Hence, 'being a mousetrap' is a functional property that can be (multiply) realized by many different physical arrangements of matter (i.e. wood, plastic, metal, and so on). Here is the point of the analogy: just as the function of trapping mice can be realized by different systems, so too, the function of mental states can be realized by different systems; systems with, or without brains. Now that we have a handle on the concept of multiple realizability, we can explain the argument from multiple realizability.

Multiple realizability arguments were first introduced into the philosophy of mind by Hilary Putnam, in the 1960s, as an argument against mind–brain identity theory – the view that future scientific progress will reveal that every mental state is identical to some particular brain state.²⁶ All the different versions of the multiple realizability argument originate from the single intuition that it is readily *conceivable* that some entity could have mental states without having brain states like ours, or any brain at all.²⁷ Here is the general form of the multiple realizability argument from conceivability:

- (1) If it is conceivable that mental states are multiply realizable, then mental states are multiply realizable.
- (2) It is conceivable that mental states are multiply realizable.
- (3) Therefore, mental states are multiply realizable.

The implication of the above argument is that considerations of conceivability reveal that there is a one-to-many relation between mental states and the substrates that realize them, rather than a one-to-one relation, as mind–brain identity theory claims. It is important to note that multiple realizability arguments are often thought to refute mind–brain identity theory, and also show that mental states can conceivably be realized²⁸ by various physical, and (as I shall argue in the next section) non-physical substrates. As such, multiple realizability arguments imply metaphysical functionalism, not the other way around.

Keeping this in mind, I will now turn to an examination and defence of just how broad a spectrum of multiple realizability is conceivable.

The spectrum of multiple realizability

It should be clear by now that multiple realizability arguments are often justified by considerations of conceivability, and certainly one can conceive of a broad spectrum of realizability. Due to this, it will be helpful to begin with Thomas W. Polger's spectrum of multiple realizability (MR) to get a feel for just how broad a range of MR is conceivable:

- Weak MR: At least some creatures that are not exactly like us in their physical composition can be conscious.
- SETI MR: Some creatures that are significantly different from us in their physical composition can be conscious.
- Standard MR: Systems of indefinitely (perhaps infinitely) many physical compositions can be conscious.
- Radical MR: Any (every) suitably organized system, regardless of its physical composition, can be conscious.²⁹

According to Polger, Standard MR and Radical MR are the most commonly accepted forms of multiple realizability in the literature, which entails that SETI MR and Weak MR are also commonly accepted. However, notice that all of the types of MR on Polger's spectrum of MR only involve physical substrates. Does this imply that most, or even all, metaphysical functionalists do not think mental states are able to be conceived of as being realized independently of physical substrates? The answer to that question is 'no':

We've left a presupposition of dualism, idealism, and materialism behind. The question of mind is no longer a question of 'stuff.' Precisely because of that shift, the functionalist approach turns out to be entirely non-committal as to 'stuff.' Most functionalists are probably materialists. But that commitment is not really entailed by the position. The claim that mental states are functional states doesn't imply anything one way or the other as to what they are functional states of. As long as they work right, they could be functional states of the materialist's physical 'stuff,' or of the 'stuff' of subjective idealism, or even of the double 'stuffs' of dualism.³⁰

Thus, it is precisely because metaphysical functionalism entails that mental states are identified by what they *do* – rather than by what they are *made of* – that non-physical substrates can conceivably realize mental states:

Perhaps not many of us now believe in angels – purely spiritual or immortal beings supposedly with a full mental life. Angels, as traditionally conceived, are wholly immaterial beings with knowledge and belief who can experience emotions and desires and are capable of performing actions . . . If the idea of an angel with beliefs, desires, and emotions is a consistent one, that would show that there is nothing in the idea of mentality as such that precludes purely non-physical, wholly immaterial beings with psychological states.³¹ It seems, then, that we cannot set aside the possibility of immaterial realizations of mentality as a matter of an a priori conceptual fact.³²

Hence, I think we are justified in broadening Polger's conceivable spectrum of MR to include the following:

Substrate Neutral MR (SNMR): At least some suitably functioning *non-physical* entities, and at least some creatures that are not exactly like us in their physical composition (Weak MR) can be conscious.³³

But why think that SNMR's conceivability is on a par with the most commonly encountered forms of multiple realizability in the literature – Standard MR and Radical MR? The answer – I think – is that it is extremely difficult to see how someone who endorses Standard MR and Radical MR (and virtually all functionalists do) on the basis of the conceivability of different realizers can resist the thesis of SNMR. Why? Because SNMR is just as readily conceivable as Standard MR and Radical MR – and even more so by my lights. I, for one, find it much more readily conceivable – and therefore metaphysically possible – for non-physical entities, and at least some creatures that are not exactly like us in their physical composition, to be capable of realizing mental states; then I find beer cans and toilet paper to be capable of realizing mental states.³⁴ The former samples of realizability are entailed by SNMR, whereas the latter samples of realizability are entailed by Standard MR and Radical MR. Hence, any considerations from conceivability that support Standard MR and Radical MR will also tend to support SNMR just as much (or more so).

Here is the crucial point: If metaphysical functionalism is true, and SNMR is conceivable, then it is not the case that the only or most plausible way to interpret what makes God's mind a *mind* is by the immaterial stuff it is made of. To make this as clear as possible, in the next section I explain (i) the only two ways in which what makes God's mind a mind could be the immaterial stuff it is made of, and why, (ii) if metaphysical functionalism is true, and physical and non-physical realizers of mental states are conceivable, then another and more plausible way to interpret what makes God's mind a *mind* is by the mental functions it performs – rather than the immaterial stuff in which it is realized – from which it follows that Premise two is not well-grounded. Finally, the succeeding two sections see a consideration of two objections to my overall argument followed by a conclusion.

Premise two – theism and extreme metaphysical dualism

Recall that theism is the hypothesis (i) that there exists at least one immaterial mental entity that is not in any sense ontologically dependent upon the physical world for its existence, and (ii) that there wouldn't be any physical entities if this immaterial mental entity – in particular, a single person who is omnipotent, omniscient, and omnibenevolent – didn't produce them.³⁵ Given the extreme metaphysical dualism implied by theism, and the background assumption that what makes God's mind a mind is the immaterial stuff it is made of, I can think of two and only two metaphysical interpretations – one strong and one weak – of the nature of God's mind that would make it antecedently likely, given theism, that all minds should be fundamentally non-physical entities.

According to the ‘strong’ metaphysical interpretation, what makes God’s mind a mind is the immaterial stuff it is made of in the sense that God’s mental states are *identical* to an immaterial object (i.e. soul). If correct, then it is metaphysically necessary (*de dicto*) that God’s mental states are *identical* to an immaterial object. This ‘strong’ metaphysical interpretation of the nature of God’s mind can be formalized as follows:

Strong Metaphysical Interpretation: Necessarily (*de dicto*), if God has some mental state M, at time *t*, then M is identical to some immaterial object *y*, and God has M at *t* in virtue of the fact that M is identical to *y*.

So then, if the only or most plausible way to interpret what makes God’s mind a mind is by the immaterial stuff it is made of in this sense, then the truth of theism would make it antecedently likely that minds are fundamentally non-physical entities. In fact, such a theory about the nature of mental states would be the immaterial twin of the materialist mind–brain identity theory that motivated Putnam to introduce multiple realizability arguments into philosophy of mind as an argument against the view that mental states are identical to brain states in the 1960s. But therein lies the rub; what is sauce for the material goose is sauce for the immaterial gander. That is, if metaphysical functionalism is true, and SNMR is conceivable, then another and more plausible way to interpret what makes God’s mind a *mind*, if God exists, is by the mental functions it performs, rather than by the immaterial stuff in which it is realized – from which it follows that Premise two is not well-grounded. But, perhaps there is a different, or weak metaphysical interpretation of the nature of God’s mental states which would show that the only or most plausible way to interpret what makes God’s mind a mind is by the immaterial stuff it is made of; and therefore, that Premise two of Draper’s Argument is well-grounded.

According to the weak metaphysical interpretation, what makes God’s mind a mind is the immaterial stuff it is made of in the sense that God’s mental states are dependent upon an immaterial base in some sense (i.e. supervenience, reduction, emergence), but not identical to that immaterial base (i.e. soul). This weak metaphysical interpretation of the nature of God’s mind can be formalized as follows:

Weak Metaphysical Interpretation: Necessarily (*de re*),³⁶ if God has some mental state M, at time *t*, then God has M at *t* in virtue of the fact that God has at *t* some immaterial base B that is responsible for producing (causing) M in God at *t*.³⁷

Put simply, every mental state God has that exists in the actual world is such that it is dependent upon an immaterial base (i.e. a soul) producing (causing) it. So then, if the only or most plausible way to interpret what makes God’s mind a mind is the immaterial stuff it is made of in this sense, then the truth of theism would make it antecedently likely that minds are fundamentally non-physical entities.

However, it is important to realize that if metaphysical functionalism is true, then the mental states of any metaphysically possible mental entity that may

exist – physical and non-physical – will be *identified (de dicto)* by what they *do*, rather than by what they are *made of*. Thus, if metaphysical functionalism is true, then it is necessarily true (*de dicto*) that mental states are functional entities; and therefore, just because theism is committed to the claim that God's mental states have an immaterial realizer, it doesn't follow that the extreme metaphysical dualism implied by theism makes it antecedently likely that all minds are fundamentally non-physical entities. On the contrary, if metaphysical functionalism is true, and SNMR is conceivable, then another and more plausible way to interpret what makes God's mind a *mind*, if God exists, is by the mental functions it performs, rather than by the immaterial stuff in which it is realized. And so it follows that the physical basis of human (and animal) mental states is not *much* more probable on naturalism than theism.

Objections

In the last two sections I consider two objections to my overall case and then conclude the article.

First objection

If God exists, and if other personal beings are to exist, it's intrinsically more probable that the latter will be more like God, in their substance, than different (i.e. they will more likely be composed of spirit rather than be a body-spirit composite, or worse still, a wholly material being). For an analogy, I think Draper, following Carnap and others, would say that if you find one black swan then it's intrinsically more probable that the next swan you find will also be black as opposed to white, or worse, black and white – variety is less probable than uniformity according to Draper's theory of intrinsic probability.

Response

Other evidence held equal, I agree that Draper's theory of intrinsic probability (if correct) can be used to show that the scientific evidence for the dependence of conscious life of all sorts upon arrangements of matter is antecedently *more* probable on naturalism than theism because (according to that theory) uniformity is more probable than variety. However, notice that this argument does not show that God's mind, if God exists, makes it antecedently likely that all minds are *fundamentally* non-physical entities as the argument I have been criticizing assumes. As such, this objection (as it stands) does not show that 'E' is *much* more probable on naturalism than on theism.

Second objection

Though it is controversial to use antecedent probabilities to say anything useful or coherent about empirical states of affairs, one popular way to determine

antecedent probability is by employing the principle of indifference. The principle of indifference states that if n possibilities are indistinguishable except for their names, then each possibility should be assigned a probability equal to $1/n$. But then, based on my own argument, this principle can be used to show that the antecedent probability of God's mind – and therefore, all minds – being fundamentally non-physical, on the assumption theism is true, is $2/3$. That is, since I identified two ways for God's mind to be a mind in virtue of the immaterial stuff it could be made of, and only one way God's mind could be a mind in virtue of the mental functions it performs, it is antecedently more likely that God's mind is fundamentally an immaterial substance rather than a functional entity with an immaterial realizer. Thus, other evidence being equal, the principle of indifference can be used by Draper to show that the truth of theism makes it antecedently likely that minds are fundamentally non-physical entities; and therefore, Draper's argument would show that 'E' is much more probable on naturalism than theism after all.

Response

If metaphysical functionalism is false, and the principle of indifference is a reliable guide to determining antecedent probabilities prior to experience or observation, then I agree with this objection. On the other hand, if metaphysical functionalism is true, and even if the principle of indifference is a reliable guide to determining antecedent probabilities prior to experience or observation, then I disagree with this objection. There are two reasons for this disagreement: (i) in virtue of my overall argument, there is still a non-zero antecedent probability (e.g. $1/3$) that what makes God's mind a mind, if God exists, is the mental functions it performs, rather than the immaterial stuff that realizes it, and (ii) the likelihood of Draper's second premise does not rely on antecedent probability alone, but also involves what he calls conditional epistemic probabilities:

[W]here K is an epistemic situation and p and q are propositions, relative to K , p is epistemically more probable than q just in case any fully rational person in K would have a higher degree of belief that p than that q .³⁸

To illustrate the difference and interplay between antecedent and conditional epistemic probabilities, suppose two persons, Paul and Kevin, are trying to determine the antecedent probability of drawing a queen from the top of a fairly shuffled deck of cards. Determining the probability of drawing a queen in this scenario is prior to any experiences regarding this particular deck of cards, and so it involves antecedent probability. Moreover, because Paul and Kevin only know that there are fifty-two cards in a deck, four of which are queens, and that the deck is fairly shuffled, it is difficult to determine what the probability of a drawing a queen from the top of a fairly shuffled deck of cards would be. However, as already mentioned, one option is to use the principle of indifference to do so. Since the principle of indifference says that each possibility should be assigned a probability equal to $1/n$, the antecedent probability of drawing a

queen in this scenario is $4/52$ or $1/13$. As it happens, both Paul and Kevin think the principle of indifference is a reliable guide to determining antecedent probabilities, and so they both agree that the antecedent probability of drawing a queen from the top of the deck, in this scenario, is $1/13$.

To add conditional epistemic probabilities into the mix, now suppose that Paul is asked to leave the room, but Kevin is allowed to stay and is also shown the top card in the deck. Kevin observes that the top card is a queen. That queen is then returned to the top of the deck. Paul re-enters the room and Kevin and Paul are asked to assess the probability of the top card being a queen. Obviously, Paul and Kevin are in different epistemic situations now. That is, while Kevin and Paul both believe that the antecedent probability of the top card being a queen is $1/13$, the specific evidence Kevin now has for thinking the top card is a queen is so strong that the (conditional epistemic) probability for him that the top card is a queen is virtually certain. However, because Paul does not have any specific evidence from observation about the top card that Kevin has, the probability that the top card is a queen remains $1/13$ for him.

Thus, even if the principle of indifference mandates that we assign an antecedent probability of $1/3$ to the claim that what makes God's mind a mind (if God exists) are the mental functions God's mind performs, still, for all those persons who know that metaphysical functionalism is true, the (conditional epistemic) probability that what makes God's mind a mind is the mental functions it performs will be higher than the antecedent probability that what makes God's mind a mind is the immaterial stuff it is made of. Therefore, for all those persons who know that metaphysical functionalism is true, the extreme metaphysical dualism implied by theism, on the assumption theism is true, does not make it more likely than not that minds are fundamentally non-physical entities. Instead, it is more likely for such persons that the mental states of any metaphysically possible mental entity that may exist – physical and non-physical – are *identified* (*de dicto*) by what they *do*, rather than by what they are *made of*. So then, even if we assign an antecedent probability of $1/3$ to the claim that what make God's mind a mind (if God exists) are the mental functions God's mind performs, still, Premise two of Draper's argument – $\Pr(E/N) > \Pr(E/T)$ – will not be well-grounded for all those persons who know that metaphysical functionalism is true.

Conclusion

My goal here was to draw out a hitherto unnoticed intersection between the received view in philosophy of mind/cognitive psychology – metaphysical functionalism – and philosophy of religion. In particular, I hope I have shown that if metaphysical functionalism is true, and SNMR is conceivable, then another and more plausible way to interpret what makes God's mind a *mind*, if God exists, is by the mental functions it performs, rather than by the immaterial stuff in which it is realized – from which it follows that Premise two is not well-grounded.³⁹

Lastly, if my goal has been met, then the argument defended here could be used by all those who know metaphysical functionalism is true to weaken other arguments against theism that share the same background assumption, namely, that the only or most plausible way to interpret what makes God's mind a *mind* is by the immaterial stuff it is made of, rather than by the mental functions it performs.⁴⁰

References

- BAGGINI, J. & FOSL, P. S. (2003) *The Philosopher's Toolkit: A Compendium of Philosophical Concepts and Methods* (Malden MA: Blackwell Publishers).
- BICKLE, J. (2016) 'Multiple realizability', *The Stanford Encyclopedia of Philosophy* (Spring 2016 Edition), Edward N. Zalta (ed.), <<http://plato.stanford.edu/archives/spr2016/entries/multiple-realizability/>>.
- DRAPER, P. (1989) 'Pain and pleasure: an evidential problem for theists', *Noûs*, **23**, 331–350.
- DRAPER, P. (2002) 'Seeking but not believing: confessions of a practicing agnostic', in D. Howard-Snyder & P. K. Moser (eds) *Divine Hiddenness: New Essays* (Cambridge University Press), 197–214.
- DRAPER, P. (2004) 'Cosmic fine-tuning and terrestrial suffering: parallel problems for naturalism and theism', *American Philosophical Quarterly*, **41**, 311–321.
- DRAPER, P. (2008) 'Evolution and the problem of evil', in L. Pojman & M. Rea (eds) *Philosophy of Religion: An Anthology*, 5th edn (Belmont CA: Wadsworth), 207–219.
- DRAPER, P. (2010) 'God and evil: a philosophical enquiry', 9th Annual Plantinga Fellow Lecture, University of Notre Dame.
- DRAPER, P. (2012) 'God and the burden of proof', Morehead State University, Invited Paper.
- DRAPER, P. (2014) 'Evolution and the problem of evil', in M. Rea (ed.) *Evil and the Hiddenness of God* (Belmont CA: Wadsworth), 44–55.
- GODFREY-SMITH, P. (1996) *Complexity and the Function of Mind in Nature* (Cambridge: Cambridge University Press).
- GRIM, P. (2008) 'Philosophy of mind: brains, thinking machines, and the mysteries of consciousness', 24 lectures on interdisciplinary issues in philosophy of mind, psychology, and neuroscience (Chantilly VA: The Teaching Company).
- KIM, J. (2010) *Philosophy of Mind*, 3rd edn (Boulder CO: Westview Press).
- LEVIN, J. (2013) 'Functionalism', *The Stanford Encyclopedia of Philosophy*, Edward N. Zalta (ed.), <<http://plato.stanford.edu/archives/fall2013/entries/functionism/>>.
- LIVINGSTON, P. (2005) 'Functionalism and logical analysis', in D. W. Smith & A. L. Thomasson (eds) *Phenomenology and Philosophy of Mind* (Oxford: Clarendon Press), 19–40.
- POLGER, T. W. (2004) *Natural Minds* (Cambridge MA: MIT Press).
- POLGER, T. W., 'Functionalism', *The Internet Encyclopedia of Philosophy*, <<http://www.iep.utm.edu/functionism/>> [accessed 7 July 2016].
- REY, G. (1997) *Contemporary Philosophy of Mind: A Contentiously Classical Approach* (Cambridge MA: Blackwell).
- SEARLE, J. (1984) *Minds, Brains, and Science: The 1984 Reith Lectures* (Harmondsworth: Penguin Books).

Notes

1. Draper (2010), 6.
2. *Ibid.*, 5–7.
3. Draper (2002).
4. It should be mentioned that, given Draper's purposes in the written work in which he covers this argument, it is to be expected that one wouldn't formalize one's arguments.
5. Draper (2002), Kindle Location 3399 of 3417.
6. Draper (2008), 212.
7. Draper (2002), Kindle Location 3399 of 3417.
8. Draper (2014), 46.

9. I realize that some philosophers object to the usefulness and coherence of antecedent probability all together, but it is common practice to gloss over various assumptions of an argument in order to assess whether even the most sympathetic reading can withstand critical scrutiny. So, my goal is to see what can be said against Draper's argument given any assumptions about the usefulness and coherence of antecedent probability.
10. See Draper (2010); Draper (2012). Since we do not have space to explain and examine Draper's theory of intrinsic probability in detail, we can simply assume it is correct for purposes of argument.
11. Draper (2004), 314–315. I copied the basic format and content of a different argument Draper formalizes in this article for the purposes of my argument in order to represent his general form of argumentation as accurately as possible.
12. Livingston (2005), 19.
13. Godfrey-Smith (1996), 13.
14. Polger (2004), Kindle Location 1026 of 3768. Polger does try to show that explanatory functionalism is the type of functionalism that unites all the diverse versions of functionalism that there are. If correct, then one needn't count the large number of different versions of functionalism Polger identifies as a sign that functionalism has no hope of formulating an ideal theory of mental states. Moreover, many of the different versions of functionalism in his taxonomy would, if true, entail metaphysical functionalism; including explanatory functionalism.
15. Polger, 'Functionalism'.
16. Rey (1997), 165.
17. Polger (2004), Kindle Location 1140 of 3768.
18. Levin (2013).
19. Rey (1997), 191.
20. *Ibid.*, 191.
21. Kim (2010), Kindle Location 2781 of 8026.
22. *Ibid.*, Kindle Location 2764 of 8026.
23. *Ibid.*, Kindle Location 2781 of 8026.
24. *Ibid.*, Kindle Location 2777 of 8026. Contrast this with water. Water is a spatiotemporally unrestricted entity with an intrinsic essence. That is, all samples of water – anywhere and anytime – must be quantities of H₂O molecules because being composed of H₂O molecules is necessary and jointly sufficient for any particular instance of water to be a member of the kind rigidly designated by the proper name: dihydrogen monoxide.
25. For details, see Thomas (2004); Polger (2004).
26. Bickle (2016).
27. Polger (2004), Kindle Location 213–223 of 3768.
28. While no rigorous analysis of the realization relation that obtains between mental kinds and substrates has won over the majority of philosophers engaged in analytical metaphysics, it is widely accepted in philosophy of mind that whatever the correct account turns out to be, it is still true (right now) that there is a one-to-many relation between mental kinds and the substrates that realize them.
29. Polger (2004), Kindle Location 255 of 3768.
30. Grim (2008).
31. Cf. Kim (2010), Kindle Location 3421 of 8026: 'At least some of them, for it could be argued that certain psychological states can be had only by materially embodied subjects – for example, feelings of hunger and thirst, bodily sensations like pain and itch, and sexual desire.'
32. *Ibid.*, Kindle Location 2698–2704 of 8026.
33. In e-mail conversation Polger said that certainly some versions of functionalism, if they were correct, would imply SNMR versions of MR.
34. Searle (1984), ch. 2.
35. Draper (2010), 5–7.
36. Baggini & Fosl (2003), 155: '*De re* necessity is thus weaker than *de dicto* necessity, but it is necessity nonetheless, and so to assert it is still to make a strong claim.'
37. Kim (2010), Kindle Location 2706 of 8026.
38. Draper (1989), 349.
39. For helpful feedback I am particularly grateful to Jason Marsh and Jenelle Vandergriff.
40. Draper (2008), 212:

The *dualism inherent in theism* [emphasis added] may explain why so many theists were drawn to the idea of special creationism before (and in many cases even after) the evidence for evolution was discovered. For this dualism supports a dualistic view of human nature – a view that must have made the idea that we are the effect of altering the nucleic acids of single-celled organisms seem ludicrous. Offspring don't have to be identical to their parents, but surely genetic change can't result in fundamental metaphysical lines being crossed!

Here Draper argues that if God's mind is a mind in virtue of the immaterial stuff it is made of, then the falsity of the special creation of conscious life is *twice* as probable antecedently on naturalism, as it is on theism. Why? Because if God's mind is a mind in virtue of the immaterial stuff it is made of, then theism entails/implies that there is an unbridgeable metaphysical gap between non-conscious living things and conscious living things that evolution cannot traverse. Since evolution – which is virtually the only process that can bring about complex/conscious living things on naturalism – did bring about the transition from non-conscious living things to conscious living things, that entails that special creationism is false, and so, the falsity of the special creation of conscious living things is twice as probable antecedently on naturalism as it is on theism. However, the falsity of the special creation of conscious living things is not twice as probable antecedently on naturalism as it is on theism unless the only way to interpret God's mind being a mind is in virtue of the immaterial stuff that it is made of. But, if metaphysical functionalism is true, and SNMR is conceivable, then it would be the case that God's mind could be a mind in virtue of the mental functions it performs, not the stuff in which it is realized – which further implies that there is no antecedent reason (given theism) to think the falsity of the special creation of conscious life is twice as probable antecedently on naturalism, as it is on theism. Why? Because in that case there would be no unbridgeable metaphysical gap between non-conscious living things and conscious living things that evolution cannot traverse. Certainly, the fact that conscious life itself evolved is antecedently more probable on naturalism than theism still (all other evidence held equal), but not much more probable.