The Waning of Materialism

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Kripke’s Argument Against Materialism

Eli Hirsch

I

Although Kripke presents an argument designed to show that (a certain form of) materialism is a priori necessarily false, he allows that there are on the other side some ‘highly compelling’ arguments in favor of materialism. The issue is therefore for him ‘wide open and extremely confusing.’ My aim in this chapter is to defend Kripke’s argument. This does not necessarily imply criticism of philosophers who acknowledge the force of the argument and admit they do not know how to answer it, but continue to accept materialism.

The central idea of the argument is the following principle:

(K) If the terms ‘a’ and ‘b’ both pick out their referents essentially then, if the identity sentence ‘a is b’ is true, not only is it (metaphysically) impossible for a not to be b, but it is impossible for people in our (actual) epistemic situation to be mistaken in asserting the sentence ‘a is b.’

People are in the same epistemic situation in the relevant sense if their ‘qualitative’ evidence is the same. Two people looking at different but qualitatively indistinguishable tables are in the same epistemic situation in this sense. When considering issues related to certain terms (for example, the terms playing the roles of ‘a’ and ‘b’ in the principle (K)) people are said to be in our epistemic situation if their qualitative evidence for applying the terms is the same as ours. I take this to imply that these people are phenomenologically (introspectively, subjectively) like us in all ways that might be relevant to their use of the terms.

1 Kripke (1980: 155, note 77). I address in this chapter only materialism at the level of types, not tokens. This includes the type-type identity thesis, but also a more general materialist position, as I will explain.

2 See ibid.: 151–2. A formulation that may be in some ways clearer is given in Kripke (1971: 162–3); reprinted in J. Kim and E. Sosa (eds.), Metaphysics (Oxford: Blackwell, 1999), 85. Subsequent page references to this article will be to the Kim and Sosa volume.
The term 'a' picks out the referent x essentially if x's being the referent of 'a' is determined by x's essential properties rather than by any contingent facts about x. In particular, x's being the referent of 'a' does not depend on any contingent facts about how x affects us. (Where x is a general property the idea is that x's being the referent of 'a' does not depend on any contingent facts about how instances of x, or instances of other properties in terms of which we can define 'a', affect us.) It follows that if 'a' picks out the referent x essentially then people in our epistemic situation, whose basis for applying 'a' is relevantly the same as ours, must use 'a' to pick out x, regardless of any contingent differences in how x affects them and us.

We can readily understand the rationale for (K). The term 'heat' is rigid, but it does not pick out its referent essentially. If some other phenomenon (e.g., some magnetic phenomenon) affected people's senses in the way heat affects ours, they could be in our epistemic situation and use 'heat' to refer to that other phenomenon. Heat is the referent of 'heat' not because of its essential nature, but because of contingent facts about how it affects our senses. This is why, although it is impossible for heat not to be molecular motion, people in our epistemic situation might be mistaken in asserting the sentence 'Heat is molecular motion.' The term 'pain,' on the other hand, picks out its referent essentially, without dependence on any contingent facts about pain. It's therefore impossible for people in our epistemic situation to use the term 'pain' to refer to something other than pain. The principle (K) implies, therefore, that if an identity sentence of the form 'Pain is such and such a physical property' were true, where the second term of the identity is filled in with a term that picks out some physical property essentially, then it would be impossible for people in our epistemic situation to be mistaken in asserting this sentence.

(Kripke typically talks about pain and heat as 'types of phenomena,' but I often find it easier to talk in terms of properties. It is to be understood that throughout this chapter properties are individuated coarse-grainedly (as in Kripke (1980: 138)): The property P is identical to the property Q if it is necessary that something has P iff it has Q. For terminological ease, allow me to ignore the difference between 'pain' or 'heat' and 'having pain' or 'having heat,' the latter more properly designating properties.)

As Kripke says (Kripke (1980: 143–4, 150–1)) the most obvious case of non-essential reference concerns a rigid designator whose reference is fixed by a contingent description of the referent. The case of 'heat' fits this model. But I think it is clear that Kripke will consider a typical proper name such as 'Aristotle' to pick out its referent non-essentially. Although in this case it may be impossible to specify the contingent facts about Aristotle that determines him to be the referent of 'Aristotle,' it is nonetheless obvious that we could have been in the same (qualitative) epistemic situation and picked out someone else as 'Aristotle' (if a different baby had been there at the initial baptism, etc.). In David Kaplan's work a term is said to have 'stable character' if its referent does not vary with the
context of its utterance. But Kaplan seems to consider only actual contexts, and therefore counts terms like ‘heat’ and ‘Aristotle’ as having stable character. For a term to pick out its referent essentially it must be context-free in the more radical sense of having a reference that does not vary with actual or possible changes in the context of utterance.³

Kripke’s main target is indeed the kind of materialist who asserts an identity sentence of the form just mentioned (‘Pain is such and such a physical property’), the kind of materialist, that is, who wants to identify mental properties (or types) with physical properties. Assuming that both terms of the identity sentence pick out their referents essentially, the principle (K) presents this materialist with two serious problems (or perhaps two formulations of what is at bottom a single problem). (Kripke focuses on the second one.) Since it follows from (K) that, if the materialist’s identity sentence is true, it is impossible for people in our epistemic situation to be mistaken in asserting this sentence, this is tantamount to saying that our (qualitative) evidence guarantees that in asserting the identity sentence we are asserting the truth. But typical materialists surely do not want to accord to their identity sentence the epistemic status of being immune from error. The typical materialist’s position is rather that the sentence affirming the identity of the mental and the physical, like the sentence affirming the identity of heat and molecular motion, is a plausible theoretical hypothesis, not something about which we couldn’t possibly have been mistaken, given our evidence.

Let me mention here a related point that I will try to clarify later. If it is impossible for people in our epistemic situation to be mistaken in asserting the materialist’s identity sentence, then the truth of this sentence might be knowable by us a priori. But no one is presumably claiming that the materialist’s identity sentence might be known a priori to be true.

But suppose materialists do claim (most implausibly, it would seem) that, given our epistemic situation, it follows necessarily that in asserting the sentence ‘Pain is such and such a physical property’ we are asserting the truth. The second problem then is that they have no way of explaining why it seems intuitively obvious that the physical property could occur without pain occurring, and vice versa. We have an analogous intuition in the case of heat and molecular motion, but in that case we can explain why the intuition is illusory by appealing to the point that ‘heat’ does not pick out its referent essentially. Our initial intuition that heat and molecular motion are only contingently connected is dispelled once we come to realize that what we really meant to say was that, given our epistemic situation, the referent

of ‘heat’ might not have been the referent of ‘molecular motion.’ But in the case of the materialist’s identity sentence, since both terms pick out their referents essentially, there seems no analogous approach to explaining away the intuition that pain and the physical property are only contingently connected. If pain and the physical property are identical then, given our epistemic situation, the terms of the identity sentence that pick them out essentially would have to have the same referent.

In some literature this second problem has been minimized by responding that perhaps the illusion of contingency between the mental and the physical can be explained as resulting from our being muddled about modal matters in certain ways. That response seems to me to miss the point. It would be like someone’s saying: ‘The solution to Zeno’s paradox is that Achilles really does overtake the tortoise, and the reason why Zeno’s argument seems to show otherwise is that we are muddled.’ That is not a solution to the paradox. To answer the second problem one has to show how things come out straight after reflection. That is what happens in the case of heat and molecular motion. After reflection we have the intact intuition that there is indeed an element of contingency in this case, but it’s located a bit differently from where we originally supposed. Once we realize this everything seems intuitively okay. (‘Oh, it’s all clear now. That phenomenon that in actuality produces the sensation didn’t have to, but it had to be molecular motion, since that’s what the phenomenon is.’) We cannot apparently achieve this result in the case of the materialist’s identity claim. If that is so, we are left here with an intuitive problem that we cannot answer. If considerations that favor materialism are deemed to trump the force of this problem, then we may indeed be required to acknowledge that some of our modal intuitions are incorrigibly misguided, but that is not to have answered Kripke’s argument.

Our modal ‘intuitions’ are the source of our a priori judgments about modal propositions. Reflection may cause some intuitions to be corrected, and in that way to be dispelled in their initial form. Kripke’s argument purports to show that our intuitions contrary to materialism cannot be corrected. If someone says, ‘All things considered I remain committed to materialism, even though I can’t make any intuitive sense of how a physical property can necessitate a mental property,’ then this person has not expressed any criticism of Kripke’s argument. One has not found some fault in an argument if one states that, though everything in the argument seems perfectly right, one has some reason not to trust one’s judgment. A criticism of Kripke’s argument must involve showing how it can make good intuitive sense to say what the materialist says.

Kripke’s talk of explaining (away) the illusion of contingency has, I think, misled some philosophers into thinking that a relevant critique of Kripke’s

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4 See George Bealer (2004).
argument is to come up with an explanation of why we lack the capacity to
get things intuitively right with respect to materialism. But our purported
incapacities do not constitute an alternative explanation of the sort Kripke is
talking about. By explaining the illusion he means explaining it in a way that
corrects it. What Kripke seeks is an account of the relationship between the
mental and the physical that at the end of the day seems intuitively intelligible.
Kripke is saying:

1. It seems initially obvious that C-fiber stimulation could occur without pain
occurring.
2. On more careful reflection this continues to seem completely obvious.
3. Therefore, we have a strong reason to believe that C-fiber stimulation could
occur without pain occurring.

He contrasts this with:

1'. It seems initially obvious that molecular motion could occur without heat
occurring.
2'. But on more careful reflection this is not really obvious at all.
3'. Therefore we have no reason to believe that molecular motion could occur
without heat occurring.

His discussion about ‘explaining the illusion’ is a matter of explaining why we
have 2 in one case and 2' in the other. Questions about trusting our (considered)
intuitions don’t enter at all.6

To repeat: If one is led by Kripke’s argument to say that materialism seems
after the most careful reflection to be intuitively absurd, then one has in the
relevant sense accepted the argument, whether or not one then goes on also to
accept materialism.

In the light of (K) the materialist’s identity sentence should be compared
with the following identity sentence: ‘The feeling of dizziness is a slight burning
sensation in the back of the tongue.’ Suppose that scientists discover that, for
deep neurological reasons, people feel dizzy when, and only when, they have
a slight burning sensation in the back of the tongue. The reason why people
generally don’t notice this outside of experimental setups is that the salience of
the dizziness drowns out the slight sensation. (Or perhaps they do notice it but,
for deep neurological reasons, immediately forget it.) I think almost everyone
will agree that even if there should turn out to be this correlation between the
dizziness and the burning sensation, it would be absurd to identify the two. The
principle (K) explains why this would be absurd in a way that it is not absurd
to identify heat and molecular motion. It is absurd because both ‘the feeling of

5 An especially clear critique of this sort is developed in Hill (1997).
6 See Bealer (2004) for more specific problems with the kind of critique of Kripke’s argument
that appeals to our incapacities.
dizziness' and 'a slight burning sensation in the back of the tongue' pick out referents by their essential natures, not by some contingent properties. Kripke's argument imposes on the materialists the burden of explaining why their identity sentence is any less absurd.

II

The most significant response to Kripke's argument in the literature is that the principle (K) does not really apply to the materialist's identity sentence. Kripke explains why 'pain' picks out its referent essentially, but he pays little attention to the second term of the identity sentence. In Kripke (1980) this sentence is represented as 'Pain is C-fiber stimulation.' In order for (K) to apply to this sentence, 'C-fiber stimulation' must pick out its referent essentially. But it seems extremely plausible to suppose that 'C-fiber stimulation' picks out its referent by the contingent causal relations in which C-fiber stimulation stands to various other things (e.g., certain neurological instruments). People in our epistemic situation might therefore have been mistaken in asserting the sentence 'Pain is C-fiber stimulation,' because, although pain is necessarily C-fiber stimulation, they might be using 'C-fiber stimulation' to refer to something other than C-fiber stimulation (= pain).

Kripke's attitude about this question comes out most clearly in his remarks in Kripke (1971: 85).

In fact, it would seem that both the terms, 'my pain' and 'my being in such and such a brain state' are, first of all, rigid designators... Second, the way we would think of picking them out—namely, the pain by its being an experience of a certain sort, and the brain state by its being the state of a certain material object, being of such and such molecular configuration—both of these pick out their objects essentially and not accidentally, that is, they pick them out by essential properties. Whenever the molecules are in this configuration, we do have such and such a brain state. Whenever you feel this, you do have a pain. So it seems that the identity theorist is in some trouble, for, since we have two rigid designators, the identity statement in question is necessary. Because they pick out their objects essentially, we cannot say the case where you seem to imagine the identity statement false is really an illusion like the illusion one gets in the case of heat and molecular motion...

It is clear that Kripke is not making any claim about the specific term 'C-fiber stimulation.' His point is rather that a materialist who says that pain is C-fiber

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7 I am assuming that even if 'being a tongue' does not pick out its referent essentially, 'a slight burning sensation in the back of the tongue' does.

8 This objection, in one form or another, appears in many places, perhaps first in Boyd (1980: 84–5).
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stimulation must be committed to the truth of an identity sentence of the form 'Pain is such and such a molecular configuration,' where the second term of the identity picks out its referent essentially. But any such sentence will be subject to the problems mentioned earlier: it will seem implausible to suppose that people in our epistemic situation could not possibly be mistaken in asserting the sentence, and there would be no way to explain away the intuition that there is only a contingent relation between pain and the mentioned molecular configuration.

My impression is that many commentators on Kripke's argument pay insufficient attention to the passage just cited (nor to the corresponding formulation in Kripke 1980). And this often goes together with their overestimating the importance of a certain formulation Kripke gives of the difference between 'heat' and 'pain.' He says that whereas there is a distinction between heat and the experiences by which we pick something out as being heat, there is no distinction between pain and the experience by which we pick something out as being pain; the experience by which we pick something out as being pain is pain itself. I think some commentators have taken this to imply that a necessary condition for a term 'a' to pick out a certain kind of phenomenon essentially is that there is no distinction to be drawn between the phenomenon a and the experience by which we pick something out as being a. It may seem to follow immediately that no term of the form 'such and such a molecular configuration' can pick out its referent essentially, since there will certainly be a distinction to be drawn between the configuration and the perceptual experiences by which we pick it out. The same point would hold for any physicalist description of a property.

Kripke's position must be understood differently. His famous formulation of the difference between 'pain' and 'heat' in terms of there being no distinction between pain and the experience of pain may perhaps imply that a sufficient condition for a term 'a' to pick out a certain kind of phenomenon essentially is that there is no distinction to be drawn between the phenomenon a and the experience by which we pick something out as being a. But he certainly cannot mean that this is a necessary condition, for his argument would then obviously not get off the ground. As the quoted passage indicates, Kripke is in fact well aware that his argument requires him to say that certain physicalist descriptions pick out their referents essentially. It is true that Kripke pays a lot more attention to explaining why 'pain' picks out its referent essentially than to explaining why 'such and such a molecular configuration' does. My guess is that it never occurred to him that materialists might want to say that they cannot grasp the essential nature of the physical phenomena on which they pin all their hopes. Let me elaborate on this point.

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9 In Kripke (1980: 149), Kripke says, '[I]f “C-fiber stimulation” is not a rigid designator, simply replace it by one which is... He also means that if it does not pick out its referent essentially, replace it by one that does.
C-fiber stimulation, as Kripke says, is a certain molecular configuration. This means that it consists of certain complex spatiotemporal and causal relations between molecules. Let's suppose for the moment that the term '(being a) molecule' picks out its referent essentially. Then it would seem that we could in principle construct a term that picks out C-fiber stimulation essentially if the relevant spatiotemporal and causal relations can be picked out essentially. Let's focus on a particular spatial relation: one thing being enclosed within another. Does our term '(being) enclosed' pick out this relation essentially? The intuitive test is this: Can we imagine people in our epistemic situation—people who are phenomenologically just like us—who say 'One thing is enclosed within another' but who are not thereby referring to the relation of being enclosed? That seems intuitively hard to imagine.

If we say that '(being) enclosed' does not pick out its referent essentially, then we are saying that it picks out the relation of being enclosed by virtue of certain contingent facts about that relation, most obviously, contingent facts about how the presence of things so related typically affect our senses. If we say this about '(being) enclosed' then we will presumably say the same thing about all of our most fundamental physicalist vocabulary. None of this vocabulary serves to pick things out by their essential natures. Bertrand Russell seemed to hold such a view. Russell said: 'The physical world is only known as regards certain abstract features of its space-time structure—features which, because of their abstractness, do not suffice to show whether the physical world is or is not different in intrinsic character from the world of mind. Since we don't know what the intrinsic or essential natures are of the basic physical properties we refer to, there is nothing to prevent it from turning out that certain complex properties built up out of the basic physical properties are identical with mental properties.

Glover Maxwell dubbed Russell's position 'structural realism,' but it may be questioned whether the position deserves to be called 'realism' at all. It may strike one as having more of the feeling of a kind of Kantian idealism. If we cannot pick out a property essentially, but pick it out only by how it contingently affects us, then in an important sense that property is something-we-know-not-what that affects us in a certain way. We are left at bottom with no more than a kind of Ramified description of physical reality: 'There are things \( x, y, z, \ldots \), and properties \( P_1, P_2, P_3, \ldots \), and relations \( R_1, R_2, R_3, \ldots \), such that \( x \) has \( P_2 \), and \( z \) has \( P_1 \), and \( x \) stands in \( R_3 \) to \( y \), etc., and these facts relate causally to our experience in such and such ways.' Insofar as we have no idea what these \( P \text{S} \) and \( R \text{S} \) amount to, this description may seem to differ little from a Kantian.

formulation in which physical reality is something \( X \) that somehow produces our experience.\(^{12}\)

This conclusion may of course be resisted. We are not simply saying that there is this unknowable \( X \). We are saying rather that there are a multiplicity of properties and relations and a multiplicity of things making up a certain specifiable abstract structure. I don’t want to go down the road of Putnam’s paradox. I’ll assume that the required kind of Ramsified description can somehow escape that problem. Perhaps the escape is by way of taking ‘causality’ as picking something out essentially and not being treated as a relation-we-know-not-what. Or perhaps the second order property of being natural is not Ramsified, and it is assumed that the \( Ps \) and \( Rs \) are natural. Even if that paradox can be escaped, so that the ‘structural’ description is not demonstrably vacuous, it seems intuitively too abstract and rarified to qualify as anything we would normally want to call a description of physical reality.

Let me mention a more specific problem, though I’m not sure how much weight to place on it. It seems plausible to say that if our understanding of a term ‘\( a \)’ depends on our understanding of a term ‘\( b \)’, then ‘\( a \)’ picks out its referent essentially only if ‘\( b \)’ does. Now according to an old doctrine going back to Aristotle our understanding of the individuation of physical objects depends on our understanding of objects being located in different places. This implies that our understanding of the term ‘(being a) different physical object than’ depends on our understanding of the term ‘(being) located at.’ Since structural realists say that the latter term does not pick out its referent essentially, neither can the former term. But then the abstract structure of the physical world itself cannot be picked out essentially, for the components of that structure are supposed to be different physical objects (‘\( x \) has \( P1 \), and \( y \) has \( P2 \), and \( x \) is a different object than \( y \), etc.’). If the abstract structure itself is something-we-know-not-what then this is surely no different from the Kantian \( X \) that produces our experience.

Structural realists may reject the claim that our understanding of the individuation of physical objects depends on our understanding of spatial location. Their position may then be coherent but, I think, very hard to believe. The intuitive idea, the idea that is surely implicit in the attitude of both scientists and ordinary people, is that such fundamental physical properties as being enclosed in something do not have for us the status of properties-we-know-not-what that affect us in certain ways, but that we grasp the essential natures of these properties, and through them have some understanding of what physical reality

\(^{12}\) A version of structural realism is presented in Carnap (1966: chapter 26); Carnap apparently takes the position to be a form of ‘instrumentalism’ (p. 255), which is generally thought of as a kind of anti-realism. A view that seems closely related to structural realism is sketched in Putnam (1981: 60–1); in Putnam this position is taken to be a form of Kantian idealism.
is like. If structural realism is the only answer to Kripke's argument then the argument shows that materialism requires an extremely counterintuitive view of physical reality.

III

It might be suggested, however, that the answer to Kripke's argument does not require anything as extreme as structural realism. Perhaps many fundamental physical properties can be picked out essentially but some cannot. Kripke implies that C-fiber stimulation can be picked out essentially as a certain kind of spatiotemporal and causal configuration of molecules. For this to be the case the property of being a molecule must be picked out essentially. Might one hold that this property cannot be picked out essentially, though various other fundamental physical properties can? If that were so then C-fiber stimulation could not be picked out essentially as a certain molecular configuration. (And then, to recapitulate the main issue, the principle (K) would not apply to the materialist's identity sentence, and Kripke's argument would fail.)

A molecule, one might suppose, is simply a bit of matter made up of bits of matter having certain geometric properties and standing to each other in various spatiotemporal and causal relations. If we are not structural realists why can't we pick out these properties and relations essentially and thereby pick out the property of being a molecule essentially? One potential problem has been raised by George Bealer.\(^{13}\) It seems plausible to suppose that for something to be a molecule its size must fall within a certain range. We pick out a particular size as 'such and such (milli-)meters,' and we pick out a meter as, say, the size of a particular stick. Since we can't pick out the stick essentially (we must pick it out by how it contingently relates perceptually and spatially to us), we cannot pick out a particular size essentially. We therefore cannot pick out the property of being a molecule essentially, and therefore cannot pick out C-fiber stimulation essentially.

I think Bealer's point is that particular sizes cannot possibly be picked out essentially. If it were just that we can't pick them out essentially but other possible people could, it's not clear that this would adversely affect Kripke's argument. If Bealer is right the property of being a certain size is ineffable in a certain sense. (I think this a good ordinary use of 'ineffable,' but readers who disagree should simply take the previous sentence as stipulating that 'ineffable' in this discussion is short for 'something that can't be picked out essentially.') And it can of course be suggested that other physical properties may be ineffable in this sense. Perhaps there are different kinds of matter, where each specific kind cannot possibly be picked out essentially. Pain is a certain kind of molecular

\(^{13}\) Bealer (1994: 208).
configuration only because our molecules are made up of the special kind of matter we happen to encounter. Our epistemic replicas in a different possible situation might encounter a different kind of matter, and they would therefore be mistaken in asserting any sentence of the form ‘Pain is such and such a molecular configuration.’

Whether it is really plausible to suppose that there are ineffable properties that figure in science is an interesting question that I will not go into.\(^\text{14}\) It seems to me that the problem Bealer is raising can be circumvented by presenting a slightly different version of Kripke’s basic argument. Doing so will at the same time respond to another problem that comes out of Bealer’s discussion. This is that many current materialists do not endorse the kind of identity thesis that Kripke criticizes. The more popular current materialist view is formulated in terms of supervenience rather than identity. The current materialist might not claim that pain is identical with any physical property, but may claim instead that there is a physical property such that necessarily anything that has it has pain. Kripke’s argument in the form that I have so far presented does not address that kind of supervenience claim.

Here is something Kripke says at the end of Kripke (1980: 155).

Materialism, I think, must hold that a physical description of the world is a complete description of it, that any mental facts are ‘ontologically dependent’ on physical facts in the straightforward sense of following from them by necessity. No identity theorist seems to me to have made a convincing argument against the intuitive view that this is not the case.

For Kripke too the basic materialist target of his argument is the supervenience claim, the claim that physical facts necessarily entail mental facts. The identity theory was primarily addressed because it seemed to be the most promising development of the supervenience claim. Let us now put the identity theory aside and recast Kripke’s argument as directly targeting the supervenience claim. We will see that by so doing we also put aside objections about ineffable properties.

The target now is this (still sticking to the example of pain):

\[(M)\] There is a physical property such that necessarily if something has that property it has pain.

Evidently the principle \((K)\) cannot apply directly to \((M)\). Let us generalize \((K)\) as follows:

\[\text{(K*) If a sentence contains only terms that pick out their referents essentially then, if the sentence expresses a necessary truth, it is impossible for people in our epistemic situation to be mistaken in asserting the sentence.}\]

\(^{14}\) If being the same size as that stick counts as a (natural) property then it may be trivial that there are ineffable properties, but it’s not clear that such properties figure in science.
In order to allow \( (K^*) \) to apply to sentences containing general terms, let me stipulate that if the singular term ‘the property of being \( F \)’ picks out a certain property essentially, the general term ‘is \( F \)’ will also be said to pick out that property essentially. The rationale for \( (K^*) \) is no different than that for \( (K) \). Suppose that \( S \) is a sentence that expresses a necessary truth and that all of the terms in \( S \) pick out their referents essentially. And let \( w \) be a possible world in which people in our epistemic situation assert \( S \). Since \( S \) contains only terms that pick out their referents essentially, these terms as uttered in the context of \( w \) will pick out the same properties that they pick out in our context. It follows that the truth conditions of \( S \) as uttered in the context of \( w \) is the same as the truth conditions of \( S \) as uttered in our context.\(^{15}\) As uttered in our context \( S \) expresses a necessary truth and hence is true with respect to \( w \). Therefore as uttered in \( w \), \( S \) is true with respect to \( w \). This means that the people in \( w \) are not mistaken in asserting \( S \).

Even if we believe in ineffable properties, we should agree, I think, that the sentence \( (M) \) contains only terms that pick out their referents essentially. The only term in \( (M) \) that might be questioned is ‘physical property.’ But if we are not extreme structural realists, why would we not regard that term as picking out essentially the (second order) property of being a physical property? Suppose we stipulate that a ‘physical property’ is a property that can be constructed out of (natural) properties and relations falling under the following list: (being) matter; the part–whole relation; the causal relation; various spatiotemporal properties and relations; and perhaps various additional ineffable properties and relations. If someone thinks that something is missing from this list (e.g., that ‘force’ or ‘energy’ pick out properties that are not ineffable), or that some of the items mentioned (e.g., (being) matter) are ineffable, then let him adjust the list accordingly. These possible refinements aside, my point is that we will wind up with a definition of ‘physical property’ acceptable to the materialist in which definition all of the terms (if we are not extreme structural realists) will be viewed as picking out their referents essentially. It should then be agreed that \( (M) \) contains only terms that pick out their referents essentially. Indeed, if one wishes one can replace \( (M) \) with the sentence: ‘There is a property \( P \) such that necessarily if something has \( P \) it has pain, and \( P \) can be constructed out of: (being) matter; the part–whole relation; the causal relation; various spatiotemporal properties and relations; and perhaps various additional ineffable properties and relations.’\(^{16}\) Unless we are extreme

\(^{15}\) I assume that logical constants do not alter their meanings in any relevant sense when they are moved from our context to the context of \( w \). One can put this point, if one wishes, in terms of essential reference: ‘negation’ (‘conjunction,’ ‘existence’) pick out negation (conjunction, existence) essentially.

\(^{16}\) Perhaps we should add, 'where these ineffable properties and relations do not themselves allow for the construction of a property \( Q \) such that necessarily if something has \( Q \) it has pain.' Materialism in any familiar form implies that, for pain to supervene on \( P \), \( P \) requires for its construction some of the mentioned ingredients other than simply the 'additional ineffable properties and relations.' Let
structural realists we should regard this sentence, and therefore the sentence (M),
as containing only terms that pick out their referents essentially.

If that is right, then \((K^*)\) will apply to (M) if (M) is necessary. Assuming
that if a (physical) property exists, it necessarily exists (as a physical property), it
immediately follows that (M) is necessary if it is true. If one wants to do without
that assumption, simply replace (M) by a sentence that results from appending
the words 'it is possible that' at the beginning of (M), and this will give us
a sentence held by materialists, but not by their opponents, that is certainly
necessary if true. I will stick to (M) as it stands and assume that it is necessary
if true.

The materialist is then committed to holding that (M) is a necessary truth. It
follows from \((K^*)\) that it is impossible for people in our epistemic situation to be
mistaken in asserting the sentence (M). And that generates the same problems
for the materialist that were indicated earlier with respect to the identity theory.
First, the materialist will have to say that it follows necessarily from our qualitative
evidence that in asserting sentence (M) we are asserting the truth, which seems
extremely implausible. Second, the materialist will have no way of explaining
away the intuition that (M) is not a necessary truth, since we cannot straighten
this intuition out by saying that what we really meant was that our epistemic
replicas might be mistaken in asserting (M).\(^{17}\)

Kripke's discussion assumes from beginning to end that there are strong
intuitions that run counter to materialism. It seems on the face of it completely
obvious that, for any physical property and any mental property, there could
possibly be entities having that physical property without having that mental
property. I myself think that philosophers who simply do not acknowledge
the force of such intuitions are beyond the pale of serious discussion about the
mind–body problem.\(^{18}\) But even strong intuitions might be rejected at the end of

\(^{17}\) Bealer (1994) uncovers a surprising asymmetry between (1) 'Necessarily, if something has pain
it has C-fiber stimulation,' and (2) 'Necessarily, if something has C-fiber stimulation it has pain,'
an asymmetry that leads him to conclude that the Kripkean argument works only against (1) but
not against (2) (pp. 201–2, 207–8). We can find a term 'a' that picks out its referent essentially
such that 'Necessarily, if something has C-fiber stimulation it has a' is true, while 'Necessarily,
if something has pain it has a' is counter-intuitive. (Bealer's example of 'a' is 'the property of
containing parts that have 74,985,263 or more functionally related nonconscious parts.') Since
Kripke's argument works against the latter sentence, which is entailed by (1), we thereby refuse
(1). On the other hand, because of ineffable properties that are constitutive of C-fiber stimulation,
we cannot find a term 'b' that picks out its referent essentially such that 'Necessarily, if something
has b it has C-fiber stimulation' is true, while 'Necessarily, if something has b it has pain' is
counter-intuitive. (2) therefore, does not entail any sentence against which Kripke's argument can
work. My answer to this is to go up one logical level: (2) entails (M), against which Kripke's
argument does work.

\(^{18}\) Nozick (1981: 458), suggests that perhaps such philosophers lack subjective experience.
the day. This can happen for two different kinds of reasons. The initial intuitions might be revealed as confused and capable of being corrected. Kripke's argument shows that this apparently cannot happen for the anti-materialist intuitions. Of the intuitions, though they remain incorrigibly strong, might be trumped by competing considerations that are even stronger. As to whether this may happen in the case of materialism, Kripke leaves that open.

IV

In this final section I want to briefly consider a number of further issues coming out of Kripke's argument.

A. Epistemic Situations and a Priori Knowledge

To say that it's impossible for people in our epistemic situation to be mistaken in asserting a sentence is not, of course, to say that the sentence expresses a necessary truth. Assuming that the reference of the word 'heat' is rigidly fixed by the description 'the phenomenon that normally causes the sensation of heat,' then it's impossible for people in our epistemic situation to be mistaken in asserting the sentence 'Heat is the phenomenon (if there is one) that normally produces the sensation of heat.' The sentence, however, expresses a contingency, since something other than heat might have normally caused the sensation. This sentence is one of Kripke's examples of a priori contingency.

One might be tempted to suggest that to know a priori that a sentence is true is just to know that it is impossible for people in our epistemic situation to be mistaken in asserting the sentence, but that cannot be quite right. Since some of us have headaches accompanied by dizziness, it is impossible for people in our (actual) epistemic situation to be mistaken in asserting the sentence 'Some people have headaches accompanied by dizziness,' but one does not consider our knowledge of that truth to be a priori. The intuitive idea is that a priori knowledge must not describe people's contingent mental states, but must instead reflect our understanding of what follows from our concepts or rules of language. If it's impossible for people in our epistemic situation to be mistaken in asserting a certain sentence, and the sentence does not describe people's contingent mental states, then the sentence might be called a 'conceptual truth.' In these cases, it is the cognitive or conceptual aspect of our epistemic situation that makes it impossible for people in our epistemic situation to be mistaken in asserting the sentence. A priori knowledge, it may be suggested, is knowledge that a sentence is conceptually true. (It goes without saying that none of this is clear-cut.)

A simple thought now is that any conceptual truth is knowable a priori. That idea is threatened, however, by such examples as Goldbach's conjecture. If that conjecture is true then the sentence expressing it is a conceptual truth
(it's impossible for people in our epistemic situation to be mistaken in asserting the sentence, and the sentence does not describe people's contingent mental states), but it's not clear that it is possible even in principle to know a priori that the sentence is true. A more cautious formulation of a connection between conceptual truth and a priori knowledge might be this:

(APR) If a sentence is conceptually true then it is impossible to rule out a priori the possibility of knowing a priori that it is true.

Even if the truth of Goldbach's conjecture is not knowable a priori, it doesn't seem that we can know a priori that this is the case.

If (APR) is accepted we can recast Kripke's argument in a form that seems especially powerful. It follows from (K*) that (M), if true, is a conceptual truth. It then follows from (APR) that we cannot a priori rule out the possibility that the truth of (M) is knowable a priori. But is seems a priori evident that the truth of (M) is not knowable a priori. It follows that (M) is false.\(^{19}\)

\[\text{B. Jackson's Knowledge Argument}\]

In Frank Jackson's famous example the scientist Mary is raised in a black and white room, and learns all of the physical facts about color. When she steps out of the room and has her first experience of chromatic color it seems clear that she will learn something new. She will learn what the colors look like, which she did not previously know. This shows that there are mental facts over and above the physical facts accepted by materialists.\(^{20}\)

I find Jackson's argument (as stated) hard to understand. Why would materialists have a problem in saying that Mary of course learns something when she leaves her room, but what she learns follows necessarily from what she previously knew? Materialists have no special views about what constitutes a 'new (or different) fact.' They can plausibly maintain that, since Mary learns something that follows necessarily from what she already knew, what she learns is in one sense a 'new fact' but in another sense not a 'new fact.' There seem to be many examples of that sort. Suppose that Sarah counts eighteen rows and eighteen columns of coins on the table. Since she doesn't know how to multiply those numbers, and she wants to know how many coins there are on the table, she counts them, and finds there are three hundred and twenty-four. She has thereby learnt something, but what she learnt follows necessarily from what she already knew. In a sense she has learnt a 'new fact,' but in a sense she hasn't. Why would it be a problem for materialists to say that Mary is like Sarah?

\(^{19}\) This argument is related to Bealer's (1994: 204–7) 'reformulated certainty argument,' and to the version of Kripke's argument that I give in Hirsch (1986).

\(^{20}\) Jackson (1982).
Jackson indicates his awareness of this question in his later paper ‘What Mary Didn’t Know.’ He says that Mary’s lack of knowledge before she leaves her room can’t be explained as merely being a matter of her ‘not being sufficiently logically alert to follow the consequences through. If Mary’s lack of knowledge were at all like this, there would be no threat to physicalism in it.’ It seems clear, as Jackson says, that Mary could not even in principle have derived what she subsequently finds out just by reasoning from what she previously knew. That does indeed reveal a relevant difference between Mary and Sarah. But Jackson seems to be ignoring the phenomenon of a posteriori necessity. Suppose that Hannah, who has no idea that heat is molecular motion, perceives that there is heat in a certain object. She is then told that there is molecular motion in the object. (She is not told that heat is molecular motion or that the molecular motion causes the sensation of heat; she is just told that there is molecular motion in the object.) She has learnt something that follows a posteriori necessarily from what she previously knew. The obvious position for the materialist seems to be that Mary is like Hannah. Jackson, as far as I can tell, has not said anything (in the cited papers) to indicate why this would be a problem for the materialist.

The only way I am able to understand Jackson’s argument is that it is implicitly the version of Kripke’s argument I sketched in the last sub-section. Jackson seems to be presupposing that: (1) Mary expresses her initial physicalist knowledge in terms that pick out their referents essentially; (2) Mary expresses her subsequent mentalist knowledge in terms that pick out their referents essentially; (3) if her physicalist knowledge necessarily entails her mentalist knowledge, as is required by materialism, it follows from \( (K^*) \) that this is a conceptual truth; (4) it then follows from (APR) that it can’t be ruled out a priori that Mary could have a priori derived her subsequent mentalist knowledge from her previous physicalist knowledge; but (5) it is a priori evident that no such derivation is possible.

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21 Jackson (1986: 5).

22 There are of course familiar problems about the opacity of intentional contexts that apply to Mary, and also the question about whether to say that Mary winds up knowing a ‘new (or different) fact.’ But those problems apply as well to the examples of Sarah and Hannah, and pose no special threat to materialism. Essentially this criticism of Jackson’s argument is given in a number of places. See, e.g., Horgan (1984); and Tye (1986). Lewis, on the other hand, responds to Jackson’s argument by suggesting that when Mary leaves her room and discovers what it is like to experience color, she only acquires a new ‘ability.’ See Lewis (1988). The ‘ability’ view may be found by some materialists to be plausible in its own right, but I don’t see why Lewis thinks that Jackson’s argument pressures materialists into saying anything more than that Mary is like Hannah.

23 Condition (2) is needed. This is so even though, as Chalmers shows (in his two-dimensionalist terminology), if \( P \) is a physicalist sentence all of whose terms pick out their referents essentially, and materialists claim that any true sentence \( X \) is a necessary consequence of \( P \), it follows that it is impossible for people in our epistemic situation to be mistaken in asserting the conditional sentence ‘If \( P \) then \( X \),’ regardless of whether or not the terms in \( X \) pick out their referents essentially.
C. Chalmers’ Two Dimensionalist Argument

Another famous recent anti-materialist argument is David Chalmers’.\textsuperscript{24} I do not, however, see any substantive difference between Chalmers’ argument and Kripke’s. Certainly Chalmers’ discussion contains a number of significant and novel insights. And he redirects Kripke’s argument away from the identity thesis, focusing on the central materialist claim that the mental supervenes on the physical. I have done the same in this chapter. My point is that his core argument seems to me to be essentially Kripke’s argument in different words.

I am not addressing here the general topic of two-dimensional semantics, which ranges over a wide variety of issues in semantic high theory. Whereas Chalmers suggests that Kripke implicitly endorses his brand of two-dimensionalism, Soames maintains that there are actually three different kinds of two-dimensionalism, with Kripke holding the (‘benign’) kind that is correct, and Chalmers holding one of the two other kinds that are incorrect.\textsuperscript{25} Those subtleties, however, have no significant bearing on Chalmers’ argument against materialism. My narrow focus here is on only those aspects of Chalmers’ two-dimensionalist framework that are directly relevant to his argument.

Let me give a brief sketch of that framework. He applies it to both terms and sentences, but it is easier to start with the latter. It will be convenient to think of a proposition as a set of possible worlds, as in Lewis. A sentence can be associated with two sets of possible worlds. A sentence’s primary proposition is the set of worlds in which the inhabitants could correctly assert the sentence as being true (with respect to that world). If the reference of ‘heat’ is rigidly fixed by the description ‘the property that normally produces the sensation of heat,’ then the primary proposition of the sentence ‘Some things have heat’ is the set of worlds in which some things have a property that (in that world) normally produces the relevant sensation. A sentence’s primary proposition cannot vary from one context of utterance to another. Its secondary proposition can.\textsuperscript{26}

(Chalmers 1996: 132–3; I follow the explanation of Chalmers’ argument in Scott Soames, Reference and Description (Princeton, NJ: Princeton University Press, 2005), pp. 246–7). But Mary’s situation is different. The physicalist sentence \( P \) that she initially knows to be true is not supposed to necessarily entail every truth, but just truths ‘about color.’ Whatever exactly is meant by a ‘truth about color,’ it seems clear that we can find a sentence \( X \) about color such that in our context Mary’s known sentence \( P \) necessarily entails \( X \), but the entailment need not hold for people in our epistemic situation in other possible contexts. For example, let \( X \) be the sentence, ‘Objects generally look blue when they have \( \text{dthat} \) (the color that is either the color blue in a world containing an even number of molecules or the color red in a world not containing an even number of molecules).’ Supposing that our world contains an even number of molecules, so that in our context the \( \text{dthat} \) expression refers rigidly to the color blue, the sentence \( X \) ought to be a necessary consequence of Mary’s known \( P \), but there is surely no requirement that Mary be able to derive \( X \) a priori from what she knows about color.

\textsuperscript{24} Chalmers (1996). See also his ‘Consciousness and its Place In Nature,’ in D. Chalmers (2002).

\textsuperscript{25} Soames (2005).
sentence’s secondary proposition relative to a given context of utterance is the set of worlds with respect to which it holds true. The secondary proposition of ‘Some things have heat,’ as uttered in our context, is the set of worlds in which some things have molecular motion. Those worlds, and only those, are worlds in which some things have heat, whether or not some things in the world have a property that normally produces the sensation of heat. A terminological oddity that takes some getting used to is that the proposition that would normally be said to be expressed by a sentence is the secondary proposition, not the primary one (as Chalmers notes on p. 64).

I abstract here from many complications: How does the framework deal with cases involving indexicals and demonstratives in which the context of utterance must be more finely grained than whole worlds? Must the worlds in the primary proposition contain people? Must these people be in our epistemic situation? I ignore these complications, of which Chalmers is well aware.

There is clearly a close connection between Chalmers’ account of primary and secondary propositions and Kripke’s explanation of why some necessary truths may initially appear to be contingent. Here is how Kripke puts it at one point (Kripke 1980: 142), ‘In the case of some necessary a posteriori truths... we can say that under appropriate qualitatively identical evidential situations, an appropriate corresponding qualitative statement might have been false.’ What Kripke is here calling the qualitative statement corresponding to a sentence is a statement that expresses what Chalmers calls the sentence’s primary proposition. Chalmers explains the illusion of contingency as applying to cases in which a sentence expresses a necessary truth (its secondary proposition is necessary) while its primary proposition is contingent. That is very close to Kripke’s explanation.

The basic idea on both formulations is that, although the sentence in our context expresses a necessary truth, people who in some (internalist) sense mean the same thing we mean by the sentence might in their context assert it falsely.

In terms of Chalmers’ framework the central points of Kripke’s argument against materialism can be reformulated. If a sentence contains only terms that pick out their referents essentially, there is no distinction between its primary and secondary proposition. In these cases the worlds with respect to which the sentence as uttered in a given context holds true are just the worlds in which the sentence can be truthfully asserted. Chalmers’ distinction between the primary and secondary intensions of terms is more complicated. For my immediate purposes the only point that needs to be understood is that if, and only if, a term picks out its referent essentially, there is no distinction between its primary and secondary intension. Therefore, the primary/secondary distinction vanishes at the level of a sentence if it vanishes at the level of the terms in the sentence. Corresponding to Kripke’s assumption that much of our fundamental physicalist and mentalist vocabulary picks out their referents essentially is Chalmers’ assumption that with respect to this vocabulary (and the sentences built up from them) the primary/secondary distinction vanishes.
The central claim in Chalmers’ development of his argument is a principle that might provisionally be put as follows:

(C) If a sentence expresses a necessary truth but its truth is not knowable a priori, then the sentence’s primary proposition is contingent and its secondary proposition is necessary.

(C) immediately implies that the primary/secondary distinction must apply to any a posteriori necessary sentence. In Kripkean terminology the implication of (C) is that a sentence cannot be a posteriori necessary if all its terms pick out their referents essentially. It is perplexing that in repeatedly seeming to appeal to (C) throughout his discussion Chalmers ignores the problem posed by such examples as Goldbach’s conjecture. When he finally addresses that problem (p. 139) he evidently retreats from (C) to a weaker principle, but it’s not clear to me what exactly that principle is. Probably it is something like this:

(C') If a sentence expresses a necessary truth but initially seems intuitively not to express a necessary truth, the reason for this modal confusion is that the sentence’s primary proposition is contingent and its secondary proposition is necessary.

(C') implies that if the primary/secondary distinction does not apply to a sentence, and the sentence seems intuitively not to express a necessary truth, then there is no modal confusion, and the sentence can be presumed not to express a necessary truth. That is essentially the import of (K*) when we add Kripke’s explanation that the only reason why we may initially have an illusory intuition that a sentence does not express a necessary truth is that it is possible for people in our epistemic situation to be mistaken in asserting the sentence. (Another possibility for Chalmers is to emend the principle (C) in a way that brings it close to the conjunction of (K*) and (APR): If a sentence expresses a necessary truth but its truth is knowable a priori to be not knowable a priori, then the sentence’s primary proposition is contingent and its secondary proposition is necessary.)

Assuming that (C') is the principle Chalmers ultimately appeals to, his argument proceeds from (C') in essentially the same way that Kripke’s argument

26 It appears that in Chalmers (2002: sections 5–6), Chalmers again ignores examples like Goldbach’s conjecture and is thereby led to a formulation equivalent to the faulty (C). I think that an underlying problem is that Chalmers seems often to slip into conflating the following two senses of ‘It is conceivable that $p$: (1) ‘It cannot be ruled out a priori that $p$’ and (2) ‘The primary proposition associated with the sentence ‘$p$’ is possibly true’ (alternatively, ‘It is possible for people in our epistemic situation to assert the sentence ‘$p$’ truthfully’).

The same conflation seems to figure in a criticism of Kripke given in Brian Loar (2002), ‘Phenomenal States,’ in Chalmers (2002: 295–310). Loar states that Kripke’s argument against materialism depends on the principle: ‘A statement of property identity that links conceptually independent concepts is true only if at least one concept picks out the property it refers to by connoting a contingent property of that property,’ (p. 297) It is made clear in Loar’s discussion that he intends this principle to mean that if $a$ and $b$ pick out their referents essentially then, if the identity sentence ‘$a$ is $b$’ is true, its truth is knowable a priori. But Kripke does not hold this principle, and his argument does not depend on it.
on my formulation proceeds from (K*). He takes the materialist to hold that there is in principle a sentence \( P \) couched in the fundamental physicalist vocabulary such that for any sentence \( M \) couched in the fundamental mentalist vocabulary the conditional sentence 'If \( P \) then \( M \)' expresses a necessary truth. Since the primary/secondary distinction cannot apply to this sentence (in the Kripkean formulation, every term in the sentence picks out its referent essentially) it follows from (C') (in the Kripkean formulation, it follows from (K*)) that, if the sentence seems intuitively not to express a necessary truth, it does not express a necessary truth. The sentence does seem intuitively not to express a necessary truth. So it does not express a necessary truth, and materialism is wrong.\(^{27}\)

Is there any virtue to recasting Kripke's argument in Chalmers' terminology? Of course if one is already invested in the two-dimensional framework developed by Chalmers, one will naturally be interested in formulating an argument within that framework. But it is, I think, at bottom just Kripke's argument.

There is one remark Chalmers makes in trying to distinguish his argument from Kripke's that puzzles me. He says: '[Kripke's] essentialist metaphysics is inessential, except insofar as the feel of pain is essential to pain as a type—but that is just a fact about what 'pain' means.' I think, on the contrary, that every move in Chalmers' argument depends on essentialism. Forget about the 'feel of pain': the argument requires it to be agreed (contrary, it seems, to David Lewis) that pain itself is something such that nothing other than it could have been pain. And that heat is something such that something other than it might have produced the relevant sensation. If these are facts about what the words 'pain' and 'heat' mean, then Kripke's essentialism is part of a theory of meaning. The distinction, I think, is moot.

D. Meanings in the Head

When we use a term to pick out a property essentially we do so without dependence on contingent facts about how (instances of) the property (or properties in terms of which we can define it) affect our experience. We use a term to pick out essentially a certain kind of configuration of matter (molecules), in Kripke's example. This property is picked out simply by virtue of what is going on in our minds. That is why if people are phenomenologically indistinguishable from us they must be thinking of that same kind of configuration of matter, regardless of what contingent differences there may be in how configurations of

\(^{27}\) Chalmers addresses structural realism (p. 135), but he seems to ignore the threat to his position posed by Bealer's suggestion that certain physical properties (e.g., specific sizes) cannot be picked out essentially, which implies that the primary/secondary distinction must apply to any term that picks out such a property. My response to Bealer's question, recast in Chalmers' terminology, is that the primary/secondary distinction does not apply to the sentence (M).
matter affect them and us. In the case of picking properties out essentially what we mean is in a sense ‘in our heads’.\textsuperscript{28}

It is ironic that some of the most hard-nosed causal theorists of reference take Kripke as their inspiration. It is of course true that Kripke’s analyses inject a causal element into the semantics of many ordinary words, including both proper names and certain general words. But it seems clear that a non-causal semantic model of some sort is at work in Kripke’s idea that our mentalist vocabulary and some of our fundamental physicalist vocabulary pick out their referents essentially. Even in the case of proper names and certain general words whose references are said by Kripke to be determined by a causal chain going back to an initial baptism the baptism itself will involve picking out some properties essentially, e.g., as ‘the kind of stuff over there that looks and behaves like such-and-such,’ where ‘stuff’ and ‘looks and behaves like such-and-such’ pick out their referents essentially. Kripke seems often to be deliberately vague and non-commitittal about which words he would count as picking out their referents essentially (see especially p. 128, note 66), and it may be that in the first two lectures of Kripke (1980) he is not concerned with the specific commitments in this regard required for his anti-materialist argument to go through at the end of the third lecture. Some of his remarks may suggest that many traditional words for primary qualities pick out their referents essentially, whereas many words for secondary qualities do not (see Kripke 1980: 139–40 and note 71). On the other hand, the fact that he often has recourse to talking about ‘such-and-such’ properties may suggest that he thinks it is not easy to find words in English that unambiguously function to pick out their referents essentially. Despite these complications it seems clear to me that Kripke’s overall semantic picture contains a central non-causal component.

If what is going on in our minds determines that we are thinking about a certain configuration of matter, this should not be understood in the manner of Locke as implying that an idea in our minds is ‘similar to’ a configuration of matter. Berkeley seemed to get it right when he insisted that only an idea can be similar to an idea. Nor need we be committed to a full dose of the ‘magic’ of Brentano’s thesis of irreducible intentionality. That thesis seems to imply that when we pick out a property essentially there is in each mind a mental act or episode that independently of all other events in that or other minds picks out the property. I tend to doubt that this is Kripke’s view. He always talks about people in our epistemic situation. The picture is perhaps of a community of people each of whose members is the phenomenological replica of one of us. The causal interactions between these minds, and within each mind, may be a

\textsuperscript{28} I assume that if people are phenomenologically just like us then they are in Kripke’s sense in our (qualitative) epistemic situation. This is not to attribute to Kripke the Cartesian view that our knowledge of external reality must be inferred from our introspective states. Our perceptual judgments (or some of them) may provide us with non-inferential knowledge. But hallucinators who are phenomenologically like us are in the relevant sense in our epistemic situation (they have the same ‘evidence of the senses’), although they lack our perceptual knowledge.
necessary condition for any of these minds to pick out properties essentially or to have any understanding.

Although a full dose of 'magic' is perhaps avoided, I think it must be admitted that what Kripke implies about picking out properties essentially requires something in the way of irreducible intentionality. What is going on in our minds determines that when we use a certain term we are picking out a certain kind of configuration of matter, regardless of how that kind of configuration contingently affects our experience. The connection between the term and the configuration is not causal. It is something peculiar to language and understanding. If this seems too mysterious, one has to consider whether the alternative is less mysterious. An important corollary of thinking through Kripke's argument is that if one rejects the notion of picking out certain physical properties essentially then one is left with structural realism, which is often one small dialectical step away from a form of idealism. One need not resolve the mysteries of intentionality to appreciate the force and significance of Kripke's idea that some terms pick out their referents essentially.29

29 For helpful comments my thanks to Dan Kornman, Beri Marusic, Jerry Sarnet, and Palle Yourgrau.