

Imagery, Evidence, and the Mind-Body Problem

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KRIPKE (1980) FAMOUSLY SHOWED that certain identity statements that appear contingent (e.g. ‘water is H₂O’) may in fact be necessarily true. Much of the persuasive power of his argument derives from his ability to explain why such identities initially seem contingent. While it is impossible that water could have turned out not to be H₂O (given it is H₂O), it *is* possible, suggests Kripke, for one to be “qualitatively in the same epistemic situation” that one normally is in when one encounters water, yet it not be H₂O one is encountering (1980; p. 142). But to imagine this is not to imagine a situation where water is not H₂O, but rather is to imagine a non-H₂O substance that has some of water’s contingent properties (e.g., its looks, taste, and location). When explaining away the misconception that a certain wood table could have been made of ice, Kripke puts this point in terms of the possibility of one’s having identical *sensory evidence* in differing scenarios:

What, then, does the intuition that the table might have turned out to have been made of ice or of anything else... amount to? I think that it means simply that ... I could have the same sensory evidence that I in fact have, about *a table* which was made of ice (1980; p. 142).

The problem Kripke notoriously attributes to mind-body identity theories is that this paradigm for explaining away apparent contingency does not work in the case of mind-body identities. There is no analogous situation where one could, for instance, have the normal sensory evidence one has that one is in pain (i.e. feeling as though one is in pain), while in fact not being in pain. Thus, when it seems *prima facie* clear to one that a pain could possibly occur in the absence of its corresponding brain state, there is no story to be told about akin to the case of water and H₂O that would explain how one was not imagining what one thought one was.

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I challenge that conclusion in this paper, arguing that once we gain a finer understanding of Kripke's own paradigm, we see that it too can be extended to explain away the apparent contingency of mind-body identities. My dialectical route will be somewhat indirect. I begin by critiquing a promising alternate strategy for explaining away the apparent contingency of mind-body identities, first suggested by Nagel (1974) and revived by Hill (1997) and Hill and McLaughlin (1999). I then argue that, properly modified, this approach becomes a viable way of understanding Kripke's own paradigm, with the crucial difference that it allows the apparent contingency of mind-body identities to be explained away in the same manner as those pertaining to Kripke's other *a posteriori* necessities.¹

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In a footnote to his famous “bat” paper, Nagel (1974) makes an interesting suggestion for how we might account for the apparent contingency of mind-body identities. The sense of a contingent relationship, suggests Nagel, results from the opposition of images in two fundamentally different forms of imagination, the “perceptual” and the “sympathetic”. “To imagine something perceptually,” Nagel tells us, “we put ourselves in a conscious state resembling the state we would be in if we perceived that thing. To imagine something sympathetically, we put ourselves in a conscious state resembling the thing itself. (This method can only be used to imagine mental events and states—our own or another’s)” (1974; fn. 11).

According to Nagel, when an experience of pain is imagined occurring in the absence of the brain state to which it is (necessarily) identical, we are splicing together disparate kinds of images. We are using the sympathetic imagination to put ourselves in a state resembling pain—imagining what it’s like to be *in* pain—while using the perceptual imagination to imagine perceiving a lack of the relevant brain activity (i.e., imagining seeing that certain neurons are missing or inactive). Something analogous is happening when we imagine the relevant brain state (call it “C-fiber firing”) in the absence of any pain experience: we perceptually imagine or “see” the C-fibers firing while simultaneously using the sympathetic imagination to imagine being in a mental state that it does not feel like pain to be in. “Because of the independence of the disparate types of imagination” suggests Nagel, “the relation between [a mental feature and its realizing brain state] will appear contingent even if it is necessary,” (1974; fn. 11). The central idea here is that we experience no cognitive discomfort in imagining a pain in the absence of its realizing brain state precisely because we imagine pains and their realizers in such different ways.

Taking Nagel’s hypothesis to lend *prima facie* support for distrusting certain appearances of contingency, Hill (1997) attempts to extend the account so that it not only

¹Two alternate popular responses to Kripke’s anti-physicalist argument are: 1) pains (and mental states in general) can occur non-consciously, so the phenomenal quality of a pain is not an essential property of pain; thus, imagining feeling pain is not necessarily imagining a pain, and 2) imaginability is *never* a reliable guide to possibility, so we need not concern ourselves with the imaginability of disembodied pains. For reasons I cannot go into here, I believe that both strategies lead down blind alleys. For the purposes of this paper, I will assume, with Kripke, that the property in virtue of which we fix the reference of ‘pain’ is an essential property of pain.

explains the appearances but explains them *away*. To explain away, one must “provide evidence which calls the reliability of the relevant mechanisms into question” (1997; p. 70). Hill’s concern to explain away is well-founded, for one might grant that imagining mind/brain identities involves disparate forms of imagination, yet wonder why the resultant appearance of contingency should be considered especially unreliable. The answer cannot be that we are antecedently committed to mind-brain identities, since the unreliability of perceptual/sympathetic image-splicing is supposed to provide *independent* warrant for accepting such identities, thereby rendering them less mysterious.²

Hill’s strategy for showing the splicing process to be unreliable is to *assimilate* the cognitive mechanisms it involves to the same class as those that lead us astray in the less controversial case of natural kind/theoretical kind identities. In both kinds of cases, Hill claims, our intuitions of separability are unreliable because they result from our imagining certain *commonsense* phenomena in the absence of the *theoretical* phenomena to which they are identical (1997; p. 71). Just as ‘pain’ picks out a commonsense phenomenon and ‘C-fiber firing’ a theoretical one, so does ‘water’ name a commonsense kind and ‘H₂O’ a theoretical one. Our epistemic relations to commonsense and theoretical phenomena are so different that identities involving them will inevitably have an air of contingency.

Though well-motivated, this assimilative approach fails on several counts. First, it seems clear that the imaginability of pain without C-fiber firing does not arise out of the mere fact that pain is paired with a theoretical phenomenon. The same sense of contingency, fueling dualisms from Descartes forward, is present even if we substitute a commonsense (physical) phenomenon for C-fiber firing.³ Suppose we had reason to believe that pain is necessarily identical to the entire brain (or to a beach ball, or any other commonsense physical object). We could just as easily sympathetically imagine the pain occurring in the complete absence of that (perceptually imagined) physical object.

Moreover, if a theoretical kind/non-theoretical kind contrast could do the explanatory work Hill wishes, his appeal to the Nagelian ideas concerning disparate forms of imagination would not have been necessary in the first place. He could simply have put his point in terms of a contrast between things named by theoretical and commonsense terms.

Also, if Hill is to apply his own paradigm to the case of natural kind/theoretical kind identities, he will have to give some *other* account of why necessary *a posteriori* identity statements *not* involving theoretical terms (e.g. “Hesperus is Phosphorous”, “Superman is Clark Kent”) can also appear contingent. A unified account of the mechanisms responsible for the apparent contingency of all necessary *a posteriori* identity statements would, if possible, be preferable.

²Put another way, the identity theorist must not beg the question against those who allow for mind-brain causal interaction yet, trusting their Kripkean conceivability intuitions, deny mind-brain identities.

³Given the little that most philosophers know of neurophysiology, it is even plausible to think that in philosophical contexts ‘C-fiber firing’ plays the role of a more or less commonsense physical kind, standing for, roughly, “any given gray and squishy brain event.” This is not to ridicule the philosopher’s use of ‘C-fiber-firing’, but is just to suggest that his epistemic relationship to the term may not be a deeply theoretical one.

3

Consider again Kripke's method for explaining away apparent contingency: the possibility of someone's being in a qualitatively identical epistemic or evidential situation—having the same sensory evidence—when encountering both water and some non-water substance is mistaken for the possibility that water could have turned out not to be H_2O .

My suggestion will be that we can understand the envisaging of qualitatively identical epistemic and evidential situations in various cases where the external world differs as essentially involving an opposing of images in the sympathetic and perceptual imaginations. If such a view is correct, it will allow the desired assimilation, showing the apparent contingencies of natural kind/theoretical kind identities and mind/brain identities to share the same roots.

I will use 'imagery' to name that class of mental states that are typically featured in a remembering (or anticipating, or supposing) of what various perceptual and sensory experiences were (or will, or would be) like. Images account for the difference between merely thinking that, for instance, you went to the store, and imagining yourself having done so. Images need not be picture-like, but they will bear a close relation to perception, and to the qualitative aspects of experience, being invariably keyed to some sense modality or other. Thus, to simply think that there is bread baking in the kitchen without drawing on the resources of some sense modality is not to *imagine* that bread is baking in the kitchen. That said, if one defines "thinking" broadly, one can consider imagery as a *kind* of thinking—here the relevant distinction would fall between imagistic thinking and non-imagistic thinking. I intend for this characterization of imagery to be neutral as regards the debate between pictorialists and descriptionalists, which concerns the underlying nature of the representations featured in imagistic thinking, not the very existence of imagery, or its intuitive features. So long as one grants that there is a difference between thinking and imagining, images—be they "pictorial" or "descriptive" in nature—are what account for this difference.

On reflection, we can see that the difference between the perceptual and sympathetic imaginations is somewhat subtle. One and the same mental image can, it seems, serve double duty, being incorporated in both the perceptual and sympathetic imaginations (going forward, the "P-imagination" and "S-imagination"). To see this, we can start by imagining brain state X —a state that realizes an experience as of staring at a red wall—in the two different ways, noting the images the two imaginings make use of (the '>>>>' signs below signify that the thing on the left *essentially involves* or *makes use of* the thing on the right)⁴:

- (1) S-imagination of X >>> a visual image of a red wall.
- (2) P-imagination of X >>> a visual image of activity in a certain set of neurons, R .
[or, if one is skeptical that we can visually perceive a certain brain state, an

⁴Keep in mind that we are simply *assuming* here that brain state X is identical with a certain visual experience, for the purposes of seeing how the sympathetic/perceptual imagination distinction would account for the apparent contingency of such a relation, were it to hold. So far as independent reasons go for accepting the identity, I think the best (current ones) will be causal: postulating identities between mental states and brain states is a very good (but by no means the only) way of explaining why brain events are closely correlated with mental events. See Papineau (1998) for what I take to be cogent developments of the causal argument for mind-brain identity.

image of what it's like to see certain test equipment revealing the relevant activity].

It is the “disparity” in these two types of imagination to which Nagel attributes the apparent contingency of mental/physical identities. Now imagine a red wall *W* and, in particular, what it would be like to see *W*.

- (3) P-imagination of *W* \ggg a visual image of a red wall.

Lastly, sympathetically imagine a certain brain state *Y* that is the brain state of someone who is looking at brain state *X* above (that is, they are seeing the brain of the person—a neurological patient, let's suppose—who is in *X*).

- (4) S-imagination of *Y* \ggg a visual image of activity in a certain set of neurons, *R*.

Notice that (1) & (3) and (2) & (4) incorporate the same mental image, even though each pair couples an instance of the perceptual imagination with an instance of the sympathetic imagination. The conclusion we should draw from this is simple: the difference between the sympathetic and perceptual imaginations does not reside in the intrinsic nature of the images they incorporate. Rather, it arises out the different ways in which a particular image may be used in one's mental economy.

Before I go on to explain these different uses, I should stress the following: the content (or functional role) of an act of imagination (perceptual, sympathetic, or otherwise) need not (perhaps *must* not) be fixed entirely by the nature of the image featured in the act of imagination. Two acts of imagination can easily incorporate the same image without themselves being the same (as a rough analogy, one and the same string of English letters can have different meanings). This is one of the upshots of the reasoning above, but is evident from consideration of more mundane cases as well—for one can use the same mental image to imagine one's mother *and* to imagine someone who looks exactly like one's mother, without these two acts of imagination amounting to the same thing.⁵

Given that there is *more* to an act of imagination than the image it incorporates, let me now try to say what it is that distinguishes acts of the sympathetic imagination from acts of the perceptual imagination (aside from the fact that only “mental” states can be sympathetically imagined, itself a not particularly illuminating stipulation). When we use an image to represent our *last line of evidence* (or, as I'll also call it, “transparent evidence”) for an external state of affairs, we are conceptualizing that image sympathetically. When we use the image to represent properties inherent in an external state of affairs itself (or to represent “non-transparent evidence”), we are conceptualizing the image perceptually.

The idea of a “last line of evidence” or “transparent evidence” bears a close relation to the view that perception is in some sense “transparent”. When we can use one and the

⁵Thus this account does not run afoul of Wittgenstein's (1953) famous worry: “I see a picture; it represents an old man walking up a steep path leaning on a stick.—How? Might it not have looked just the same if he had been sliding downhill in that position?” (ff. 137, fn. 2(b)) Does allowing that there is more to an act of the imagination than what is given in its attendant imagery conflict with pictorialism? I do not think so; the pictorialist need only allow that the (pictorial) image featured in a given act of the imagination does not itself exhaust the content of that act of imagination.

same image both to represent our perceptual evidence for a thing and to represent the thing we would normally take the imagined evidence to be evidence *for*, the evidence we are imagining is our last line of evidence, for there is no more basic evidence we can call on to justify the perceptually formed belief. A moment ago I was looking at a pen. When I imagine that pen now, I form a certain visual image. And when I imagine what my evidence was that there was a pen of that sort in front of me, I conjure the same image, but use it to represent my *evidence* for the pen and not the pen itself. In so doing, I have reached what I am calling my “last line of evidence” for the pen, and, by extension, have engaged in an act of the sympathetic imagination.

One can, of course, perceptually imagine an everyday object as a way of imagining evidence for some state of affairs. For instance, I might perceptually imagine an unmade bed, and rightly consider what I am imagining to be a representation of evidence that someone was sleeping in a certain bed not long ago. But here we must use a *different* image (of a person sleeping in the bed) to represent the thing we would take the unmade bed to be evidence for.⁶

So, whereas Nagel simply stipulates that the sympathetic imagination pertains only to *mental* states, we now have an independent, epistemic characterization of it: sympathetically imagined states are *evidential* states, the imagination of which involves the same image as the imagination of the states of affairs such evidence is taken to be evidence *for*.

4

We can now cast Kripke’s paradigm for explaining away the apparent contingency of natural kind/theoretical kind identities in terms of the sympathetic and perceptual imagination distinction. When we misconceive the possibility that water could have turned out not to be H₂O, what we are really doing is sympathetically imagining a typical last line of evidence for water, and then “splicing” this (sympathetic) image with a perceptual image of some non-H₂O substance that we are interacting with while having this perceptual evidence.⁷ This is simply a more fine-grained way of understanding Kripke’s suggestion that one “could, *qualitatively* speaking, be in the same epistemic situation” as someone whose experiences are being caused by a substance of a different nature (1980; p. 150). It is our somewhat covert tendency to engage in this kind of image-splicing that makes ‘water is H₂O’ appear contingent.⁸

⁶ I am advancing a necessary, not a sufficient, condition for something being an act of the sympathetic imagination. Thus, I have not *reduced* the notion of a sympathetically imagined state to a “last line of evidence”, but have merely provided a partial, epistemically grounded, *characterization* of it.

⁷ Again, it is not crucial that the image of XYZ used in the perceptual imagination be any different, *qua* image, than that used to perceptually imagine H₂O—the important difference here too will be in how that image is *used* in one’s mental economy. It is enough that H₂O and XYZ are conceptually “tagged” as different substances. Yet it bears noting that the “disparity” that Nagel originally noted between the sympathetic and perceptual imaginations has shifted from being a pictorial one to being a largely functional one.

⁸ Why doesn’t a similar splicing process make “water = water” seem contingent? Well, it *would* make “water = water” seem contingent if one took one’s justification for accepting the identity to be grounded in empirical evidence. If, on the other hand, one feels justified in accepting the identity claim independent of any empirical evidence, then the splicing process will not be brought to bear on the statement to begin with.

Turning to the mind-body case, a sensation of heat is evidence for the presence of heat itself. And the image we use in an imagination of our typical sensory evidence for heat is the same as we might use to imagine heat itself. Thus imagining one's (typical) sensory evidence for heat qualifies as a case of the sympathetic imagination. Of course, a sensation of heat can also make one aware that one is in a certain brain state, couched in a neuroscientific vocabulary, if one knows some brain science (or even if one doesn't, but just thinks, "there must be something happening in my brain expressible in a neuroscientific vocabulary that accounts for this sensation... I name this neuroscientifically-specified state of affairs '*N'*'"). In this situation, a heat sensation can serve as an intermediary that makes us aware of *itself* under another description. That is, imagining a heat sensation can be a way of imagining evidence that brain activity of a certain scientifically-specified kind is occurring.

This is where the important similarity with the heat/molecular motion and water/H₂O cases arises. In all these cases, the illusion of contingency arises from the fact that we believe we could have the same type of evidence we in fact have for a perceptually imagined object or kind—where "evidence" is always a sympathetically imagined state, the sort that can be a "last line of evidence"—yet it be some other perceptually imagined object or kind that is causing or realizing that evidence.⁹ In short, as epistemic agents with restricted forms of access to features of our environment, we are committed to the idea that states of affairs in that environment are underdetermined by the evidence we have for them; we could have the same last lines of evidence, yet things not be as we take them to be.

Of course, if a type identity theory is true and pain is type-identical with a neurophysiological state of some kind (e.g., "C-fiber stimulation"), it is *not* possible to have the same type of evidence we normally have for that state yet have it determined by some other state. However, even in this case, it remains *rational to suppose* that our evidence does not rule out the falsity of the theory that equates pains with C-fiber firings (or, alternately, it remains reasonable to think that our evidence does not logically entail the truth of the theory that equates pain with C-fiber firing). So, even if pain *is* type-identical to C-fiber stimulation, it will feel unnatural to call it a necessary identity just because it is unnatural for us to think that it is not even *possible* to have the same evidence for the occurrence of a certain kind of state while a different theory of what it is evidence for is true.¹⁰ Thus we see how what is normally a reliable methodological principle—the idea that theories are underdetermined by our evidence for them—would, in the mind/body case, lead one to feel that a necessary identity is

Thus, we can think of it as a two-step process through which the appearance of contingency arises. First, one (rather automatically) considers whether one's justification for accepting an identity statement is grounded in empirical evidence of some kind. If the answer is No, then the splicing process does not begin (since one has essentially *stipulated* that by one token of "water" or "Bob" one is referring to the same thing as with the other token of "water" or "Bob"). If the answer is Yes, then the splicing mechanisms kick in, giving the identity an air of contingency. Thanks to Jonathan Ichikawa for pressing me on this point.

⁹Clearly, causation and realization are *not* the same relation, yet they bear a similarity that warrants the present assimilation: both causes and realizers *explain*, insofar as they help *determine*, the nature of one's evidence.

¹⁰A similar story can be told for why the truth value of Goldbach's conjecture (that every even number larger than 2 is the sum of two primes) may seem contingent, even if it is necessary (that is, why it seems as though a presumably necessary truth could come out either way).

in fact contingent. Ironically, what fuels the sense of contingency may be, at bottom, an aversion to idealism. We are not comfortable concluding that, given our current perceptual evidence, some aspect of the external world (i.e. some brain state) could not possibly be any other way than the (neuroscientific) way we take it to be.

It is sometimes suggested that Kripke's appeal to identical epistemic situations succeeds in explaining away apparent contingency just because it shows we were imagining something else that *really is possible*.¹¹ But this reading is unwarranted, since we cannot know *a priori* that it really *is* possible to be in identical epistemic situations while encountering different substances. Kripke himself makes this point, when discussing the presumably contingent (but *perhaps* necessary) relation between sensations of heat and heat itself:

Of course, it might be part of the very nature of human beings that they have a neural structure which is sensitive to heat. Therefore, this too [i.e., certain kinds of sensations being *of* heat] could turn out to be necessary if enough investigation showed it (1980; p. 133)

So, what matters in explaining away apparent contingencies is not that we *really could* have the same evidence that we normally do for the presence of a substance (e.g., water) in our environment while it is some other substance (e.g. XYZ) we are encountering, but that, given our evidence, we cannot rule the possibility out.¹² Note that the constraints on what we cannot rule out *a priori*, are much looser than the constraints on what we may rationally suppose *is* the case. The former matches up with a notion of "epistemic possibility" akin to the one Kripke allows, according to which it is correct to say gold *might* turn out not to be an element (1980; fn. 72). The latter is constrained by considerations of theoretical strength and simplicity—given our evidence, we cannot rule out the possibility that Tom Cruise is a robot, but this does not make it rational to suppose that he actually is one.

If I am right, we now have what Hill was originally searching for: an assimilation of the factors responsible for the apparent contingency of mind-body identities to the class of those responsible for the apparent contingency of natural kind/theoretical kind identities. Further, it is an assimilation that fits with Kripke's own explanation of why necessary natural kind/theoretical kind identities appear contingent. Thus we need not take the apparent contingency of mind-brain identities to weigh against their necessity.

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¹¹ This is the leading idea of David Chalmers's (1996, 2002, 2004) deployment of the two-dimensional semantic framework for understanding Kripke's arguments.

¹² Here is the argument spelled out: P1) For all we know *a priori*, it is an essential property of humans that we have neural structures that realize sensations of heat only in presence of heat. P2) So we cannot know *a priori* that we humans really could be in the same epistemic situation we are normally in around heat but be encountering something that is not heat. P3) Regardless of how the empirical investigation of our own essential properties plays out, Kripke's appeal to identical epistemic situations still explains away apparent contingencies. C) So what matters for his paradigm of explaining away to succeed is *not* that the scenarios imagined really are possible, but only that they are not ruled out *a priori* by our evidence.

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