

## 21 Max Black's Objection to Mind-Body Identity

In his famous article advocating mind-body identity, J. J. C. Smart (1959) considered an objection (Objection 3) that he says he thought was first put to him by Max Black. He says "it is the most subtle of any of those I have considered, and the one which I am least confident of having satisfactorily met." This argument, the "Property Dualism Argument," as it is often called, turns on much the same issue as Frank Jackson's (1982, 1986) "Knowledge Argument," or so I will argue. This chapter is aimed at elaborating and rebutting the Property Dualism Argument (or rather a family of Property Dualism Arguments) and drawing some connections to the Knowledge Argument.<sup>1</sup> I will also be examining John Perry's (2001) book which discusses both Max Black's argument and the Knowledge Argument, and some arguments drawn from Stephen White's (1983) paper on the topic and some arguments inspired by unpublished papers by White.

I discovered rather late in writing this chapter (from Rozemond 1998<sup>2</sup>) that some of my arguments, especially those in the last third of the chapter, amount to a physicalistic adaptation of Arnauld's criticisms of Descartes. As I understand it, Arnauld criticized Descartes's idea that we have a complete intuition of the mental substance by arguing that nothing in our intuitive grasp of the mental rules out an objective "backside" to the mental whose objective description is out of reach of our intuitive grasp.

I will say a bit about what the basic idea of the Property Dualism Argument is and compare it with the Knowledge Argument. Then I will discuss Perry's view of both issues. Next, I will introduce an ambiguity in the notion of mode of presentation and use that to give a more precise statement and rebuttal of one version of the Property Dualism Argument. That is the first half of the chapter. In the second half, I will use this long set-up to exposit and rebut another version of the Property Dualism Argument and mention some related arguments. This chapter is long and detailed. Those who are very familiar with the issues will find it too long and detailed, but given the prevalence of confusion on these matters, I felt it was better to err on the side of explicitness.

### I What Is the Property Dualism Argument?

Smart said “suppose we identify the Morning Star with the Evening Star. Then there must be some properties which logically imply that of being the Morning Star, and quite distinct properties which entail that of being the Evening Star.” And he goes on to apply this moral to mind-body identity, concluding that “there must be some properties (for example, that of being a yellow flash) which are logically distinct from those in the physicalist story.” (1959: 148) He later characterizes the objection to physicalism as “the objection that a sensation can be identified with a brain process only if it has some phenomenal property . . . whereby one-half of the identification may be, so to speak, pinned down” (149), the suggestion apparently being that the problem of physicalism will arise for that phenomenal property even if the original mind-body identity is true. This concern motivated the “dual-aspect” theory, in which mental events are held to be identical to physical events even though those mental events are alleged to have irreducible mental properties. (See also Schaffer 1963.) Smart did not adequately distinguish between token events (e.g. this pain) and types of events (e.g. pain itself), or between token events and properties such as the property of being a pain, the property of being pain, or the property of being in pain—the first being a property of pains, the second being a property of a property, and the last being a property of persons. (For purposes of this chapter, I will take types of events to be properties—any of those just mentioned will do.) But later commentators have seen that the issue arises even if one starts with a mind-body property identity, even if the mind-body identity theory that is being challenged says that the property of being in pain (for example) is identical to a physical property. For the issue arises as to how that property is “pinned down,” to use Smart’s phrase. If the mind-body identity says that phenomenal property  $Q =$  brain property  $B_{52}$ , then the question raised by the argument is: is the property by which  $Q$  is pinned down non-physical or is something non-physical required by the way it is pinned down?<sup>3</sup>

John Perry (2001: 101) states the argument as follows: “even if we identify experiences with brain states, there is still the question of what makes the brain state an experience, and the experience it is; it seems like that must be an additional property the brain state has. . . . There must be a property that serves as our mode of presentation of the experience as an experience.” Later in discussing Jackson’s Knowledge Argument, Perry considers the future neuroscientist, Mary, who is raised in a black and white room (which Perry calls the Jackson Room) and learns all that anyone can learn about the scientific nature of the experience of red without ever seeing anything red. While in the room, Mary uses the term “ $Q_R$ ” for the sensation of red, a sensation whose neurological character she knows but has never herself had. Perry (ibid.) says:

If told the knowledge argument, Black might say, “But then isn’t there something about  $Q_R$  that Mary didn’t learn in the Jackson room, that explains the difference between ‘ $Q_R$  is  $Q_R$ ’ which she

already knew in the Jackson room, and (5) [Perry's (5) is: 'Q<sub>R</sub> is this subjective character'], which she didn't?" There must be a new mode of presentation of that state to which "Q<sub>R</sub>" refers, which is to say some additional and *apparently non-physical* aspect of that state, that she learned about only when she exited the room, that explains why (5) is *new* knowledge.<sup>4</sup>

On one way of understanding Perry, he uses "mode of presentation" here, not in the usual Fregean sense of something cognitive or semantic about a representation, but rather for a property of the represented referent. It seems that he sees Black's problem as arising from the question of the physicality of the mode of presentation in that non-Fregean sense of the term. Smart speaks in the same spirit of a property that pins down one half of the identification.

The idea of the Property Dualism Argument, and, I will argue, the Knowledge Argument, is that the mind-body identity approach to phenomenality fails in regard to the phenomenality that is involved in a certain kind of subjective mode of presentation (in both the Fregean and non-Fregean senses mentioned) of a phenomenal state. Even if a mind-body identity claim is true, when we look at the mode of presentation of the mental side of the identity, we are forced to accept a "double aspect" account in which unreduced phenomenal properties remain. However, don't expect a full statement of the main version of the Property Dualism Argument until nearly the halfway point. The next items on the agenda are connections to the Knowledge Argument, then (section II) Perry's solutions to both problems. Then (section III) I will take up the question of the difference between and respective roles of the Fregean and non-Fregean notions of mode of presentation.

Consider a specific phenomenal property, Q, e.g., the property of feeling like the pain I am having right now. (If pain just is a type of feel, then Q is just pain.) The physicalist says, let us suppose, that Q = cortico-thalamic oscillation of such and such a kind. (I will drop the last six words.) This is an a posteriori claim. Thus the identity depends on the expressions on either side of the "=" expressing distinct concepts, that is, having distinct modes of presentation, for if the concepts and modes of presentation were the same, it is said, the identity would be a priori. (An ambiguity involved in this reasoning—involving (surprise!) the distinction between Fregean and non-Fregean modes of presentation—will be scrutinized in section IV.)

"Q" in my terminology is very different from "Q<sub>R</sub>" in Perry's terminology since "Q<sub>R</sub>" is a term that Mary understands in the black and white room. "Q" by contrast is meant (by me even if not by Perry and Smart) as the verbal expression of a *phenomenal* concept. A phenomenal concept of the experience of red is what Mary lacked in the black and white room and what she gained when she went outside it. (She also lacked a phenomenal concept of the color red, but I will not depend on that.) Why do I insist that "Q" express a phenomenal concept? Because the mind-body identity claim under consideration must be one in which the phenomenal property is referred to *under a phenomenal concept of it* for the Property Dualism Argument—in any of its forms—even

*to get off the ground.* (The Knowledge Argument also depends on the use of a phenomenal concept in my sense.) Suppose that in the original identity claim we allowed *any old concept* of Q—e.g., “the property whose onset of instantiation here was at 5 p.m.” or “the property whose instantiation causes the noise ‘ouch’.” There is no special problem having to do with phenomenality for the physicalist about the cognitive significance of such properties or how such properties could pick out their referents. The modes of presentation of these properties raise no issues of the metaphysical status of phenomenality. If the original paradigm of mind-body identity were “the property whose onset of instantiation here was at 5 p.m. = cortico-thalamic oscillation,” the property in virtue of which the left-hand term presents the referent would not be a special candidate for non-physicality. It would be the property of being instantiated here starting at 5 p.m. The Property Dualism Argument depends on an identity in which a *phenomenal concept* is involved on the mental side. To allow a non-phenomenal concept is to discuss an argument that has only a superficial resemblance to the Property Dualism Argument.

With all this emphasis on phenomenal concepts, you might wonder what they are supposed to be. A phenomenal concept is individuated with respect to fundamental uses that involve the *actual occurrence* of phenomenal properties. In these fundamental uses, a simultaneously occurring experience is used to think about that very experience. No one could have a phenomenal concept if they could not in some way relate the concept to such fundamental uses in which the subject actually has a simultaneous instance of the phenomenal quality.

That is what I mean by a phenomenal concept, but in the rest of this chapter, I will often adopt a simplification: the fundamental uses will be taken to be all the uses of the concepts. That is, I will assume that in the exercise of a phenomenal concept, the subject actually has to have an experience. Phenomenal concepts in this heavy-duty sense do not really correspond to the kind of general ability that we take concepts to be individuated by. But since it is really these fundamental uses that figure in this chapter, it will make matters simpler if we usually talk about the concepts as if their only uses were the fundamental uses. The idea of these heavy duty phenomenal concepts is that an instantiation of a phenomenal property is used in the concept to pick out a phenomenal property (a type). Of course, the experience involved in the fundamental use need not be an *additional* experience, that is, additional to the referent. A single experience can be both the object of thought and part of the way of thinking about that object. Further, one does not *have* to have an experience of red in order to think about an experience of red. One can think about the experience of red using, for example a purely descriptive concept of it, e.g., “the color of ripe tomatoes.”<sup>5</sup>

Perry (2001, 2004a,b) uses what may be a more relaxed notion of phenomenal concept, in which a phenomenal concept is a kind of mental folder that contains what he calls a “Humean idea” of the experience. He says (2004b: 221):

Thinking of having the experience of some kind in this way is not having the experience, but it is in some uncanny way like it. Usually the same kinds of emotions attach to the thinking as to the having, although in a milder form. It is usually pleasant to anticipate or imagine having pleasant experiences, and unpleasant to anticipate or imagine having unpleasant ones, for example.

Perry's notion of a phenomenal concept is vague on the crucial point. Sure, thinking of having the experience is not just having the experience. Dogs can have experiences but presumably they can't think about them. The question is: does a phenomenal concept in Perry's sense require that the subject relate the concept to the fundamental uses I mentioned that involve an actual experience? Or, putting the point more clearly in terms of my simplified notion of a phenomenal concept, does the exercise of a phenomenal concept in Perry's sense involve an actual experience? As I shall argue in the section on Perry below, the problem for Perry's treatment hinges on whether phenomenal concepts in his sense are phenomenal enough to give the Knowledge Argument and the Property Dualism Argument a fighting chance.

It is time to turn to my claim that the Knowledge Argument hinges on the same requirement of a phenomenal concept in my sense as the Property Dualism Argument. Mary is reared in a colorless environment but learns all there is to know about the physical and functional nature of color and color vision. Yet she acquires new knowledge when she leaves the room for the first time and sees colored objects. Jackson concludes that there are facts about what it is like to see red that go beyond the physical and functional facts, and so dualism is true. From the outset, the following line of response has persuaded many critics.<sup>6</sup> Mary knew about the subjective experience of red via an objective concept from neuroscience. On leaving the room, she acquires a subjective concept of the same subjective experience. In learning what it is like to see red, she does not learn about a new property. She knew about that property in the room under an objective concept of it and what she learns is a new concept of that very property. One can acquire new knowledge about old properties by acquiring new concepts of them. I may know that there is water in the lake and learn that there is H<sub>2</sub>O in the lake. In so doing, I do not learn of any new property instantiated, and in that sense I do not learn of any new fact. I acquire new knowledge that is based on a new concept of the property that I already knew to be instantiated in the lake. When Mary acquires the new subjective concept that enables her to have new knowledge, the new knowledge acquired does not show that there are any properties beyond the physical properties. Of course it does require that there are concepts that are not physicalistic concepts; however, that is not a form of dualism but only garden-variety conceptual pluralism: concepts of physics are also distinct from concepts of, say, economics and concepts of biology. The idea of the argument is to substitute a dualism of concepts for a dualism of properties and facts: there is a new concept but no new properties or facts in the relevant sense.

A natural rejoinder from the dualist is this. After seeing red for the first time, how does Mary “pin down” (to use Smart’s obscure phrase) that old property? Or, to use an equally obscure phrase, what is Mary’s “mode of presentation” of that old property?<sup>7</sup> When she acquires a subjective concept of the property that she used to have only an objective concept of, *a new unreducible subjective property* is required to pin down the old objective property. *This is the key stage in the dialectic about Mary, and this stage of the dialectic brings in the same considerations that are at play in the Property Dualism Argument.* Just to have a name for it, let us call this idea that the phenomenal concept that Mary acquires itself contains or else requires unreducible phenomenality the “metaphenomenal” move in the dialectic.<sup>8</sup>

The issue is sometimes put in terms of a distinction between two kinds of propositions. (See van Gulick 1993, 2006.) Coarse-grained propositions can be taken to be sets of possible worlds (or, alternatively, Russellian propositions that are n-tuples of objects and properties but contain no (Fregean) modes of presentation). The proposition (in this sense) that Harry Houdini escaped is the same coarse-grained proposition as the proposition that Erich Weiss escaped, in that the possible worlds in which Harry Houdini escaped are the same as the worlds in which Erich Weiss escaped, because Harry Houdini is Erich Weiss. (Alternatively, these are the same Russellian propositions because the proposition  $\langle \text{Houdini, escaped} \rangle$  is the same proposition as  $\langle \text{Weiss, escaped} \rangle$ .) Fine-grained propositions include (Fregean) modes of presentation, and so the different names determine different fine-grained propositions. When we say that Harry Houdini escaped, we express a different fine-grained proposition from the one we express when we say that Erich Weiss escaped. In these terms, the issue is: does Mary’s new knowledge involve merely a new fine-grained proposition (in which case physicalism is unscathed because Mary’s new knowledge does not eliminate any possibilities), or does it require a new coarse-grained proposition (as well)? *It is the phenomenal (Fregean) mode of presentation of Mary’s new subjective concept of the property that she already had an objective concept of that motivates the idea that she gains new coarse-grained knowledge.* The metaphenomenal move is at play: the thought is that that phenomenal mode of presentation brings in something fundamentally ontological and not something on the order of (merely) a different description. The idea is that when something phenomenal is part of a (Fregean) mode of presentation, it will not do for the physicalist to say that that phenomenal item is unproblematically physical. Whether one agrees with this or not, if one does not recognize it, one misses a crucial step in the dialectic about Mary.

I said that the standard reply to Jackson’s argument attempts to substitute a dualism of concepts for a dualism of properties and facts. But the dualist rejoinder that I have been describing—exploited in pretty much the same way by the Knowledge Argument and the Property Dualism Argument—is that the dualism of concepts *requires* a dualism of properties and facts.

I said that Mary acquires a subjective concept of the experience of red, whereas what she already had was an objective concept of it. However, it is a particular kind of subjective concept she acquires, namely a phenomenal concept of the experience of red. If it was an objective concept that she acquired, say the concept of the type of experience that occurred at 5 p.m., the argument would have no plausibility. But even some subjective concepts would not do, e.g., the concept of the type of experience that happened five minutes ago. This concept is subjective in that it involves the temporal location of the subject from the subject's point of view ("now"), but it is no more suitable for the Knowledge Argument than the objective concept just mentioned. What is required for the metaphenomenal move in the dialectic about the Knowledge Argument is that Mary acquires a mode of presentation that is either itself problematic for physicalism or that requires that the referent have a property that is problematic for physicalism. And in this regard, it is just like the Property Dualism Argument.

What Mary learns is sometimes put like this: "Oh, so *this* is what it is like to see red," where "what it is like to see red" is a phrase she understood in the black and white room, and the italicized 'this' is supposed to express a phenomenal concept. Since there is some doubt as to whether a demonstrative concept can really be a phenomenal concept (I'll explain the doubt below), we could put the point better by saying that what Mary learns is that P = the property of being an experience of red, where it is stipulated that "P" expresses a phenomenal concept (of a phenomenal property) and "is an experience of red" is a term Mary understood in the black and white room. But there is nothing special about this item of knowledge in the articulation of the point of the Knowledge Argument as compared with other items of knowledge that use 'P'. In particular, one could imagine that one of the things that Mary learns is that P = the property of being cortico-thalamic oscillation. She already knew in the room that the experience of red = cortico-thalamic oscillation (where it is understood that 'the experience of red' is something she understood in the black and white room), but she learns that P = the property of being cortico-thalamic oscillation. The proposition that P = the property of being cortico-thalamic oscillation is supposed to be a new coarse-grained proposition, one that she did not know in the black and white room. This version of the Knowledge Argument makes the overlap with the Property Dualism Argument in the metaphenomenal move explicit: there is supposed to be something problematic about physicalism *if it is stated using a phenomenal concept*. That is, what is problematic is something about the "mode of presentation" of the phenomenal side of the identity. Both arguments can be put in the form: even if we take physicalism to be true, that supposition is undermined by the phenomenal mode of presentation in the knowledge or statement of it.<sup>9</sup>

I have used, more or less interchangeably, terms such as "pin down," "mode of presentation," "concept," and "way of thinking." But there is an ambiguity (the ambiguity between Fregean and non-Fregean readings) that must be resolved in order to focus

on a precise statement of these arguments. Before I turn to that topic, however, I will give a critique of Perry's approach to Max Black, the Knowledge Argument and modal arguments for dualism.

## II Perry's Treatment of the Two Arguments

Perry's (2001, 2004*a,b*) approach to the Knowledge Argument is roughly along the lines mentioned above: that Mary does something like acquiring a new subjective concept of a property that she had an objective concept of already in the black and white room. But Perry gives that response two new twists with two ideas: that the new concept is part of what he calls a "reflexive content" and that Mary need not actually acquire the new concept so long as she is appropriately sensitive to it.

Here is a quotation from Perry (2001) that gives his response both to Max Black's problem and to the Knowledge Argument.

We can now, by way of review, see how Black's dilemma is to be avoided. Let's return to our imagined physicalist discovery, as thought by Mary, attending to her sensation of a red tomato:

"This<sub>i</sub> sensation = B<sub>52</sub>" [where 'this<sub>i</sub>' is an internal demonstrative and B<sub>52</sub> is a brain property that she already identified in the black and white room—NB]

This is an informative identity; it involves two modes of presentation. One is the scientifically expressed property of being B<sub>52</sub>, with whatever structural, locational, compositional and other scientific properties are encoded in the scientific term. This is not a neutral concept. The other is being a sensation that is attended to by Mary. This is a neutral concept; if the identity is true, it is the neutral concept of a physical property. Thus, according to the antecedent physicalist [who takes physicalism as the default view—NB], Mary knows the brain state in two ways, as the scientifically described state and as the state that is playing a certain role in her life, the one she is having, and to which she is attending. The state has the properties that make it mental: there is something it is like to be in it and one can attend to it in the special way we have of attending to our own inner states. (2001: 205)

If Mary's concept were "being the sensation attended to by Mary" it could not be regarded as a topic-neutral concept unless the terms "sensation" and "attend" are themselves understood in a topic-neutral manner. (Ryle introduced the term "topic-neutral" for expressions that indicate nothing about the subject matter. Smart offered topic-neutral analyses of mental terms that were supposed neither to entail that the property is physical nor that it is non-physical. But it is clear that mentalistic terminology was supposed to be precluded, for otherwise no topic-neutral analyses would be needed—the terms would already have been topic-neutral.)

If Mary's concept is topic-neutral, it is not a phenomenal concept in the sense required by the Property Dualism Argument. Although Perry rejects the "deflationist" view that phenomenal concepts are analyzable a priori in non-phenomenal terms (as Smart advocated), his approach to arguments for dualism is to appeal to topic-neutral

demonstrative/recognition concepts as surrogates for phenomenal concepts. To explain what he has in mind, we need to introduce what he calls "reflexive content." Propositional attitudes have "subject matter" contents which are a matter of the properties and objects the attitudes are concerned with. The subject matter content of your belief that the morning star rises could be taken to be the Russellian proposition  $\langle \text{Venus, rises} \rangle$ . But there are other contents that are concerned with the same subject matter and have the same truth condition: for example, that the heavenly object which you are now thinking of is in the extension of the property that is the object of your concept of rising. Before I mentioned it and brought it to your explicit attention, this might have been a reflexive content but not a subject matter content of your thought. ("Reflexive" is meant to indicate that what is being brought in has to do with the way thought and language fit onto the world or might fit onto the world.) The subject matter content of the claim that  $\text{this}_i$  (where "this<sub>i</sub>" is an internal demonstrative) =  $B_{52}$ , if physicalism is right, is the same as that  $\text{this}_i = \text{this}_i$  or that  $B_{52} = B_{52}$ . Perry's intriguing idea is that my belief can have reflexive contents, the concepts of which are not concepts that I actually have, or even if I have them, those concepts are not ones that I am exercising in using demonstrative or recognition concepts that have those reflexive contents. However, he argues persuasively that these concepts may be psychologically relevant nonetheless if the subject is "attuned" to the concepts in reasoning and deciding. Attunement is a doxastic attitude that can have contents that are not contents of anything the subject believes or has concepts of. For example, I can be attuned to a difference in the world that makes a perceptual difference without conceptualizing the difference in the world. Perry's view is that our intuitions about contents are often a matter of reflexive contents that we are attuned to rather than to subject matter contents that we explicitly entertain.

Perry's solution to Max Black's problem and his reply to Jackson is to focus on a topic-neutral version of what Mary learns. I am not totally sure whether it is just the demonstrative/recognition concept ("this<sub>i</sub>") that is topic-neutral, or whether the reflexive content of it is also supposed to be topic-neutral. But both proposals evade the Max Black problem without solving it. In the passage quoted earlier, he says what Mary learns can be put in terms of "This<sub>i</sub> sensation is brain state  $B_{52}$ ," where "this<sub>i</sub>" is a topic-neutral internal demonstrative/recognition concept. If the suggestion is that Mary acquires the belief that  $\text{this}_i$  is brain state  $B_{52}$ , the problem is that the topic-neutral concept involved in this belief is not a phenomenal concept, so the real force of the Knowledge Argument (and Max Black's argument) is just ignored. However, it seems that Perry's suggestion is that Mary comes to be *attuned* to the relevant reflexive content instead of coming to believe it. He thinks that what Mary learns can be expressed in terms of something she is attuned to and Max Black's problem can be solved by appealing to attunement to the same content. That is, in using demonstrative and recognition concepts in the thought "This<sub>i</sub> sensation =  $B_{52}$ ," Mary becomes

attuned to a reflexive content like “the sensation Mary is attending to is the scientifically described state” without explicitly exercising those concepts.

But does substituting attunement for belief avoid the problem of ignoring the real force of the argument? Does attunement help in formulating a response to the Mary and Max Black arguments that takes account of the metaphenomenal move in the Mary dialectic? I think not.

Distinguish between two versions of Jackson’s “Mary.” Sophisticated Mary acquires a genuine phenomenal concept when she sees red for the first time. Naive Mary is much less intellectual than Sophisticated Mary. Naive Mary does not acquire a phenomenal concept when she sees red for the first time (just as a pigeon presumably would not acquire a new concept on seeing red for the first time), nor does she acquire an explicit topic-neutral concept, but she is nonetheless *attuned* to certain topic-neutral non-phenomenal content like that of “The sensation I am now attending to is the brain state I wrote my thesis on earlier.” In addition, we might suppose (although Perry does not mention such a thing) that Naive Mary is also attuned to a genuine phenomenal concept of a color even though she does not actually acquire such a concept.

As I mentioned earlier, there is a well-known solution to the Mary problem that takes Mary as Sophisticated Mary. What Sophisticated Mary learns is a phenomenal concept of a physical property that she already had a physical concept of in the black and white room. Any solution to the Mary problem in terms of Naive Mary is easily countered by a Jacksonian opponent who shifts the thought-experiment from Naive to Sophisticated Mary. Consider this dialectic. Perry offers his solution. The Jacksonian opponent says “OK, maybe that avoids the problem of Naive Mary, but the argument for dualism is revived if we consider a version of the thought experiment involving Sophisticated Mary, that is a version of the thought-experiment in which Mary actually acquires the phenomenal concept instead of merely being attuned to it (or attuned to a topic-neutral surrogate of it). What Sophisticated Mary learns is a content that contains a genuine phenomenal concept. And that content was not available to her in the room. What she acquires is phenomenal knowledge (involving a phenomenal concept), knowledge that is not deducible from the physicalistic knowledge she had in the black and white room. So dualism is true.” Indeed, it is this explicit phenomenal concept that makes it at least somewhat plausible that what Mary acquires is a new coarse-grained belief as well as a new fine-grained belief. Perry cannot reply to *this* version of the thought experiment (involving Sophisticated Mary) by appealing to the *other* one (that involves Naive Mary). And the thought experiment involving Sophisticated Mary is not avoided by appeal to attunement to a topic-neutral concept or even to a phenomenal concept.

As I indicated earlier, the crucial point in the dialectic about Mary is this: the dualist says “The concept that Mary acquires (or acquires an attunement to) has a mode of presentation that involves or requires unreducible phenomenality.” If Perry appeals to

the idea that the concept is topic-neutral or has a topic-neutral reflexive content, the dualist can reasonably say "But that isn't the concept I was talking about; I was talking about a genuinely phenomenal concept."<sup>10</sup>

Let us now turn to Perry's solution to the Max Black problem. Although the Max Black problem is mentioned a number of times in the book, Perry's solution is expressed briefly in what I quoted above. He clearly intends it to be a by-product of his solutions to the other problems. I take it that that solution is the same as the solution to the Mary problem, namely that the problem posed by the alleged non-physical nature of the mode of presentation of the phenomenal side of a mind-body identity or what is required by that mode of presentation can be avoided by thinking of what Mary learns in terms of a demonstrative/recognition topic-neutral concept that—perhaps—has a topic-neutral reflexive content. The proponent of the Max Black argument (the Property Dualist) is concerned that in the mind-body identity claim "P = B<sub>S2</sub>" where "P" expresses a phenomenal concept, the phenomenal mode of presentation of "P" undermines the reductionist claim that P = B<sub>S2</sub>. Someone who advocates this claim—and who, like Perry, rejects deflationist analyses of phenomenal concepts—is certainly not going to be satisfied by being told that the content that Mary is attuned to is topic-neutral. The Property Dualist will say "So what? My concern was that the mode of presentation of 'P' introduces an unreducible phenomenality; whether Perry's topic-neutral content is something we believe or are merely attuned to is not relevant." And even if what Mary is attuned to is a reflexive content that contains a genuine phenomenal concept, that also evades the issue without solving it, since the dualist can reasonably say that it is the actual phenomenal concept on which the argument for dualism is based.

Perry also applies his apparatus to the modal arguments for dualism such as Kripke's and Chalmers's. Why do we have the illusion that "This<sub>i</sub> sensation = B<sub>S2</sub>" is contingent, given that (according to physicalism) it is a metaphysically necessary truth? Perry's answer is that the necessary identity has some *contingent* reflexive contents such as: that the subjective character of red objects appears like so and so on an autocerebroscope, is called "B<sub>S2</sub>," and is what I was referring to in my journal articles. The illusion of contingency comes from these reflexive contents. Here the metaphenomenal move I mentioned earlier has no role to play. I think Perry's point here has considerable force.

However, the dualist can respond to Perry by saying, "Look, I can identify the brain state by its *essential properties* and still wonder whether I could have that brain state (so identified) without *this<sub>i</sub>* phenomenal property." *A version of this argument, will be explored in section IV below.*

Though I agree with Perry on many things about phenomenality, and find his book with its notion of attunement to reflexive concepts insightful and useful, there is one key item from which all our disagreements stem. He does not recognize the need for, or

rather he is vague about the need for, a kind of phenomenal concept that itself requires fundamental uses that are actually experiential. When saying what it is that Mary learns, he says, “This new knowledge is a case of recognitional or identificational knowledge. . . . We cannot identify what is new about it with subject-matter contents; we can with reflexive contents” (2004a: 147). The physicalist will agree that what Mary learns is not a *new* subject matter content (in the sense explained earlier). But the problem is that it is unclear whether the recognitional or identificational concepts that Perry has in mind have the phenomenality required to avoid begging the question against the advocate of Max Black’s argument. When he proposes to explain away the intuitions that motivate the Max Black argument and the Knowledge Argument by appeal to a topic-neutral concept, he loses touch with what I called the metaphenomenal move and with it the intuitive basis of these arguments in phenomenal concepts, or so it seems to me.

The reader may have noticed that there has still not been an explicit statement of the Property Dualism Argument. I have postponed the really difficult and controversial part of the discussion, the explanation of an ambiguity in “mode of presentation,” a matter to which I now turn.

### III Modes of Presentation

The “mode of presentation” of a term is often supposed to be whatever it is on the basis of which the term picks out its referent. The phrase is also used to mean the cognitive significance of a term, which is often glossed as whatever it is about the terms involved that explain how true identities can be informative. (Why is it informative that Tony Curtis = Bernie Schwartz but not that Tony Curtis = Tony Curtis?) However, it is not plausible that these two functions converge on the same entity, as noted in Tyler Burge (1977) and Alex Byrne and Jim Pryor (2006).<sup>11</sup>

I believe that these two functions or roles are not satisfied by the same entity, and so one could speak of an ambiguity in “mode of presentation.” However, perhaps confusingly, the Property Dualism Argument depends on a quite different ambiguity in “mode of presentation.”<sup>12</sup> I will distinguish between the cognitive mode of presentation (CMoP) and the metaphysical mode of presentation (MMoP). The CMoP is the Fregean mode of presentation mentioned earlier, a constellation of mental (cognitive or experiential) or semantic features of a term or mental representation that plays a role in determining its reference, or, alternatively but not equivalently, constitutes the basis of explanation of how true identities can be informative (and how rational disagreement is possible—I will take the task of explaining informativeness and rational disagreement to be the same, using “cognitive significance” for both. I will also tend to simplify, using “cognitive” to describe the relevant constellation of features. Since semantic and experiential differences make a cognitive difference, they don’t need to

be mentioned separately.). The importantly different, non-Fregean, and less familiar mode of presentation, the MMoP, is a property of the referent. There are different notions of MMoP corresponding to different notions of CMoP. Thus if the defining feature of the CMoP is taken to be its role in determining reference, then the MMoP is the property of the referent in virtue of which the CMoP plays this role in determining reference. If the defining feature of the CMoP is taken to be explaining cognitive significance, then the MMoP is the property of the referent in virtue of which cognitive significance is to be explained.

For example, suppose, temporarily, that we accept a descriptive theory of the meaning of names. On this sort of view, the CMoP of "Hesperus" might be taken to be cognitive features of "the morning star." "The morning star" picks out its referent in virtue of the referent's property of rising in the morning rather than its property of being covered with clouds or having a surface temperature of 847 degrees Fahrenheit. The property of the referent of rising in the morning is the MMoP. (And this would be reasonable for both purposes: explaining cognitive significance and determining the referent.) The CMoP is much more in the ballpark of what philosophers have tended to take modes of presentation to be, and the various versions of what a CMoP might be are also as good candidates as any for what a concept might be. The MMoP is less often thought of as a mode of presentation—perhaps the most salient example is certain treatments of the causal theory of reference in which a causal relation to the referent is thought of as a mode of presentation. (Devitt 1981).

In the passage quoted earlier from Perry's statement of Max Black's argument, Perry seemed often to be talking about the MMoP. For example, he says: "even if we identify experiences with brain states, there is still the question of what makes the brain state an experience, and the experience it is; it seems like that must be an additional *property* the brain state has . . . There must be a *property* that serves as our mode of presentation of the experience as an experience" (2001: 101, italics added). Here he seems to be talking about the MMoP of the brain state (i.e. the experience if physicalism is right). When he says what Max Black would say about what Mary learns, he says: "But then isn't there something about  $Q_R$  that Mary didn't learn in the Jackson room, that explains the difference between ' $Q_R$  is  $Q_R$ ' which she already knew in the Jackson room, and (5) [(5) is:  $Q_R$  is this subjective character], which she didn't?" There must be a new mode of presentation of that state to which ' $Q_R$ ' refers, which is to say some additional and *apparently non-physical aspect* of that state, that she learned about only when she exited the room, that explains why (5) is *new* knowledge." (ibid., italics added) Again, "aspect" means property, a property of the state. So it looks like in Perry's rendition, a mode of presentation is an MMoP. However, his solution to Max Black's problem involves the idea that the concept that Mary acquires or acquires sensitivity to is topic-neutral, and that makes it look as if the issue in the Property Dualism Argument is centered on the CMoP. He says, speaking of a mind-body identity: "This is

an informative identity; it involves two modes of presentation. One is the scientifically expressed *property* of being  $B_{52}$ , with whatever structural, locational, compositional and other scientific properties are encoded in the scientific term. This is not a neutral *concept*. The other is being a sensation that is attended to by Mary. This is a neutral *concept*; if the identity is true, it is the neutral *concept* of a physical property" (italics added). The properties of being  $B_{52}$  and being a sensation that is attended to by Mary are said by Perry to be properties, but also concepts. The properties are modes of presentation in the metaphysical sense, but concepts are naturally taken to be or to involve modes of presentation in the cognitive sense. The view he actually argues for is: "We need instead the topic-neutrality of demonstrative/recognitional concepts" (205).

When I described the metaphenomenal move in the dialectic concerning the Knowledge Argument, I said the phenomenal concept that Mary acquires itself contains or else requires unreducible phenomenality. Why "contains or else requires"? In terms of the CMoP/MMoP distinction: if the CMoP that Mary acquires is partly constituted by an unreduced phenomenal element, then we could say that the concept contains unreduced phenomenality. If the MMoP that is paired with the CMoP involves unreduced phenomenality, one could say that the concept that Mary acquires *requires* an unreduced phenomenal property, as a property of the referent.

In the next section (IV) I will state a version of the Property Dualism Argument in terms of MMoPs. But as we shall see, that argument fails because of what amounts to equivocation: one premise is plausible only if modes of presentation are MMoPs, the other premise is plausible only if modes of presentation are CMoPs. A second version of the Property Dualism Argument (V) will also be couched initially in terms of MMoPs, but that treatment is tactical, and the argument will involve some degree of separate discussion of CMoPs and MMoPs.

I will pause briefly to say where I stand on the main issue. The Property Dualism Argument is concerned with a mind-body identity that says that phenomenal property  $Q =$  brain property  $B_{52}$ . The worry is that the mode of presentation of  $Q$  brings in a non-physical property. But mode of presentation in which sense? Start with the CMoP. Well, a phenomenal CMoP has a constituent that is phenomenal and is used to pick out something phenomenal. Let me explain.

If I think about the phenomenal feel of my pain *while I am having it*, I can do that in a number of different ways. I could think about it using the description "the phenomenal feel of this pain." Or I could think about it using the phenomenal feel of the occurring pain itself as part of the concept. But if a token phenomenal feel does double duty in this way (as a token of an aspect of both the pain and our way of thinking of the pain), no extra specter of dualism arises. If the phenomenal feel is a physical property, then it is a physical property even when it (or a token of it) does double duty. The double duty is not required by a phenomenal concept. One could in principle use one phenomenal feel in a CMoP to pick out a different phenomenal feel; e.g., the phenom-

enal feel of seeing green could be used to pick out the phenomenal feel of seeing red if the concept involves the description "complementary" in the appropriate way. But there is no reason to think that such a use brings in any new specter of dualism.

Move now to the MMoP. We can think about a color in different ways, using different properties of that color. I might think of a color via its property of being my favorite color or the only color I know of whose name starts with "r." Or, I may think about it via its phenomenal feel. And what holds of thinking about a color holds for thinking about the phenomenal feel itself. I can think of it as my favorite phenomenal feel or I can think about it phenomenally, for example, while looking at the color or imagining it. If the referent is a phenomenal property P, the MMoP might be taken to be the property of being (identical to) P. If P is physical, so is being P. So the MMoP sense generates no new issue of dualism. That is where I stand. The Property Dualist, by contrast, thinks that there are essential features of modes of presentation that preclude the line of thought that I expressed. That is what the argument is really about.<sup>13</sup>

I have not given a detailed proposal for the nature of a phenomenal CMoP, since my case does not depend on these details. But for concreteness, it might help to have an example. We could take the form of a phenomenal CMoP to be "the experience: —," where the blank is filled by a phenomenal property, making it explicit how a CMoP might mix descriptonal and non-descriptonal elements.<sup>14</sup> If the property that fills the blank is phenomenal property P, the MMoP that is paired with this CMoP might be the property of *being P* and the referent might be P itself.

I will turn now to a bit more discussion of the CMoP/MMoP distinction and then move to stating and refuting the Property Dualism Argument.

Different versions of the Property Dualism Argument presuppose notions of CMoP and MMoP geared to different purposes. I have mentioned two purposes, fixing reference and accounting for cognitive significance. A third purpose—or rather a constraint on a purpose—is the idea that the MMoP is a priori accessible on the basis of the CMoP. And since one cannot assume that these three functions (cognitive significance, fixing reference, a priori accessibility) go together, one wonders how many different notions of CMoP and MMoP there are. Burge (1977) and Byrne and Pryor (forthcoming) give arguments that—although put in different terms—can be used to make it plausible that these three *raisons d'être* of modes of presentation do not generally go together. However, I will rebut the Property Dualism Argument without relying—except at one point—on any general claim that this or that function does not coincide with a different function. All of the versions of the CMoP that I will be considering share a notion of a CMoP as a cognitive entity, for example a mental representation. The MMoP, by contrast, is always a property of the referent. One way in which the different *raison/s d'être* matter is that for fixing reference, the MMoP must not only apply to the referent but uniquely pick it out—and further, have been in effect given a special authority in picking out the referent by the subject. But when it comes to cognitive

significance, the MMoP need not even apply to the referent (as Byrne and Pryor note in somewhat different terms), so long as it seems to the subject to apply. However, I will not be making use of this difference.

Physicalists say that everything is physical and thus they are committed to the claim that everything cognitive, linguistic, and semantic is physical. However, not all issues for physicalism can be discussed at once, and since the topic of this chapter is the difficulty for physicalism posed by phenomenality, I propose to assume that the cognitive, linguistic, and semantic features of CMoPs do not pose a problem for physicalism so long as they do not involve anything phenomenal.

I will argue that the key step in the Property Dualism Argument can be justified in a number of ways, assuming rather different ideas of what MMoPs and CMoPs are (so there is really a family of Property Dualism Arguments). There are many interesting and controversial issues about how to choose from various rather different ways of fleshing out notions of CMoP and MMoP. My strategy will be to try to avoid these interesting and controversial issues, sticking with the bare minimum needed to state and critique the Property Dualism Argument. In particular, I will confine the discussion to CMoPs and MMoPs of singular terms, since the mind-body identities I will be concerned with are all of the form of an “=” flanked by singular terms (usually denoting properties). I will not discuss belief contexts or other oblique contexts. The reader may wonder if all these different and underspecified notions of mode of presentation are really essential to any important argument. My view, which I hope this chapter vindicates, is that there is an interesting family of arguments for dualism involving a family of notions of mode of presentation and that this family of arguments is worth spelling out and rebutting.

Am I assuming the falsity of a Millian view, according to which modes of presentation do not figure in a proper understanding of concepts? Without modes of presentation, the Property Dualism Argument does not get off the ground, so if Millianism assumes that there are no modes of presentation involved in concepts, then I am assuming Millianism is false. However, the view of phenomenal concepts that I will be using has some affinities with a Millian view. In addition, I will be considering a version of the Property Dualism Argument (in the next section) in which metaphysical modes of presentation on both sides of the identity are assumed to be identical to the referent.

Modal arguments for dualism such as Kripke's and Chalmers's attempt to move from epistemic premises to metaphysical conclusions. (For example, the epistemic possibility of zombies is appealed to in order to justify a claimed metaphysical possibility of zombies.) A similar dynamic occurs with respect to the Property Dualism Argument. One way it becomes concrete in this context is via the issue of whether in an identity statement with different CMoPs there must be different MMoPs. That is, is the following principle true?

D(CMoP)  $\rightarrow$  D(MMoP): A difference in CMoPs in an identity statement entails a difference in MMoPs

Prima facie, the D(CMoP)  $\rightarrow$  D(MMoP) principle is false. Consider the identity "the wet thing in the corner = the thing in the corner covered or soaked with H<sub>2</sub>O." Suppose the CMoP associated with the left-hand side of the identity statement to be the description "the wet thing in the corner." Take the corresponding MMoP to be the property of being the wet thing in the corner. Analogously for the right-hand side. But the property of being the wet thing in the corner = the property of being the thing in the corner covered or soaked with H<sub>2</sub>O. MMoP<sub>1</sub> = MMoP<sub>2</sub>, i.e., there is only one MMoP, even though here are two CMoPs.

Of course, a theorist who wishes to preserve the D(CMoP)  $\rightarrow$  D(MMoP) principle, seeing MMoPs as shadows of CMoPs, can postulate different, more fine-grained quasi-linguistic-cognitive MMoPs that are individuated according to the CMoPs. There is no matter of fact here but only different notions of CMoP and MMoP geared to different purposes. In the discussion to follow, I will focus on the cognitive significance purpose of the CMoP/MMoP pair, since I think that rationale is the most favorable to the view I am arguing against, that we must—that we are forced to—individuate MMoPs according to CMoPs.<sup>15</sup>

Consider the familiar "Paderewski" example. Our subject starts out under the false impression that there were two Paderewskis of the turn of the twentieth century, a Polish politician and a Polish composer. Later, he has forgotten where he learned the two words and remembers nothing about one Paderewski that distinguishes him from the other. That is, he remembers only that both were famous Polish figures of the turn of the twentieth century. Prima facie, the cognitive properties of the two uses of "Paderewski" are the same. For the referent is the same and every property associated by the subject with these terms is the same. However, there is a cognitive difference. We could give a name to the relevant cognitive difference by saying that the subject has two "mental files" corresponding to the two uses of "Paderewski." We could regard the difference in mental files as a semantic difference, or we could suppose that semantically the two uses of "Paderewski" are the same, but that there is a need for something more than semantics—something cognitive but non-semantic—in individuating CMoPs. In either case, there are two CMoPs but only one MMoP, the MMoP being, say, the property of being a famous turn-of-the-twentieth-century Pole named "Paderewski." Thus "Paderewski = Paderewski" could be informative to this subject, despite identical MMoPs for the two terms.

As Loar (1988) notes, Paderewski-type situations can arise for general terms, even in situations where the subject associates the same description with the two uses of the general term. An English speaker learns the term "chat" from a monolingual French speaker who exhibits cats, and then is taught the term "chat" again by the same forgetful teacher exhibiting the same cats. The student tacitly supposes that there are two

senses of 'chat' which refer to creatures that are different in some respect that the student has not noticed or perhaps some respect that the student could not have noticed, something biological beneath the surface that is not revealed in the way they look and act. We can imagine that the student retains two separate mental files for "chat." Each file has some way of specifying some observable properties of chats, for example that they are furry, purr, are aloof, are called 'chat', and most importantly, each of the files says that there are two kinds of creatures called "chat": chats in the current sense are not the same as chats in the other sense. So if the student learns "this chat = this chat" where the first "chat" is linked to one file and the second is linked to the other, that will be informative. It is certainly plausible that there are different CMoPs, given that there are two mental files. But the MMoP associated with both CMoPs would seem to be the same—being furry, purring, being aloof, and being called "chat."<sup>16</sup>

It may be objected that there cannot be only one MMoP since explaining cognitive significance requires postulating a difference somewhere—if not in the MMoP of the referent, perhaps there are two different MMoPs of that MMoP, or two different MMoPs of the MMoP of the MMoP of the referent.<sup>17</sup> But these higher-order MMoPs need not exist! The MMoP of chats in both senses of "chat" is something like: being one of two kinds of furry, purring, aloof pet with a certain look, called "chat." There will not be any further MMoP of that MMoP unless the subject happens to have a thought about the first MMoP. What, then, explains the difference in cognitive significance between the two "chat"s? Answer: the difference in the CMoPs, the difference I have given a name to with the locution of different mental files. Objection: "But that difference in CMoP must correspond to a difference in MMoP!" To argue this way is simply to beg the question against the idea that there can be two CMoPs but only one MMoP.

Objection: "But the cognitive difference between the two CMoPs has to correspond to a difference in the world in order to be explanatory; e.g. the subject will think "The chat on my left is of a different kind from the chat on my right"." Answer: No, the example has been framed to rule out this kind of difference. The subject does not remember *any* differences between the two kinds of chat, not even differences in the situations in which he learned the terms.

It may seem that, wherever there is a difference in CMoP, there *has* to be *some* difference in MMoP of some kind, for otherwise how would the difference in CMoP ever arise? Thus, corresponding to the different CMoPs "covered with water" and "covered with H<sub>2</sub>O" one might imagine that "water" is learned or applied on the basis of properties such as, e.g. being a colorless, odorless, tasteless liquid coming out of the tap, and "H<sub>2</sub>O" is learned and applied on the basis of something learned in a chemistry class having to do with hydrogen and oxygen. Similarly, one might say that in the "chat" case, there must be some difference between the property instantiated in the first and second introductions of the word "chat" to the student. For example, perhaps the first one was introduced on a cloudy day and the second on a sunny day. Or at any rate,

they were introduced at different times and so there is a difference in *temporal* MMoPs. For if there were no difference at all in the world, what would explain—that is explain as rational—why the subject thinks there are different referents?

But this reasoning is mistaken. Maybe there has to be some difference in properties in the world that explain the *arising* of the different CMoPs, but that difference can *fade away leaving no psychological trace*. After the student learns the word “chat” twice, and tacitly assumes that it applies to different animals, the student may forget *all the specific facts* concerning the occasions of the learning of the two words, while still tacitly supposing that things that fit ‘chat’ in one sense do not fit it in the other. The *ongoing* use of two cognitive representations corresponding to the two uses of “chat” do not require any *ongoing* difference in MMoPs in order to be completely legitimate and rational. Likewise for the “Paderewski” example. To suppose otherwise is to *confuse ontology with metaphysics*.

The following reply would fit the view of many dualists such as Chalmers and White: “But doesn’t there have to be a possible world, different from the actual world, that the subject rationally supposes he is in, in which the two CMoPs are CMoPs of different referents? For the subject who believes there are two different Paderewskis, a musician and a politician, the rationalizing world is a world that contains two persons named ‘Paderewski’, both born around the turn of the century, one famous as a politician, the other famous as a musician. Now in your version of the *chat* and Paderewski stories as you tell them, you have eliminated all differences in specific properties available to the subject. You have postulated that the subject does not believe that one is a politician and the other is a musician—but the same strategy can be followed all the same. The world that rationalizes the subject’s view that there are two Paderewskis is a world in which there are two persons named Paderewski, both Europeans born around the turn of the century. The subject knows that there are bound to be many properties that distinguish them (if only their spatial locations) and he can single out two of them in his imagination, X and Y, such that one has property X but lacks Y, the other has property Y but lacks X. If the subject were rationalizing his belief, he could appeal to X and Y, so they can constitute his different MMoPs. One of his MMoPs, call it, MMoP<sub>A</sub>, is X; the other, MMoP<sub>B</sub>, is Y. The fact that the subject does not know what X and Y are does not change the fundamental strategy of rationalizing the subject’s error in which the cognitive difference, CMoP<sub>A</sub> vs. CMoP<sub>B</sub>, requires a metaphysical difference, that between MMoP<sub>A</sub> and MMoP<sub>B</sub>.”

This territory will be familiar to those who have thought about modal arguments for dualism. The dualist supposes that the conceivability of zombies justifies the claim that there is a possible world in which there is a zombie, and that leads by a familiar route to dualism.<sup>18</sup> The physicalist resists the argument from epistemology to metaphysics in that case, and the physicalist should resist it here as well. We can explain the erroneous view that Paderewski is distinct from Paderewski by reference to *epistemic possibilities*

*only*: The epistemically possible situation (not a genuine metaphysically possible world) in which, as one might say, Paderewski is not Paderewski. This is an epistemic situation in which Paderewski—who has property X but not Y (and, as we the theorists might say, is identical to the actual Paderewski) is distinct from Paderewski, who has property Y but not X (and who, as we the theorists might say is also identical to the actual Paderewski). Of course there is no such world, but this coherently describable epistemic situation accurately reflects the subject’s epistemic state. We need only this coherently describable epistemic situation, not a genuine difference in properties in a genuinely possible world. (I follow the common convention of calling a genuinely possible situation a world and reserving “situation” for something that may or may not be possible.) Likewise for the chat example. *The rationality of error can be explained epistemically with no need for metaphysics*. This is a basic premise of this chapter and it links the physicalist position on the Property Dualism Arguments to the physicalist position with regard to the Kripke-Chalmers modal arguments. Given this principle, I believe that the Property Dualism Argument, the Knowledge Argument, and the familiar modal arguments can be defanged, so the residual issue—not discussed here—is whether this principle is right. Chalmers and White argue that genuine worlds are needed to rationalize the subject’s behavior, but I have not seen anything in which they argue against situations as rationalizers.

In my view, the issue I have been discussing is the key issue concerning all forms of the Property Dualism Argument (and some modal arguments for dualism as well). If the  $D(\text{CMoP}) \rightarrow D(\text{MMoP})$  principle does not come up in some form or other, the main issue has been skipped.

There is one reason for the view that a difference in CMoPs entails a difference in MMoPs that I have not yet mentioned and will not go into in detail until the end of the chapter in the “thin/thick” part of section VI: the view that MMoPs must be thin in the sense of having no hidden essence in order to account for their role in determining reference and explaining cognitive significance.

Of course, as before, those who prefer to see MMoPs as shadows of CMoPs can think of the property of being a chat—relative to the link to one mental file—as distinct from the property of being a chat—relative to the link to the other mental file. That is, the MMoP would be individuated according to the corresponding CMoP to preserve one-one correspondence. According to me, one can individuate MMoPs as shadows of CMoPs—or not—but as we will see, the Property Dualist has to insist on individuating MMoPs as shadows of CMoPs.

What about the converse of the cases we have been talking about—one CMoP, two MMoPs? People often use one mental representation very differently in different circumstances without having any awareness of the difference. Aristotle famously used the Greek word we translate with ‘velocity’ ambiguously, to denote in some circumstances instantaneous velocity, and in other circumstances, average velocity. He did not appear to see the difference. And the Florentine “Experimenters” of the seven-

teenth century used a term translated as "degree of heat" ambiguously to denote both heat and the very different magnitude of temperature. Some of their measuring procedures for detecting "degree of heat" measured heat and some measured temperature (Block and Dworkin 1974). For example, one test of the magnitude of "degree of heat" was whether a given object would melt paraffin. This test measured whether the temperature was above the melting point of paraffin. Another test was the amount of ice an object would melt. This measured amount of heat, a very different magnitude (Wiser and Carey 1983). One could treat these cases as one CMoP which refers via different MMoPs, depending on context. Alternatively, one could treat the difference in context determining the difference in CMoP, preserving the one-one correspondence. This strategy would postulate a CMoP difference that was *not available from the first-person point of view*, imposed on the basis of a difference in the world. That is, it would take a conceptual revolution for theorists of heat phenomena to see a significant difference between their two uses of "degree of heat," so the cognitive difference was not one that they could be aware of, given their conceptual scheme. A CMoP difference that is not available to the subject is not acceptable for purposes that emphasize the relevance of the CMoP to the first person.

In what follows, I will assume independently individuated CMoPs and MMoPs. However, at one crucial point in the dialectic, I will examine whether individuating MMoPs according to CMoPs makes any difference to the argument, concluding that it does not. Why does it matter whether or not there is a one-one correspondence between CMoPs and MMoPs? I will now turn to a member of the family of Property Dualism Arguments that turns on this issue. The argument of the next section, or something much like it, has been termed the "property dualism argument" by McGinn (2001), though I think a somewhat different argument is more closely related to what Smart, Perry, and White have in mind, what I will call the "orthodox" property dualism argument in sections V and VI. The two arguments depend on nearly the same issues.

#### IV E → 2M Version of the Property Dualism Argument

Saul Kripke (1980) argued for dualism as follows. Identities, if true, are necessarily true. But cases of mind without brain and brain without mind are possible, so mind-brain identity is not necessary, and therefore not true.<sup>19</sup> A standard physicalist response is that the mind-body relation is necessary, but appears, misleadingly, to be contingent: there is an "illusion of contingency." Most of the discussion of an illusion of contingency has focused on the mental side of the identity statement, but Richard Boyd (1980) noted that one way for a physicalist to explain the illusion of contingency of "Q = cortico-thalamic oscillation" would be to exploit the gap between cortico-thalamic oscillation and its mode of presentation. When we appear to be conceiving of Q without the appropriate cortico-thalamic oscillation (e.g., a disembodied mind or

a version of spectrum inversion), all we are managing to conceive is Q in a situation in which we are misled by our mode of epistemic access to cortico-thalamic oscillation. What we are implicitly conceiving, perhaps, is a situation in which our functional magnetic resonance scanner is broken. So the physicalist is free to insist that cortico-thalamic oscillation is part of what one conceives in conceiving of Q, albeit not explicitly, and, conversely, Q is part of what one conceives in conceiving of cortico-thalamic oscillation.

But the sole reason for believing in *implicit* commitment to epistemic failure such as failing brain measurement devices in these thought experiments is that it avoids the non-physicalist conclusion, and that is not a very good reason. The conceivability of zombies, inverted spectra, disembodied minds, etc. does not seem *on the surface* to depend on implicit conceiving of malfunctioning apparatus. For example, it would seem that one could conceive of the brain and its cortico-thalamic oscillation “neat” (as in whiskey without ice or water), i.e., without conceiving of any particular apparatus for measuring cortico-thalamic oscillation.

However, the idea that one can conceive of cortico-thalamic oscillation “neat,” is useful not just in combating Boyd’s objection to Kripke’s argument for dualism, but also in a distinct positive argument for dualism.<sup>20</sup>

Consider an empirical mind-body property identity claim in which *both* terms of the identity—not just the mental term—have MMoPs that are identical to the referent. (MMoPs are, of course, properties, and we are thinking of the referents of mind-body identity claims as properties as well.) McGinn (2001) claims—albeit in other terms—that this would be true for a standard physicalist mind-body identity claim. He says “it is quite clear that the way of thinking of C-fiber firing that is associated with “C-fiber firing” is simply that of having the property of C-fiber firing . . . it connotes what it denotes” (294). Is cortico-thalamic oscillation or potassium ion flow across a membrane its own metaphysical mode of presentation? That depends on what a metaphysical mode of presentation is supposed to be, and that depends on the purpose we have for them. I have mentioned a number of different conceptions of MMoPs, explaining cognitive significance, determining the referent, a priori graspability (on the basis of understanding the term it is the MMoP of).

Suppose we took explaining cognitive significance as primary. How can we explain why “cortico-thalamic oscillation = cortico-thalamic oscillation” is less informative than “Q = cortico-thalamic oscillation”? Do we need to appeal to an MMoP of *being cortico-thalamic oscillation* for “cortico-thalamic oscillation”? First, if the identity is true, it is not clear that an MMoP of *being cortico-thalamic oscillation* is of any use. For if the MMoP of Q is *being* Q, then the MMoP of the left-hand side would be the same as for the right-hand side for both the trivial and the cognitively significant identity so that MMoP is useless. Second, other MMoPs can explain the difference in cognitive significance. For example, a scientist might conceive of Q from the first-person point of

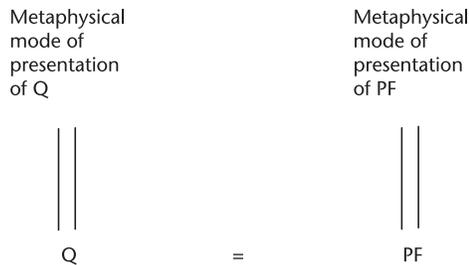
view but think of cortico-thalamic oscillation in terms of the machinery required to detect it. A scientist might even think of it perceptually, in terms of the experience in the observer engendered by the apparatus, as radiologists often say they do in the case of CAT scans.

Suppose instead that we take the special reference-fixing authority as the *raison d'être* of the MMoP. This conception has the advantage that if we have given the special reference-fixing authority to an MMoP, then it is a priori graspable that the referent, if it exists, has that property (Byrne and Pryor, 2006). Again, it is not very plausible that the MMoP of "cortico-thalamic oscillation" or "potassium ion flow" is *being cortico-thalamic oscillation* or *being potassium ion flow*. What would be the point of giving the special reference-fixing authority for 'cortico-thalamic oscillation' to the property of *being cortico-thalamic oscillation*? (Recall that uniquely determining the referent is not enough for reference fixing—the subject must also have decided (even if implicitly) that that uniqueness property governs the term, as noted by Byrne and Pryor.)

But there is a kind of mind-body identity in which the right-hand term does more plausibly have an MMoP on both the cognitive significance and the reference-fixing sense that is identical to the referent (or at any rate has the relation of *being X* to *X*), namely a mental-functional identity claim. I will skip the cognitive significance rationale, focusing on determination of reference. What is our way of fixing reference to the property of being caused by A and B and causing C and D if not that property itself (or the property of having that property itself): that is, *being caused by A and B and causing C and D*? For many complex functional properties, it is hard to imagine any other reference-fixing property that could be taken very seriously, since it is hard to see how such functional properties could be singled out without singling out each of the causal relations. Further, the functional property would be plausibly a priori graspable on the basis of a typical concept of it. These considerations suggest that a mental-functional identity claim is a better candidate for the kind of identity claim being discussed here than the standard mental-physical identity claim.

Since the candidate identity claim has to be plausibly empirical, let us think of the physical side as a *psychofunctional* property (see Block 1978, where this term was introduced), that is, a functional property that embeds detailed empirical information that can only be discovered empirically. For example, we can take the functional definition to include the Weber-Fechner Law (which dictates a logarithmic relation between stimulus intensity and perceptual intensity). To remind us that we are taking the right-hand side of the identity to be a psychofunctional property, let us represent it as "PF."

Let our sample mind-body identity be "Q = PF," where as before, "Q" denotes a phenomenal property. As before, let us use "M" for the metaphysical mode of presentation of Q, and let us assume that M = *being Q*. *Ex hypothesi*, the metaphysical mode of presentation of PF is *being PF*. But since M = *being Q*, and the MMoP of PF = *being PF*, if

**Figure 21.1**

Empirical  $\rightarrow$  2MMoP Argument for Dualism

MMoP (i.e., metaphysical mode of presentation) of Q = *being* Q, MMoP of PF = *being* PF, so if it is true that Q = PF, then the MMoP of PF = the MMoP of Q. But if the two MMoPs are the same, the identity is supposed to be a priori. However, since the identity is not a priori, the argument concludes, it is not true. The vertical “=” signs represent the relation between X and *being* X.

the identity is true (Q = PF) it follows that the MMoPs of both sides are the same. (See fig. 21.1.) But if the MMoPs of both sides are the same, then—supposedly—the identity cannot be a posteriori. Here I assume the principle that an empirical identity must have distinct MMoPs for the two sides of the identity. Call that Empirical  $\rightarrow$  2MMoP, or E  $\rightarrow$  2M for short. That would show that the original a posteriori identity claim—which embeds, you will recall, the Weber-Fechner Law and so cannot be supposed to be a priori—cannot be true: psychofunctionalism is refuted (or so it may seem).

The upshot would be that if we want a functionalist mind-body identity thesis, it can only be a priori (in which case deflationism—in the sense of conceptual reductionism about consciousness—holds). Or if we reject deflationism, the upshot is that functionalist mind-body identity is false (i.e. the relevant form of dualism is true). So the conclusion is the same as that of the Property Dualism Argument, but restricted to functionalist mind-body identity claims: only dualism and deflationism are viable.

Why accept the E  $\rightarrow$  2M Principle? Suppose that different CMoPs entail different MMoPs (i.e., the D(CMoP)  $\rightarrow$  D(MMoP) principle). An empirical identity requires different CMoPs, since, it may be said (but see below) if two of one’s terms have the same cognitive significance, that fact is a priori available to the subject. An empirical identity requires different CMoPs, different CMoPs require different MMoPs, so an empirical identity requires different MMoPs. So it would follow that an empirical identity requires different MMoPs. This is one way of seeing why the considerations of the last section about the one-one correspondence between CMoPs and MMoPs matter for dualism.<sup>21</sup>

You will not be surprised to learn that my objection to the argument is to the E  $\rightarrow$  2M Principle and the claim that different CMoPs require different MMoPs which engenders the E  $\rightarrow$  2M Principle. As I mentioned, a priority is better taken to be a mat-

ter of sameness of CMoPs, not a matter of sameness of MMoPs. In the example given above, before the subject learns that there is only one kind of creature called 'chat', he has two CMoPs but only one MMoP.<sup>22</sup>

The argument could be resuscitated if the CMoP of each side were identical to the referent. But at least on the right-hand side, this seems like a category mistake: our concept of a psychofunctional state (or something cognitive about it) is a poor candidate for identity with the psychofunctional state itself.

In comments on this chapter, David Chalmers suggested a variant of the  $E \rightarrow 2M$  Argument. Instead of " $Q = PF$ ," consider " $Q = P$ ," where  $P$  is a physical property. Assume the  $E \rightarrow 2M$  Principle—that an empirical identity must have distinct MMoPs for the two sides of the identity. If " $Q = P$ " is empirical, then it follows that the MMoP of  $Q$  is distinct from any MMoP of a physical property. For if the MMoP of  $P$  is just  $P$  and the MMoP of  $Q$  is just  $Q$ , and since the  $E \rightarrow 2M$  principle requires that the two MMoPs be distinct, it follows by transitivity of identity that  $Q$  must be distinct from  $P$ , and so dualism is true.

My objections to this variant are, as before:

1. The argument assumes the  $E \rightarrow 2M$  principle in the first step, in which it is argued that the MMoP of  $Q$  is distinct from any MMoP of any physical property, and as mentioned above, I reject the  $E \rightarrow 2M$  principle.
2. The argument presupposes the view that it is reasonable to take the MMoP of a physical property,  $P$ , to be just  $P$  itself. (It would be better to take it to be being  $P$ , but I will ignore this glitch.) As I emphasized above, I find this doubtful for physical properties although more plausible for functional properties. So at most, the argument is an argument against empirical functionalism (psychofunctionalism) rather than against physicalism.

## V Back to Stating the Orthodox Property Dualism Argument

The  $E \rightarrow 2M$  Argument raises many of the same issues as the Smart, Perry, and White argument, to which I now turn, but is not quite the same.

To frame the orthodox Property Dualism Argument, we need to use a contrast between deflationism and phenomenal realism about consciousness.<sup>23</sup> In its strong form, deflationism is *conceptual reductionism* concerning concepts of consciousness. More generally, deflationism says that a priori or at least armchair analyses of consciousness (or at least armchair sufficient conditions) can be given in non-phenomenal terms, most prominently in terms of representation, thought or function.<sup>24</sup> (If the analyses are physicalistic, then deflationism is a form of what Chalmers (1996) calls Type A physicalism.) The deflationist says phenomenal properties and states do exist, but that commitment is "deflated" by an armchair analysis that reduces the commitment. The conclusion of the orthodox Property Dualism Argument is that physicalism

and phenomenal realism are incompatible: the phenomenal realist must be a dualist and the physicalist must be a deflationist.

In what follows, I will drop the term “orthodox,” referring to the argument I am spelling out simply as the “Property Dualism Argument.”

The Property Dualism Argument in the form in which I will elaborate it depends on listing all the leading candidates for the nature of the MMoP of the mental side. My emphasis on the MMoP at the expense of the CMoP is artificial but has some dialectical advantages. The metaphenomenal move is what is really being explored, the view that with the statement of mind-body identity, either or both of the MMoP or the CMoP brings in unreducible phenomenality. Most of the issues that come up with respect to the MMoP could also have been discussed with respect to the CMoP. In rebutting the Property Dualism Argument, I will go back to the CMoP occasionally.

Recall that the phenomenal side (which I will always put on the left side of the sentence on the page) of the identity is “Q.” Let the metaphysical, mode of presentation of Q be M (for *mental*, *metaphysical* and *mode of presentation*). The basic idea of the Property Dualism Argument is that even if Q is physical, there is a problem about the physicality of M. I will discuss five proposals for the nature of M. M might be (one or more of)

1. mental,
2. physical,
3. non-physical,
4. topic-neutral or
5. non-existent, i.e. the reference is “direct” in one sense of the term.

Here is a brief summary of the form of the argument. (1) is correct but useless in the sense that both the physicalist and the dualist will agree on it. The problem for the physicalist is to show how M can be both physical and mental. (2) is (supposed to be) ruled out by the arguments given below, which will be the main topic of the rest of this chapter. (5) changes the subject by stipulating a version of the original property identity “Q = cortico-thalamic oscillation” in which Q is not picked out by a genuine phenomenal concept. So the remaining options are the dualist option (3), and the topic-neutral option (4). White (1986) argues that (4) is deflationist as follows: The topic-neutral properties that are relevant to the mind-body problem are functional properties. If M, the metaphysical mode of presentation of Q, is a topic-neutral and therefore—according to White—a functional property, then that could only be because the phenomenal concept has an a priori functional analysis; e.g., the concept of pain might be the concept of a state that is caused by tissue damage and that causes certain reactions including interactions with other mental states. But an a priori functional analysis is deflationist, by definition. The upshot is supposed to be that only (3) and (4) remain; (3) is dualist and (4) is deflationist. The conclusion of the Property Du-

alism Argument is that we must choose between dualism and deflationism: phenomenal realist physicalism is not tenable.

Of course the argument as I have presented it makes the title "Property Dualism Argument" look misguided. Anyone who does take the argument to argue for dualism would presumably want to add an argument against deflationism. However, Smart and Armstrong (and in a more convoluted version, David Lewis (1980)) use the argument the other way around: the threat of dualism was brought in to argue for deflationism. Their view is that 'pain' contingently picks out a physical state, for 'pain' is a non-rigid designator whose sense is *the item with such and such functional role*. But the view that stands behind this picture is that the nature of the mental is given a priori as functional. 'Pain' is a non-rigid designator, but what it is to have pain, that which cases of pain all share in virtue of which they are pains, is a certain functional property, and that functional property can be rigidly designated by, for example, the phrase "having pain."<sup>25</sup> So the view is a version of deflationism.

White (1986) adds an anti-dualist premise to the argument whose conclusion is *dualism or deflationism*, but in some papers in preparation (White (unpublished *a, b*)), he drops that premise, arguing instead for dualism. The point of view of the present chapter is phenomenal realist and physicalist, the very combination that the argument purports to rule out. (Though see Block 2002 for a different kind of doubt about this combination.) As we will see when I get to the critique of the Property Dualism Argument, the argument fares better as an argument for dualism than for deflationism, so the name of the argument is appropriate.

There are some well-known problems concerning the notion of a physical property.<sup>26</sup> But not all philosophy concerned with physicalism can be about the problem of how to formulate physicalism. For some purposes, physicalism is clear enough.<sup>27</sup> In particular, the debate about the Property Dualism Argument seems relatively insensitive to issues about what exactly physicalism comes to. (If not, that is an objection to what follows.)

I will take the notions of physicalistic vocabulary and mentalistic vocabulary to be unproblematic. A physical property is a property canonically expressible in physicalistic vocabulary. (I won't try to explain "canonically.") For example, the property of being water is a physical property because that property = the property of being H<sub>2</sub>O. The predicate "— is H<sub>2</sub>O" is a predicate of physics (or anyway physical science), the property of being H<sub>2</sub>O is expressed by that predicate, and so is the property of being water, since they are the same property. (Note that the relation of "expression" is distinct from referring.) A mentalistic property is a property canonically expressible in mentalistic vocabulary. "— is a pain" is a mentalistic predicate and thus expresses (or connotes) a mental property (that of being a pain). A non-physical property is a property that is not canonically expressible in physicalistic vocabulary. (So physicalism dictates that mental properties are canonically expressible in both physicalistic and mentalistic vocabularies.) I don't know if these notions can ultimately be spelled out

in a satisfactory manner, but this is another of the cluster of issues involved in defining physicalism that not every paper concerning physicalism can be about.

Smart said that a topic-neutral analysis of a property term entails neither that the property is physical nor that it is non-physical. It would not do to say that a topic-neutral property is expressible in neither physicalistic nor non-physicalistic terms, since if physicalistic terms and non-physicalistic terms are all the terms there are, there are no such properties. The key kind of topic-neutral property for present purposes is a functional property, a second-order property that consists in the having of certain other properties that are related to one another (causally and otherwise) and to inputs and outputs, all specified non-mentalistically. One could say that a topic-neutral property is one that is expressible in terms of logic, causation and non-mentalistically specified input-output language. The question may arise as to whether these terms are to be counted as part of physicalistic vocabulary or not. For purposes of this chapter, I will leave that issue undecided.

I will briefly sketch each of the proposals mentioned above for the nature of M (the metaphysical mode of presentation of Q, which you recall was introduced in the sample identity, “Q = cortico-thalamic oscillation”) from the point of view of the Property Dualism Argument, adding some critical comments at a few places. Then, after a section on phenomenal concepts, I will rebut the Property Dualism Argument.

#### **Proposal 1: M is Mental**

If M is mental, then the same issue of physicalism arises for M, the metaphysical mode of presentation of Q, which arises for Q itself. It isn't that this proposal is false, but rather that it presents a challenge to the physicalist of showing how it could be true.

#### **Proposal 2: M is Physical**

The heart of the Property Dualism Argument is the claim that M cannot be physical.<sup>28</sup> I will discuss three arguments for that claim. The first proceeds as follows. If M is physical, it will not serve to account for cognitive significance: specifically, the informativeness of identities and the possibility of rational error. For example, suppose the subject rationally believes that Q is instantiated here and now but that cortico-thalamic oscillation is absent. He experiences Q, but also has evidence (misleading evidence, according to the physicalist) that cortico-thalamic oscillation is absent. We can explain rational error by appeal to two different MMoPs of the referent, only one of which is manifest. Let us take the metaphysical mode of presentation of the right-hand side of the mind-body identity “Q = cortico-thalamic oscillation” to be a matter of the instrumentation that detects cortico-thalamic oscillation. We can think of this instrumentation as keyed to the oxygen uptake by neural activity. (Functional magnetic resonance is a form of brain imaging that detects brain activity via sensitivity to metabolism of the oxygen that feeds brain activity.)

The focus of this argument is on the left-hand side, the metaphysical mode of presentation of *Q*, namely *M*. According to the argument, if *M* is physical, it cannot serve the purpose of explaining rational error. For, to explain rational error, we require a metaphysical mode of presentation that makes rational sense of the subject's point of view. But the physical nature of *M* is not available to the subject. (The subject can be presumed to know nothing of the physical nature of *M*.) The problem could be solved if there was a mental mode of presentation of *M* itself, call it "*M\**." But this is the first step in a regress in which a physical metaphysical mode of presentation is itself presented by a mental metaphysical mode of presentation. For the same issue will arise all over again for *M\** that arose for *M*. Explaining rational error requires two modes of presentation, the manifestations of which are available to the first person at some level or other, so postulating a physical metaphysical mode of presentation just takes out an explanatory loan that has to be paid back at the level of modes of presentation of modes of presentation, etc. The upshot is that physical metaphysical modes of presentation do not pass the test imposed by one of the stipulated purposes of metaphysical modes of presentation.

There is also a related non-regress argument: if *M* is physical, a subject could believe he is experiencing *Q*, yet not believe he is in a state that has *M*. But there can be no epistemic gap of this sort between the metaphysical mode of presentation of a phenomenal property and the property itself.

Another argument that *M* cannot be physical is given by White (1986). He notes, plausibly enough, that "Since there is no physicalistic description that one could plausibly suppose is coreferential a priori with an expression like "Smith's pain at *t*," no physical property of a pain (i.e., a brain state of type *X*) could provide the route by which it was picked out by such an expression." (See *ibid.* 353, reprinted in Block, Flanagan, and Güzeldere 1997: 706). Or in the terms of this chapter, there is no physicalistic description that one could plausibly suppose is coreferential a priori with a mentalistic expression such as "*Q*," so no physical property could provide the route by which it was picked out by such an expression. The property that provides the route by which *Q* is picked out by "*Q*" is just the metaphysical mode of presentation (on one way of understanding that term) of *Q*, that is, *M*. So the upshot is supposed to be that *M* cannot be physical because there is no physicalistic description that is coreferential a priori with a phenomenal term.

A third argument that *M* cannot be physical is that MMoPs must be "thin." We can take a thin property to be one that has no hidden essence. "Thick" properties include Putnamian natural kinds such as water. According to the Property Dualist, the explanatory purpose of MMoPs precludes thick properties serving as modes of presentation. For, it might be said, it is not *all* of a thick property that explains rational error but only an *aspect* of it. The same conclusion can be reached if one stipulates that the MMoP is a priori available on the basis of the CMoP. Since hidden essences are never

a priori available, hidden essences cannot be part of MMoPs. I will indicate later how the claim that MMoPs must be thin can be used to argue against the phenomenal realist physicalist position. This consideration can also be used to bolster the regress argument and the argument of the last paragraph.

I said earlier that the standard reply to Jackson's argument attempts to substitute a dualism of concepts for a dualism of properties and facts. And then I noted that the objection that is exploited by both the Knowledge Argument and the Property Dualism Argument is that the dualism of concepts is held to *require* a dualism of properties and facts. Thin MMoPs are in effect individuated according to the corresponding CMoPs. So the attempt to substitute a dualism of concepts for a dualism of properties and facts is opposed by the claim that properties and facts should be individuated according to concepts, and so if Mary acquires a new concept, she acquires a concept that involves new properties and facts.

Earlier I discussed the  $D(\text{CMoP}) \rightarrow D(\text{MMoP})$  principle, suggesting that there could be cases of two CMoPs with the same MMoP. One example was the identity 'the thing in the corner covered with water = the thing in the corner covered with  $\text{H}_2\text{O}$ '. The CMoP associated with the left-hand side is the description "the thing in the corner covered with water," and the corresponding MMoP is the property of being the thing in the corner covered with water. Analogously for the right-hand side. But the property of being the thing in the corner covered with water = the property of being the thing in the corner covered with  $\text{H}_2\text{O}$ , so there is only one MMoP. But if MMoPs cannot be "thick," being covered with water cannot be an MMoP. The relevant MMoP would have to be some sort of stripped-down version of being covered with water that does not have a hidden essence.<sup>29</sup>

These three arguments are the heart of the orthodox Property Dualism Argument. I regard the three arguments as appealing to MMoPs in different senses of the term, and when I come to critiquing these three arguments later in the chapter, I will make that point more explicitly. In my critique, I will argue that two of the arguments do not stand on their own, but rather presuppose the third ("thick/thin") argument. Then I will examine that argument.

### **Proposal 3: M is Non-physical**

If M is non-physical, dualism is true. So this proposal will not preserve the compatibility of phenomenal realism with physicalism and will not be considered further here.

### **Proposal 4: M is Topic-neutral**

In effect, I covered this topic earlier, in my discussion of Perry. A genuinely phenomenal concept is required for getting the Property Dualism Argument (and the Mary argument) off the ground so a topic-neutral concept will not do.

**Proposal 5: There is no M: the Relation between "Q" and its Referent is "Direct" in One Sense of the Term**

A phenomenal concept is a phenomenal way of thinking of a phenomenal property. Phenomenal properties can be thought about using non-phenomenal concepts of them, for example, the concept of the property occurring at 5 p.m. As I keep mentioning, the Property Dualism Argument requires a phenomenal concept in my sense of the term, and so if the mind-body identity at issue does not make use of a phenomenal concept, the Property Dualist will simply substitute a mind-body identity that does make use of a phenomenal concept. Of course, if it could be shown that there could not be any phenomenal concepts, then the Property Dualism Argument will fail. But I believe in phenomenal concepts and so will not discuss this view further.

Phenomenal concepts are often said to refer "directly," but what this is often taken to mean in philosophy of mind discussions is not that there is no metaphysical mode of presentation, but rather that the metaphysical mode of presentation is a necessary property of the referent.

Loar (1990) says:

Given a normal background of cognitive capacities, certain recognitional or discriminative dispositions suffice for having specific recognitional concepts ... A recognitional concept may involve the ability to class together, to discriminate, things that have a given objective property. Say that if a recognitional concept is related thus to a property, the property triggers applications of the concept. Then the property that triggers the concept is the semantic value or reference of the concept; the concept directly refers to the property, unmediated by a higher order reference-fixer.<sup>30</sup>

Consider the view that a phenomenal concept is simply a recognitional concept understood as Loar suggests whose object is a phenomenal property that is a physical property. I don't know if this would count as a concept that has no metaphysical mode of presentation at all, but certainly it has no phenomenal metaphysical mode of presentation, and so is not a phenomenal concept in the sense required for the Property Dualism Argument. For one can imagine a case of totally unconscious triggering of a concept by a stimulus or by a brain state. As Loar notes, there could be an analog of "blindsight" in which a self-directed recognitional concept is triggered blankly, without any phenomenal accompaniment. (Of course this *need* not be the case—the brain property doing the triggering could itself be phenomenal, or else the concept triggered could be phenomenal. In either case, phenomenality would have to be involved in the triggering of the concept.) And for this reason, Loar (1990: 98; 1997: 603) argues, a phenomenal concept is not merely a self-directed recognitional concept.

To sum up, the central idea of the Property Dualism Argument (and the Knowledge Argument) is the metaphenomenal move, the idea that in thinking about a phenomenal property, a further phenomenal property must be brought in as part of the CMoP or with the MMoP and that further phenomenal property poses a special problem for

physicalism, because of its connection to a mode of presentation. There are three functions of modes of presentation on one or another conception of them that putatively lead to this resistance to physicalism, a function in explaining cognitive significance, of determining reference, and of a priori availability on the basis of understanding the term.

The Property Dualism Argument says that in the identity “Q = cortico-thalamic oscillation,” the metaphysical mode of presentation of Q (namely, M) must be either mental, physical, non-physical, topic-neutral, or “direct” (in which case there is no metaphysical mode of presentation). The mental proposal is supposed to be useless. The physical proposal is supposed to be ruled out because there is no a priori available physicalistic description of Q, because of supposed regress, and because the metaphysical mode must be “thin.” The “direct reference” proposal appears to be ruled out by the fact that the concept of Q needed to get the argument off the ground is a phenomenal concept with a phenomenal metaphysical mode of presentation. So the only proposals for M that are left standing are the non-physical and topic-neutral proposals. The topic-neutral proposal involves a form of deflationism. So the ultimate metaphysical choice according to the Property Dualism Argument is between deflationism and dualism. The upshot is that the phenomenal realist cannot be a physicalist. The argument is a way of making the metaphenomenal move described earlier concrete: the statement of a mind-body identity claim is supposed to be self-defeating because the MMoP (or the CMoP—but I have focused on the MMoP) of the phenomenal term of the identity is supposed to bring in unreduced phenomenality. The only way to avoid that unreduced phenomenality is to give a deflationist analysis; the alternative is dualism.

### Objections Concerning Phenomenal Concepts

I have been using a notion of phenomenal concept based on the observation that there is a fundamental exercise of it in which a token of a phenomenal property can serve in thought to represent a phenomenal property. In such a case, there is a phenomenal property that is part of the CMoP. There is a special case that I mentioned earlier in which a token of a phenomenal property can serve in thought to represent that very phenomenal property. In such a case, the phenomenal property does double duty: as part of the concept and also as the referent of that concept. Before I go on to rebutting the Property Dualism Argument, I will briefly consider two objections to this conception of a phenomenal concept.

**Objection** (put to me by Kirk Ludwig) I can truly think “I am not having an experience as of red now” using a phenomenal concept of that experience, but that would not be possible on your view of what phenomenal concepts are.

**Reply** Ludwig is right that one can truly think "I am not having a red experience now" using a phenomenal concept of that experience. As I mentioned, a phenomenal concept has non-fundamental uses in which there is nothing phenomenal going on in exercising the concept. But even in one of the fundamental uses in which a token of an experience as of red is being used to represent that experience, it is possible to think a false thought to the effect that one is not having that experience. For example, one might set oneself to think something that is manifestly false, saying to oneself, "I am not having an experience as of red now," using a phenomenal concept—in my heavy-duty sense of phenomenal concept—of the experience.

**Objection** On your view, a phenomenal property does double duty: as the referent but also as part of the mode of presentation of that referent. But if physicalism is true, cortico-thalamic oscillation would be part of its own mode of presentation. Does that really make sense?

**Reply** The claim is not that the right-hand side of the identity "Q = cortico-thalamic oscillation" has an associated mode of presentation (CMoP or MMoP) that involves cortico-thalamic oscillation. I have been supposing that the modes of presentation of the right-hand side have to do with the physical properties of oxygen metabolism that are exploited by scanning technology. Modes of presentation—both cognitive and metaphysical—are modes of presentation associated with *terms* or the concepts associated with the terms, and the identity involves *two* terms. There is no conflict with the indiscernibility of identicals if one keeps use and mention distinct. That is, cortico-thalamic oscillation is part of its own mode of presentation only as *picked out by the phenomenal concept of it*.<sup>31</sup>

## VI Critique of the Property Dualism Argument

The Property Dualism Argument says that the metaphysical mode of presentation of Q, namely M, cannot be physical (using the identity "Q = cortico-thalamic oscillation" as an example). I mentioned three (subsidiary) arguments to that effect, a regress argument, an argument concerning a priori availability, and an argument based on the thin/thick distinction. I also mentioned three different *raison d'être* of modes of presentation, each of which could be used with respect to any of the three arguments, yielding in principle, nine distinct arguments—even eighteen if one counts the CMoP/MMoP dimension—making refutation potentially unmanageable. I will try to finess this multiplicity by taking the strongest form of each argument, and bringing in the other *raison d'être* as they are relevant. (I have already mentioned my focus on the MMoP in most of the argument at the expense of the CMoP.) The exposition of the

argument has been long, but the critique will be much shorter. As we will see, the first two arguments do not really stand alone, but require the thin/thick argument. My critique of the thin/thick argument is aimed at depriving the conclusion of support rather than outright refutation.

### Regress

The first argument mentioned earlier against the physical proposal is a regress argument. The idea is that if M is physical, it will not serve to account for cognitive significance (informativeness). For example, suppose the subject rationally believes that he has Q but not cortico-thalamic oscillation. As noted earlier, there can be rational error in supposing A is present without B when in fact  $A = B$ . That error can be explained if, at a minimum, there is a metaphysical mode of presentation of A,  $MMoP_A$  and a metaphysical mode of presentation of B,  $MMoP_B$ , such that  $MMoP_A$  is manifest and  $MMoP_B$  is not.

Applied to the case at hand, the physicalist thesis that  $Q =$  cortico-thalamic oscillation, let us assume that the  $MMoP$  of “cortico-thalamic oscillation” is the one mentioned earlier having to do with oxygen uptake by neural processes that affects a brain scanner. It is the other metaphysical mode of presentation that is problematic, namely M, the metaphysical mode of presentation of the left-hand side of the identity. The Property Dualist says that if M is physical, then M cannot serve to account for cognitive significance, since the subject need have no access to that physical description just in virtue of being the subject of that metaphysical mode of presentation. The problem could be solved if there was a *mental* mode of presentation of M itself, call it “M\*”. But this is the first step in a regress in which a metaphysical mode of presentation that is physical is itself presented by a metaphysical mode of presentation that is mental. For the same issue will arise all over again for M\* that arose for M. Accounting for the different cognitive significances of the two sides of an identity statement requires two modes of presentation that are available to the first person at *some level or other*, so postulating a physical metaphysical mode of presentation just takes out an explanatory loan that has to be paid back at the level of modes of presentation of modes of presentation, etc.

This argument is question-begging. The argument supposes that if M is physical, it could not serve to account for cognitive significance, since accounting for cognitive significance requires a mental  $MMoP$ . But the physicalist thesis is that M is *both* mental and physical, so the physicalist will not be concerned by the argument.<sup>32</sup> Thus, the regress argument in the form I described is like the old objection to physicalism that says that brain states involve the instantiation of, e.g., electrochemical properties, but since pain does not involve the instantiation of such properties, pain can't be a brain state.

Of course if  $MMoPs$  must be thin, then M, which is an  $MMoP$ , cannot have a hidden physical nature, and so it cannot be both mental and physical. But if that is the claim,

the regress argument depends on the "thick/thin" argument to be discussed below, and does not stand on its own.

I assumed that the MMoP of "cortico-thalamic oscillation" is unproblematic, having to do, for example with oxygen metabolism as a result of brain activity. But the Property Dualist may say that this MMoP does not uniquely determine the referent and need not be a property to which the subject has given a special reference-fixing authority. (I will use the phrase "fixes the referent" to mean uniquely determines the referent and has been given the special authority.) Why is this a reply to my point concerning the question-begging nature of the regress argument? The question arises: if the regress argument's appeal to cognitive significance requires an MMoP for "cortico-thalamic oscillation" that *does* fix the referent, what would that MMoP be? Someone could argue that that MMoP could only be the property *being cortico-thalamic oscillation itself*. And then it could be claimed that both sides of the identity statement are such that the MMoP of that side is identical with the referent. And this may be said to lead to dualism via the route canvassed earlier in the section on the  $E \rightarrow 2M$  Argument. (If the MMoP of the right-hand side of an identity of the form  $X = Y$  is being  $Y$ ; and the MMoP of the left-hand side is being  $X$ , then, if it is true that  $X = Y$ , it follows that being  $X =$  being  $Y$ , so the MMoPs of the two sides are the same. The  $E \rightarrow 2M$  argument goes on to conclude that the identity must therefore be a priori if true, so therefore false.) I will not go into the matter again, except to note that it cannot be assumed that a property of the referent that accounts for cognitive significance also fixes the referent, and what counts in this argument is cognitive significance. As Burge (1977) and Byrne and Pryor (forthcoming) note, it is easy to see that properties of the referent that account for cognitive significance need not fix the referent. As Burge notes, the determination of reference depends on all sorts of non-conceptual contextual factors that "go beyond what the thinker 'grasps' in thought" (1977: 358). Byrne and Pryor give the example that *being a raspy-voiced singer* may give the cognitive significance for "Bob Dylan," even though there are other raspy-voiced singers. And *being a raspy-voiced singer* need only be a property that the subject saliently associates with the referent, not a property to which the subject has given the special authority.<sup>33</sup> (This, incidentally, is the one point at which I appeal to general considerations about whether the three *raison d'être* for modes of presentation mentioned earlier go together.)

In sum, the regress argument depends on the "thin/thick" argument and does not stand alone.

To avoid confusion, let me just briefly mention something the Property Dualism Argument is *not*. Someone might ask the question: in the identity ' $A = B$ ', how does one think of the metaphysical mode of presentation of  $A$ ,  $MMoP_A$ ? Doesn't one need a metaphysical mode of presentation of  $MMoP_A$ , which we could call  $MMoP_{A^*}$ ? And another of that,  $MMoP_{A^{**}}$ ? And the series won't end without some kind of "direct acquaintance" which does not require an MMoP (cf. Schiffer 1990: 255). Answer: One

does not *need* to think about  $MMoP_A$  in order to use  $MMoP_A$  to think about A. However, if one does *happen* to want to think about  $MMoP_A$ , then one does need a concept of  $MMoP_A$  with its own  $MMoP$ . “And don’t we have to have a way of thinking of  $MMoPs$  that don’t involve further  $MMoPs$  to avoid a regress?” Answer: No. To frame a thought about anything, we need a concept of it, including both a  $CMoP$  and an  $MMoP$ . To think about that  $CMoP$ , we need a further concept of it and to think about the  $MMoP$  we need a further concept of that. Every layer of thinking about a concept of a concept of . . . makes it harder and harder to do the mental gymnastics required to form the thought, and for most people, the ability to think these ever more complex thoughts will run out pretty quickly. So there is no regress—the mental gymnastics are voluntary. By contrast, the allegation of the Regress Argument that is part of the Property Dualism Argument, is that we *must* go up a level in order to explain cognitive significance at the preceding level. This is logically required and not just voluntary mental gymnastics.

#### A Priori Availability

The second argument presented above was that (to quote White 1983: 353), “Since there is no physicalistic description that one could plausibly suppose is coreferential a priori with an expression like ‘Smith’s pain at t,’ no physical property of a pain (i.e., a brain state of type X) could provide the route by which it was picked out by such an expression.” So the  $MMoP$  of the mental side of a mind-body identity claim could not be physical.

The first thing to notice about this argument is that if “Smith’s pain at t” is taken to be the relevant mental concept in the Property Dualism Argument, it has the flaw of being purely linguistic and not a phenomenal concept of the sort I have argued is required for the argument. Still, it might seem that the argument goes through, for a genuinely phenomenal concept does not make a physical description of anything that could be called the route of reference any more available a priori than the description “Smith’s pain at t.”

Note that the *raison d’être* of modes of presentation assumed here is not the cognitive significance appealed to in the regress argument but rather: the property of the referent (i.e.,  $MMoP$ ) that provides “the route by which it is picked out.” What is “the route by which it is picked out”? I think the right thing to mean by this phrase is what I have called fixing the referent, but I doubt that anything hangs on which of a number of candidates is chosen. Consider a case in which the subject conceives of the referent as being the local wet thing. Let us suppose that:

- The property of being the local wet thing is a priori available to the subject on the basis of understanding the term and therefore grasping its  $CMoP$ .
- The property of being the local wet thing uniquely determines the referent.

- The subject has given this property the special reference-fixing authority mentioned earlier.

My strategy is to concede all that could reasonably be said to be involved in reference fixing and to argue that nonetheless the argument does not work. For being wet = being at least partially covered or soaked with H<sub>2</sub>O. But the subject whose metaphysical mode of presentation it is need not have a priori access to "being at least partially covered or soaked with H<sub>2</sub>O" or know a priori that this physical description is coreferential with the original description. The subject can give the property of being the local wet thing the special reference fixing authority and thus have that property a priori available from the first-person point of view, without ever having heard the description "H<sub>2</sub>O." I hereby stipulate that the name "Albert" is the name of the local wet thing. In virtue of my grasp of the term "Albert," the property of Albert's being the local wet thing is a priori available to me. Also, I have stipulated that the property of being the local wet thing has the special reference-fixing authority. But I can do all that without knowing *all* descriptions of that property. That property *can be and is physical* even though I do not know, and therefore do not have a priori available, its physicalistic description.

Earlier, I considered the idea that MMoPs should be individuated according to CMoPs and thus that the property of being the local wet thing—considered as an MMoP-individuated-according-to-CMoP—is not identical to the property of being covered or soaked with H<sub>2</sub>O because the *terms* "water" and "H<sub>2</sub>O" are not identical. And of course this way of individuating the MMoP would provide an objection to the argument of the last paragraph.

However, the question then arises of what it is for such properties to be physical and what the physicalist's commitments are with respect to such properties. I believe that this question is best pursued not by inquiring about how to think of such strange entities as MMoPs-individuated-according-to-CMoPs but by focusing on the CMoPs themselves. And a further reason for turning the focus to CMoPs is that although the subject need have no a priori access to the physical descriptions of the physical properties that provide the metaphysical route of access, it may be thought that this is not so for CMoPs. After all, CMoPs are certainly good candidates for something to which we have a priori access!

Let us distinguish two things that might be meant by saying that a CMoP (or MMoP) is physical. First, one might have an *ontological* thesis in mind—that the CMoP (or MMoP) is identical to a physical entity or property or some conglomeration involving a physical properties or entities. In this sense, a CMoP (or MMoP) can be physical whether or not the subject has a priori access to any physicalistic description of it. (The issue with which the Property Dualism Argument is concerned is whether phenomenal properties are, ontologically speaking, physical properties. I said at the outset

that the issue of whether the cognitive apparatus involved in a CMoP is ontologically physical should be put to one side (except to the extent that that apparatus is phenomenal). My rationale, you will recall, is that although there is an important issue as to whether physicalism can handle cognitive (and semantic) entities or properties, in a discussion of whether *phenomenal* properties are physical, a good strategy is to suppose that non-phenomenal cognitive and semantic entities are not physically problematic.)

A second interpretation of the claim that a CMoP is physical is that it is *explicitly* physical or explicitly analyzable a priori in physical terms. In this chapter, I have been using “physicalistic” to mean explicitly physical. It is not obvious what it would mean to say that an MMoP is or is not physicalistic (since it is not a cognitive, linguistic, or semantic entity), but it does make sense to say that something that involves conceptual or linguistic or semantic apparatus is or is not physicalistic. For example, the CMoP ‘being covered with water’ is not physicalistic (at least if we restrict physics to microphysics), whereas “being covered with H<sub>2</sub>O” is physicalistic.

Is the CMoP of a phenomenal concept physical? Physicalistic? Recall, that according to me, a phenomenal concept uses a (token of a) phenomenal property to pick out a phenomenal property. Thus the CMoP of a phenomenal concept contains a non-descriptive element: a phenomenal property. And a phenomenal property is certainly not *explicitly* physical, i.e., physicalistic, that is, it does not contain conceptual apparatus or vocabulary of physics. A phenomenal property is not a bit of conceptual apparatus and it contains no conceptual apparatus. So, focusing on the ‘physicalistic’ sense of ‘physical’, the CMoP of a phenomenal concept is not physical. Must the physicalist therefore admit defeat? *Hardly, for physicalism is not the doctrine that everything is explicitly physical.* Physicalism does not say that all descriptions or conceptual apparatus are couched in physical vocabulary or analyzable a priori in physical vocabulary. Physicalists allow that there are domains of thought other than physics. Physicalists do not say that economics, history, and anthropology use physicalistic vocabulary or conceptual apparatus. This is an absurd form of conceptual or terminological reductionism that cannot be equated with physicalism.

Physicalism does not require that the CMoP of a phenomenal concept be physicalistic, but it does require that it is (ontologically) physical. Is it physical? That depends partly on whether all semantic and cognitive apparatus is physical, an issue that I am putting aside in this chapter. So the remaining issue is whether the phenomenal property that is part of the CMoP is physical. And that of course is the very issue of physicalism vs. dualism that this chapter is about. The Property Dualism Argument cannot *assume* that it is not physical—that is what the argument is supposed to show.

Where are we? Here is the dialectic: the Property Dualist says that in order for physicalism to be true, the physical description of the property that provides the route of reference (of the phenomenal term in a phenomenal-physical identity) has to be a pri-

ori available to the subject; it is not a priori available; so physicalism is false. I pointed out that even on very liberal assumptions about the role of the MMoP, a priori availability of a physical description of a physical property is an unreasonable requirement. But then I imagined a Property Dualist reply which said that I had failed to individuate the MMoP according to the CMoP. I then suggested that we eliminate the middleman, looking at the CMoP itself instead of considering the MMoP-individuated-according-to-the-CMoP. I pointed out that there is a sense of 'non-physical' (namely non-physicalistic) in which the CMoP of a phenomenal concept is indeed non-physical. I noted however that physicalists are not committed to all language or conceptual apparatus being physicalistic. Physicalists are committed to ontological physicalism, not conceptual reductionism. How does this apply to the MMoP-individuated-according-to-the-CMoP? It is true that if you individuate MMoPs according to CMoPs, then if there is no a priori available physical description, the MMoP is not "physical", and in this sense White's argument is correct. But all "physical" comes to here is *physicalistic*, and it is no part of physicalism to make any claim to the effect that phenomenal MMoPs or CMoPs are physicalistic. Thus the assumption of the second argument (namely, the topic of this section, the a priori availability argument) that the physicalist requires an a priori available description of the MMoP of the mental side of the mind-body identity is false.

If MMoPs have to be thin, then perhaps the distinction between an MMoP being ontologically physical and explicitly physical does not come to as much as would otherwise seem. Since a thin physical property has no hidden essence, it might be said to wear its physicality on its sleeve. However, if this is the only way to save the argument from a priori availability, that argument does not stand on its own but depends on the thin/thick argument, to which we now turn.

But first a brief reminder of what has been presupposed so far about the nature of MMoPs and CMoPs. In rebutting the regress argument, I assumed, along with the argument itself, that the *raison d'être* of MMoPs is to account for cognitive significance. The issue arose as to whether an MMoP defined according to its explanatory purpose must also fix reference or determine the referent. I noted that this cannot be assumed. The issue of the nature of CMoPs did not arise. In rebutting the second argument, I did not make any assumption about MMoPs or CMoPs that should be controversial, allowing a priori availability of the MMoP on the basis of the CMoP, reference-fixing authority and determination of the referent.

### Thin/Thick

The third argument that the MMoP of a phenomenal concept cannot be physical involves the distinction mentioned between "thin" and "thick" properties. As we have seen above, the first two parts of the Property Dualism Argument fall flat on their own, but can be resuscitated using the thin/thick distinction. However, if it could be

shown that MMoPs must be thin, these other arguments would be superfluous, since the claim that MMoPs must be thin leads to dualism by a shorter route, as I will explain shortly.

First, I must consider what exactly the thick/thin distinction is. I have been taking it that whether a property is thick or thin is a matter of whether it has a hidden essence. On this view, the primary bearer of thickness is a property, and a thick concept would be a concept that purports to be a concept of a thick property. However, this definition will be wrong if fundamental physical properties are thin. For since being water = being H<sub>2</sub>O, if being H<sub>2</sub>O is thin and being water is thick, whether a property is thick or thin is relative to what concept one has of that property. (Of course, being H<sub>2</sub>O is not a candidate for a fundamental physical property—I used that description as a surrogate since I don't know how to describe water in terms of electrons, quarks, etc.) On the picture of the thick/thin distinction in which whether a property is thin is concept-relative, one could define a thin concept as follows: the extension of the concept in a possible world does not depend on its extension in the actual world. (In terms of Chalmers's apparatus, the primary intension is the same as the secondary intension.) And thin properties would be defined in terms of their relation to thin concepts.<sup>34</sup>

Are fundamental physical properties thin? Or, to put the matter from the other perspective, are fundamental physical concepts concepts of thin properties? We could approach the issue via the question of whether there could be a "twin earth" case for fundamental physical concepts. In my view, the answer is yes. I gave an example long ago (Block 1978) in terms of matter and antimatter. The idea is that there is a counterfactual situation in which people who are relevantly like us—functionally like us—use the term "electron" to refer to anti-electrons. That is, the counterfactual situation is one in which our doppelgängers inhabit a universe or a place in our universe in which anti-matter plays the role played here by matter. And as a result, their Ramsey sentence for fundamental physics is the same as ours.<sup>35</sup> Which suggests that the functional role of a concept inside the head is not enough to determine its full nature, since the concept of an electron is not the same as the concept of an anti-electron.

But what if science can delve further into the matter/antimatter distinction, coming up with structure that explains the distinction and that will make a difference between the functional role of our concept and the doppelgängers' concept? The problem is that what we regard as fundamental physics is full of symmetries that can ground further examples, the idea being that there is more to physical reality than can be cashed out in a Ramsey sentence.

Of course, I don't think this mere suggestion settles the matter. Rather, I take the upshot to be that the issue of whether fundamental physical properties are thin cannot be settled here. Another argument in favor of that view is the point (Block 2003) that it is compatible with much of modern physics that for each level there is a still more

fundamental level, the upshot being that there is something defective about the notion of a "fundamental" level in physics.

Ideally, I would consider the issues concerning the thick/thin distinction using both approaches, thin properties defined in terms of thin concepts and the other way around. However, this chapter is already much too long, so I will simply make a choice based on ease of discussion: taking properties as basic. I don't think any issues will depend on this choice.

Whether a property is thick or thin, then, will be considered here to be a matter of whether it has a hidden essence. For example, water or the property of being water is thick, since whether something is water goes beyond superficial manifestations of it. Examples of thin properties are mathematical properties, at least some functional properties, and phenomenal properties if dualism is true. (The last point about dualism could be challenged—see Nagel (2001)—but I will put the issue aside.) Artifact properties such as being a telephone might also be taken by some to be thin. As I mentioned, fundamental properties of physics might be alleged to be thin.

Note that it is not necessary for the Property Dualist to claim that *all* MMoPs are thin properties; it would be enough if this were true only for the MMoPs of phenomenal concepts. I do not have a blanket argument against all attempts to show that MMoPs for phenomenal concepts must be thin, but I do have arguments for a number of specific attempts.

Why believe that MMoPs must be thin? I will start with two arguments.

1. The A Priority Argument, which appeals to the idea mentioned earlier that the MMoP is a priori available on the basis of the CMoP.
2. The Aspect Argument, according to which, the cognitive significance role of MMoPs precludes thick properties serving as modes of presentation. For, as mentioned earlier, the Property Dualist may say that it is not *all* of a thick property that explains rational error but only an *aspect* of it, the thin aspect.

These two arguments for MMoPs (at least for phenomenal concepts) being thin appeal to different features of MMoPs and their relations to CMoPs. Although I have registered doubt as to whether the same entities can serve both functions, I will put that doubt aside.

#### **The A Priority Argument for Thin MMoPs**

Let us assume that the MMoP of a concept is a priori available on the basis of the CMoP. For example, if one grasps the term "Hesperus," and if its CMoP is the meaning or other mental features of "the morning star," then the MMoP of rising in the morning is supposed to be a priori available in virtue of one's grasp of the term and its CMoP. This constraint might be taken to rule out thick MMoPs, for it might be said that I do not know a priori whether I am on Earth or Twin Earth (McKinsey 1991). A

thick MMoP might vary as between Earth and Twin Earth, which would be incompatible with a priori availability on the basis of the CMoP which is shared between me and my twin on Twin Earth.

I will give a fuller treatment of such arguments in the next section, but for now I will reply for the special case of phenomenal concepts, using the points made earlier about a phenomenal property doing “double duty.”

I mentioned that a phenomenal property might be part of a CMoP, but also be brought in by the MMoP. For example, the CMoP might be taken to be the meaning or other mental features of: “the experience: \_\_\_\_\_,” where the blank is filled by phenomenal property P. And the MMoP might be the property of *being P*. Such a relation between the CMoP and the MMoP allows for the MMoP to be a priori available on the basis of the CMoP, even if the property P is a thick property with a hidden essence. That is, the property of *being P* is a priori available on the basis of grasp of a CMoP that has property P as a constituent whether or not P is thick.

Although the a priori relation in itself does not appear to pose an obstacle to thickness of the MMoP, it might be thought to pose a problem combined with another argument, to which we now turn.

### The Aspect Argument

As mentioned, the idea of the Aspect Argument is that it is not *all* of a thick property that explains cognitive significance in general and rational error in particular, but only an aspect of it, the aspect that is available a priori on the basis of the CMoP. But on the face of it, *that aspect can itself be thick*. Recall the example of Albert, which I pick out on the basis of its being the local wet thing. Albert’s property of being the local wet thing fixes reference, uniquely determines the referent, is a *a priori available and also thick*.

The Property Dualist may say that the property that would serve in explanations of error is not that it is wet but that it *looks* wet. However, consider a non-perceptual case: I infer using inductive principles that something in the corner is wet, and pick it out via its property of being wet. In this case, the substitution of *looks wet* for *wet* is unmotivated. The MMoP just does not seem perceptual. Nor artifactual, nor, more generally, functional. On the face of it, the MMoP is a thick property, the property of being wet, i.e., (roughly) at least partially covered or soaked with water (which is thick because being covered or soaked with water is being covered or soaked with H<sub>2</sub>O).

But perhaps this rebuttal misses the significance of aspects to the first-person point of view. Perhaps the Property Dualist will say something like this: “If phenomenal property Q is a physical property, then it can be picked out by a physical—say neurological—concept that identifies it in neurological terms. But those neurological identifications are irrelevant to first-person phenomenal identifications, showing that the first-person phenomenal identification depends on *one aspect* of the phenomenal

property—its “feel”—rather than *another aspect*—its neurologically identifying parameters. You have suggested that “cortico-thalamic oscillation” picks out its referent via the effect of cortico-thalamic oscillation on instruments that monitor oxygen uptake from blood vessels in the brain. But this effect is not part of the first-person route by which we pick out Q, so it follows that not every aspect of the physical property is relevant to the first-person route. Therefore the identity “Q = cortico-thalamic oscillation” is supposed to be one in which the terms pick out a single referent via different properties of it, different MMoPs. And so the Property Dualism Argument has not been avoided.”

I agree that the two terms of the identity “Q = cortico-thalamic oscillation” pick out the referents via different aspects of that referent, different MMoPs. And I also agree that the aspect used by the mental term of the identity is available to the first-person whereas the aspect used by the physical term is not. But it does not follow that the aspect used by the mental term is thin. It is true that no neurological property is explicitly part of the first-person route, but that does not show that it is not part of the first-person route, albeit ontologically rather than explicitly. The MMoP of “Q” is stipulated to be phenomenal, and may be taken to be the property of *being* Q. But being identical to Q, on the physicalist view, is *both* a thick property, and available to the first person. Being identical to Q is a physical property (being identical to cortico-thalamic oscillation) but is nonetheless distinct from the MMoP I have been supposing for “cortico-thalamic oscillation,” which has to do with the oxygen uptake that fMRI scanners use to identify it. On the physicalist view, the feel and the neurological state are not different aspects of one thing: they are literally identical. If they are aspects, they are identical aspects. But the MMoP of the right-hand term of the identity is still different from the MMoP of the left-hand term.

As mentioned earlier, some will say that oxygen uptake cannot provide the MMoP for the term “cortico-thalamic oscillation,” which should be taken to be cortico-thalamic oscillation itself, or perhaps being identical to cortico-thalamic oscillation. In this supposition, there is a germ of a different argument for dualism, the E → 2M Argument discussed earlier.

I say that the aspect of a property that accounts for cognitive significance can itself be thick, appealing to examples. But the Property Dualist may suppose that if we attend to the mental contents that are doing the explaining, we can see that they are *narrow* contents, contents that are shared by Putnamian twins, people who are the same in physical properties inside the skin that are not individuated by relations to things outside the skin. If the relevant explanatory contents are narrow contents, then the corresponding explanatory properties—MMoPs—will be thin.

Here is the argument, the Narrow → Thin Argument, in more detail, offered in the voice of the Property Dualist:

$N \rightarrow T$  Argument: Suppose my CMoP is “the wet thing in the corner” (in a non-perceptual case) and my twin on Putnam’s twin earth would put his CMoP in the same words. Still, the difference between what he means by “wet” and what I mean by “wet” *cannot matter to the rationalizing explanatory force* of the CMoPs. And since CMoPs are to be individuated entirely by rationalizing explanatory force, my twin and I have the same CMoPs: so, the CMoPs are narrow. But since the MMoP is a priori available to anyone who grasps the CMoP, the twins must have the same MMoP as well as the same CMoP, so the MMoP must be thin. Narrow CMoP, therefore thin MMoP.

The  $N \rightarrow T$  Argument presupposes the familiar but controversial idea that only narrow content can serve in intentional explanations. However, on the face of it, my “water”-concept can be used in an explanation of my drinking water (“I wanted water, I saw water, so I drank water”) but would not explain my drinking twin-water.<sup>36</sup> The idea that only narrow contents can serve in a rationalizing explanation is certainly controversial. I will not enter into this familiar dispute here, since there is another less familiar problem with the reasoning.

The inference from narrow content/narrow CMoP to thin MMoP has some initial plausibility, but it is actually question-begging. I agree with the premise of the  $N \rightarrow T$  Argument that phenomenal CMoPs are narrow. (I won’t go into the possibility that there is a descriptive part of the CMoP that is wide.) However, it does not follow that the MMoP is thin. The physicalist says that since phenomenality supervenes on the physical, Putnamian doppelgängers will share CMoPs: CMoPs are narrow. For example, a phenomenal CMoP containing phenomenal property P for one twin will also contain phenomenal property P for the other twin. The MMoP, *being P*, will also be the same for both twins, but that MMoP can nonetheless be thick. In short, the phenomenal part of a CMoP and the corresponding phenomenal MMoP will in general be narrow in virtue of being necessarily shared by doppelgängers, but will nonetheless be thick on the physicalist view. That is, what the doppelgängers necessarily share will be a property with a scientific essence.

The point can be approached by looking at the anomalous nature of phenomenal kinds. Phenomenal concepts of the sort that I have described here are natural kind concepts in that they purport to pick out objective kinds, and if the physicalist is right, those kinds have scientific natures whose scientific descriptions cannot be grasped a priori simply on the basis of having the concept. But they differ from most natural kind concepts in that the Twin Earth mode of thought experiment does not apply. The Twin Earth mode of thought experiment involves a pair of people who are the same in physical properties inside the skin (that are not individuated by relations to things outside the skin) but with a crucial physical difference. In Putnam’s classic version (1975), twins who are relevantly the same in physical properties inside the skin pick out substances using the term “water” that have physically different natures, so (it is claimed), the meanings of their “water” terms and “water”-thought contents dif-

fer. They are (relevantly) physically the same, but different in "water"-meaning and "water"-content.

But how is the Twin Earth thought experiment supposed to be applied to phenomenality? If physicalism is true, the twins cannot be the same in physical properties inside the skin (that are not individuated by relations to things outside the skin) and also differ in the physical natures of their phenomenal states! (That's why I say the  $N \rightarrow T$  Argument begs the question against physicalism.) So there is no straightforward way to apply the Putnamian Twin Earth thought experiment to phenomenal concepts. (The issue concerning Burgean thought experiments is more complex, since it hinges on the ways in which our terms express phenomenal concepts. I can't go into the matter here.)

But perhaps only a superficial analysis of Twin Earth thought experiments require that the twins be the same in physical properties inside the skin (that are not individuated by relations to things outside the skin). One way to think of Twin Earth cases is that what is important is that they be *mentally* alike in ways that don't involve relations to things outside the skin. (Thus, for some purposes, functional likeness might seem more relevant than microphysical likeness. This line of thought was what I used in my earlier discussion of whether fundamental physical properties are thin.) But phenomenality is certainly part of mentality, so if twins are to be the same in phenomenal CMoPs, there had better not be any physical difference between them that makes a phenomenal difference. However, from the physicalist point of view, the shared phenomenality of the twins' CMoPs has to be explained by a shared physical basis of it. So the shared narrow CMoP is compatible with a shared thick MMoP.

The upshot is that phenomenal concepts are an *anomaly*—at least from the physicalist point of view. They are natural kind concepts in that they allow for objective scientific natures that are "hidden" (the scientific descriptions are not a priori available on the basis of merely having the concept). But they are different from other natural kind concepts in that no reasonable facsimile of a Putnamian Twin Earth scenario is possible.

So even if the inference from narrow CMoP to thin MMoP applies in a variety of other cases, it should not be surprising that it fails to apply in this anomalous case. The CMoPs for phenomenal concepts can be narrow even though the corresponding MMoPs are thick. Indeed, the CMoPs themselves can be both narrow *and* thick. Narrow because non-relational, thick because they involve a phenomenal element that has a hidden scientific nature.

I have rebutted the Aspect and A Priority Arguments and a subsidiary argument, the  $N \rightarrow T$  Argument, which all push for the conclusion that MMoPs of phenomenal concepts must be thin. But one can also look at the thesis itself independently of the arguments for it. Here are two considerations about the thesis itself.

### Issues about the Claim of Thin MMoPs for Phenomenal Concepts

First, the assumption of thin MMoPs is perhaps sufficient for the conclusion of the Property Dualism Argument *all by itself*. For what are the candidates for a thin MMoP for a phenomenal concept? Artifact properties such as being a telephone (even assuming that they are thin) and purely mathematical properties are non-starters. Some kind terms that are not natural kind terms, e.g., “dirt,” may yield thin properties. But phenomenal MMoPs are not artifactual or mathematical and they are or purport to be natural kinds as just pointed out. It is not clear whether there are any natural kind terms that express thin properties. Even if there are fundamental physical properties that are thin, the Property Dualist can hardly suggest fundamental physical properties as candidates for MMoPs for phenomenal concepts, since that has no independent plausibility and in any case would be incompatible with the conclusion of the Property Dualist’s argument. So it would seem that the only remotely plausible candidates for thin MMoPs by which phenomenal concepts refer are (1) purely functional properties, in which case deflationism would be true, and (2) phenomenal properties that are non-physical, in which case dualism is true. The conclusion would be the same as the conclusion of the Property Dualism Argument itself: that phenomenal realist physicalism is untenable.

The upshot is that much of the argumentation surrounding the Property Dualism Argument can be dispensed with if the arguments of this chapter are correct. The most obvious arguments that MMoPs of phenomenal concepts cannot be physical (the Regress Argument and the A Priori Availability Argument, presented earlier) do not stand alone but rather depend on the Thin/Thick Argument. I have not shown that there is no good argument for the claim that MMoPs of phenomenal concepts are thin, but I have rebutted some obvious candidates, and it is hard to see how the Regress and A Priori Availability Arguments could be used to justify the thinness claim since they presuppose it. So if my arguments are right, the burden of proof is on the Property Dualist to come up with a new argument for the claim that MMoPs of phenomenal concepts are thin.

Here is the second point. So far, I have argued that the assumption of thin MMoPs leads directly to dualism or deflationism, putting a heavy burden of proof on the Property Dualist to justify that assumption. But actually I doubt that deflationism really is an option. Let me explain. The functionalist characterizes functional properties in terms of the Ramsey sentence for a theory. Supposing that “yellow teeth” is an “observation term,” the Ramsey sentence for the theory that smoking causes both cancer and yellow teeth is  $\exists F_1 \exists F_2 [F_1 \text{ causes both } F_2 \text{ and yellow teeth}]$ , i.e., the Ramsey sentence says that there are two properties one of which causes the other and also yellow teeth. Focusing on psychological theories, where the “observation terms” (or “old” terms in Lewis’s parlance) are terms for inputs and outputs, the Ramsey sentence could be put as follow:  $\exists F_1 \dots \exists F_n [T(F_1 \dots F_n, i_1 \dots i_m, o_1 \dots o_p)]$ . The “i” terms are input terms and

the “o” terms are output terms. Functional properties of the sort that can be defined in terms of the Ramsey sentence are properties that consist in having certain other properties that have certain causal relations to inputs, outputs, and other properties.<sup>37</sup> The inputs and outputs can be characterized in many ways. For example, an output might be characterized neurally, or in terms of movements of a hand or leg, or distally, in terms of, e.g., water in the distance, or distally and mentalistically in terms of drinking water. *But all these characterizations are plausibly thick, not thin.* Perhaps you will think that some of them are *themselves* to be cashed functionally, but then the issue I am raising would arise for the input and output specification of *those* functional properties. Since the problem I am raising depends on the thickness of the input and output properties, I put those terms for those properties, (“i<sub>1</sub>” . . . “i<sub>m</sub>,” “o<sub>1</sub>” . . . “o<sub>p</sub>”), in bold in the Ramsey sentence earlier. The only functional properties I know of that are plausibly thin are *purely formal* functional properties that abstract from the specific nature of inputs and outputs, the kind of functional property that could be shared by a person and an economy. (See Block 1978.) For example, in the case of the theory that smoking causes cancer and yellow teeth, a purely formal Ramsey property would be: being an x such that  $\exists F_1 \exists F_2 \exists F_3 ([F_1 \text{ causes } F_2 \text{ and } F_3] \text{ and } x \text{ has } F_1)$ . This is the property of having a property which causes two other properties. Such a property could be shared by a person and an economy. Since not even a deflationist should agree that the metaphysical modes of presentation of our phenomenal states are *purely formal*, the only remaining option is dualism. So the assumption of thin properties plausibly leads right to dualism.

To sum up the points about the thin/thick argument: The “aspect” rationale for MMoPs being thin seems doubtful because the aspect can itself be thick. And the rationale for thin MMoPs in terms of the supposed a priori relation between CMoP and MMoP is problematic because the key phenomenal feature of the MMoP can also be present in the CMoP, when the relevant concept is phenomenal. At least this is so on one plausible notion of phenomenal concepts, which the Property Dualist would have to challenge. Narrow CMoPs can be used to argue for thin MMoPs, but this reasoning begs the question against the physicalist. I explained at the outset that the emphasis on MMoPs at the expense of CMoPs was tactical: the metaphenomenal move—that says that modes of presentation bring in unreduced phenomenality—can be discussed equally with respect to either mode of presentation. This was the place in the argument where the artificiality is most apparent—CMoPs must be discussed explicitly.

Moving to the thesis itself independently of arguments for it, the assumption of thin MMoPs amounts to much the same thing as the Property Dualism Argument itself. Further, the only remotely plausible candidates for thin MMoPs are purely formal properties that we do not have ordinary concepts of and phenomenal properties, dualistically conceived. The purely formal properties, though more plausible than some other candidates, are not very plausible, even from a deflationist point of view.

Deflationist functionalism is based on analyses of mentality in terms of sensory input and behavioral output. Purely formal properties do not adequately capture such analyses, and cannot without thick input and output terms. The upshot is that the assumption of thin MMoPs for phenomenal concepts adds up to dualism itself. To assume thin MMoPs begs the question against the physicalist.

Of course, I have not shown that there cannot be an argument for thin phenomenal MMoPs, but I hope I have shown that a number of candidates do not succeed.

### VII The Relation between the Property Dualism Argument and Some Other Arguments for Dualism

Loar (1997) locates the flaw in Jackson's "Mary" argument and Kripke's modal argument in a certain principle: the "semantic premise."<sup>38</sup> The semantic premise (on one understanding of it) says that if a statement of property identity is a posteriori, then at least one of the MMoPs must be contingently associated with the referent. The idea behind the principle is that if the two concepts pick out a property non-contingently, it must be possible for a thinker who grasps the concepts to see, a priori, that they pick out the same property. Again the issue arises as to what notion of MMoP is at stake. Consider, for example, the reference-fixing notion of MMoP. In this sense, the "semantic premise" is plainly false. Note that the person formed by a certain sperm = the person formed by a certain egg. This identity is a posteriori, yet both terms pick out their referents via essential and therefore necessary properties of it, assuming that Kripke is right about the necessity of origins. Call the sperm and egg that formed George W. Bush "Gamete-Herbert" and "Gamete-Barbara" respectively. The person formed from Gamete-Herbert = the person formed from Gamete-Barbara. "The person formed from Gamete-Herbert" does not pick out George W. contingently, nor does "The person formed from Gamete-Barbara." My example is put in terms of individuals but it is easy to see how to frame a version of it in terms of properties. Even if Kripke is wrong about the necessity of origins, the logic of the example remains. One thing can have two necessary but insufficient properties, both of which can be used to pick it out, neither of which a priori entails the other. Thus the terms in a true a posteriori identity can pick out that thing, each term referring by a different necessary property as the MMoP.

Of course there is some contingency in the vicinity. Gamete-Herbert might have joined with an egg other than Gamete-Barbara or Gamete-Barbara might have joined with a sperm other than Gamete-Herbert. And this might suggest a modification of the principle (one that White (2006b) suggests in response to an earlier version of this chapter), namely, if a statement of property identity is a posteriori, then it is not the case that both terms refer via MMoPs that are necessary and sufficient conditions for the property that is the referent. Or, more minimally, if a property identity is a posteri-

ori, then it is not the case that one term refers via a sufficient property of it and the other refers via a necessary property of it. But a modification of my example (contributed by John Hawthorne) suggests that neither of these will quite do. Let the identity be: the *actual* person formed from Gamete-Herbert = the *actual* person formed from Gamete-Barbara. Arguably, each designator refers via a property that is both necessary and sufficient for the referent. So the revised version of the semantic premise is also false.

The reference of the terms "Gamete-Herbert" and "Gamete-Barbara" need not be fixed via properties that involve George Bush. The gametes can be identified independently, for example before George Bush was conceived. But perhaps the names will pick them out via some contingent reference-fixing property, e.g., a perceptual demonstrative ("that egg") or by description. And that motivates White (*ibid.*) to suggest a beefed up form of the semantic premise that says that there must be contingency either in the relation between MMoPs and referent or in the relation between MMoPs and the MMoPs of those MMoPs, or ... I reject the beefed-up semantic premise for the reason given earlier: I don't think these further MMoPs need exist. That is, in the identity "a = b," there will be MMoPs associated with both sides. But there will be no MMoPs of those MMoPs unless the subject happens to refer to the first level MMoPs in another voluntary cognitive act.

### VIII Conclusion

Both the Knowledge Argument and Max Black's Property Dualism Argument for dualism hinge on the idea that there is something special about phenomenality in our phenomenal concepts that eludes physicalism. Both arguments are ways of making concrete what I called the metaphenomenal move: the idea that in a phenomenal mind-body identity claim, the CMoP is partly constituted by something with unreduced phenomenality or the MMoP is an unreduced phenomenal property.

My response has been to argue that phenomenality in modes of presentation is no different from phenomenality elsewhere. I tried to dissolve apparent impediments to the phenomenal element in the CMoP and the MMoP being physical. My way out involves a notion of a phenomenal concept that has some affinities with the "directness" story in which there is no metaphysical mode of presentation at all, since my phenomenal MMoPs are not very different from the referent itself. I considered a family of arguments based on the idea that MMoPs must be thin, arguing that appeal to narrow content does nothing to establish thinness. According to me, phenomenal concepts are both narrow and thick, which is why the phenomenality in the CMoP can be physical. I also considered a different version of the Property Dualism Argument that assumes that an empirical identity must have different MMoPs, so that if the MMoPs of the two terms of an identity are the same, then the identity is a priori. I argued that

whereas sameness of CMoP makes for a priority of the identity, sameness of the MMoP does not.

Much of the argumentation involved the principle that a difference in CMoP requires a difference in MMoP ( $D(\text{CMoP}) \rightarrow D(\text{MMoP})$ ). I argued that nothing forces us to adopt notions of CMoP and MMoP on which this principle is true. However, at a key point in the dialectic I considered a notion of MMoP individuated with respect to CMoP, which I argued did not rescue the Property Dualism Argument.

Although I expressed skepticism about whether any one thing can explain rational error, fix reference, and be relevantly a priori available, I have not claimed that these *raisons d'être* fail to coincide except at one point at which I noted that an explanatory MMoP need not fix the referent. The other rebuttals were keyed to one or another specific version of MMoPs and CMoPs and their relation. My strategy was to avoid multiplying arguments based on different notions of CMoP/MMoP by choosing what seemed to me the strongest argument of each type. In the end, everything hinges on the claim that MMoPs of phenomenal concepts are thin, and I attempted to remove the most straightforward motivations for that view.

I have pursued a divide-and-conquer strategy, distinguishing among different senses of “mode of presentation” and further dividing those by the *raisons d'être* of modes of presentation in those senses. My claim is that once we do that, the Property Dualism Argument dribbles away. I have not claimed to refute these arguments conclusively but I believe that the ball is in the Property Dualist’s court.

#### **Appendix on a Variant of the $E \rightarrow 2M$ Argument Using Primary Intensions Instead of MMoPs**

I mentioned that there is a version of the  $E \rightarrow 2M$  Argument using the notion of a primary intension instead of the notion of an MMoP. The primary intension of “water” is the function from worlds considered as actual (as actual world candidates in Davies and Humberstone’s (1980) sense) to what water turns out to be in that world. (Or so I will understand the term. Chalmers uses various different ways of specifying what a primary intension is but since this is a very brief discussion, I will just pick that one.) Thus the primary intension of “water” picks out water in the actual world and XYZ (“twin-water”) on Putnam’s Twin Earth. Since Putnam’s Twin Earth could have both XYZ and  $H_2O$  in it, the primary intension is a function from “centered” worlds—worlds with a privileged point—to referents. What makes the primary intension of “water” pick out the XYZ in Putnam’s Twin Earth is that the center of that world has the relevant relation to XYZ rather than  $H_2O$ . (For example, the center might be surrounded by XYZ whereas there might be only a few molecules of  $H_2O$  that are light years away. If there are people on twin earth, we can suppose causal commerce of the

relevant sort between XYZ (but not H<sub>2</sub>O) and uses of the term "water" that have some appropriate relation to the center.)

I read Chalmers (1996) as stipulating that the primary intension captures the a priori component of content, and on this reading the primary intension would be more like a CMoP than an MMoP. Given this stipulation, my complaint that MMoPs are not what is relevant to a priority would fall away, the pressure instead being on the issue of whether primary intensions in the sense in which they are stipulated to capture the a priori aspect of content are indeed the same as secondary intensions. That is, the analog of the  $E \rightarrow 2M$  principle, the " $E \rightarrow 2 PI$  principle," would be a stipulation, but the other premise of the argument—that the phenomenal and functional primary intensions are identical to the secondary intensions—would then take the heat. The secondary intension of "water" is the function from worlds to what 'water' denotes in those, worlds, namely, water, if there is any. The worlds are considered "as counterfactual" (as familiar from Kripke): we take reference of "water" in the actual world as fixed, and given that fixed reference, the function picks out what is identical to the actual referent in each counterfactual world, namely H<sub>2</sub>O if there is any (assuming the usual philosophical myth that "water" refers to H<sub>2</sub>O in the actual world). So the doubtful premise—according to me—would be whether primary intensions stipulated to capture the a priori component of content are the same as secondary intensions for both the phenomenal and the psychofunctional term.

Of course, there is no plausibility of the primary intension being identical to the secondary intension for "water." Twin Earth is a counterexample since the primary intension picks out XYZ whereas the secondary intension picks out H<sub>2</sub>O. To the extent that the right-hand side of mind-body identity claims are natural kind terms like 'water', the version of the Property Dualism Argument presented in this Appendix has no plausibility whatsoever. You can see why by noting that primary intensions in this incarnation correspond to my CMoPs—which can also be stipulated to capture the a priori aspect of content. As noted in the text, there is no plausibility at all that the CMoP of, say a functional term, is identical to the referent. Consider a very simple functional term, "solubility." The CMoP of "solubility" is something like a meaning, but the referent is a property of sugar and salt. Why should we suppose that the solubility of sugar and salt is a kind of *meaning*? This seems like a category error.

In many of his writings, Chalmers has one notion—primary intension—corresponding to the two notions of my apparatus—CMoP and MMoP. But in Chalmers (2006), he considers dividing the primary intension into two notions. As I understand it, the *epistemic* intension of 'water'—which is stipulated to capture the a priori aspect of content—is a function from situations (situations, not worlds) to what turns out to be water in those situations. The primary intension—which, on this version is not stipulated to capture the a priori aspect of content—is a function from worlds to what

turns out to be water in those worlds. So on this scheme, epistemic intensions roughly correspond to my CMoPs, whereas primary intensions roughly correspond to MMoPs. On this new notion of a primary intension, it becomes a substantive question whether primary intensions capture an a priori component of content. If it turns out that they do for phenomenal terms and psychofunctional terms, then the Property Dualism Argument of this section would avoid the first of the two objections I mentioned above to the  $E \rightarrow 2M$  analog for primary intensions. So it is worth taking a closer look at the prospects for the substantive—as opposed to stipulated—claim that primary intensions capture an a priori component of content.

I will start with a criticism of the notion of a primary intension as stipulated to capture an a priori component of content (see Block 1991, Block and Stalnaker 1999, and Chalmers (2006: s. 5.8) for a response). Take the value of the primary intension of ‘water’ to be what turns out to be water in a world considered as actual. How do we know what turns out to be water in a world considered as actual? By consulting our intuitions about what one should say about various worlds considered as actual. We ask ourselves what we should say if, for example, we became convinced we were living on Putnam’s Twin Earth. These intuitions are the epistemic basis of the primary intension, that is how we know what it is. And they are or at least index its metaphysical basis. That is, these intuitions constitute the metaphysical basis or they index an underlying property that is responsible both for the intuitions and the primary intension.

Now ask yourself about another of Putnam’s (1970) thought experiments, which we could put like this. Suppose we discover that cats are actually robots controlled from Mars that were put on earth 100 million years ago to spy on the intelligent beings they predicted would evolve. There never were any naturally evolving catlike creatures, since the robot cats killed off anything that had a chance of becoming one. When intelligent primates finally evolved, the robot cats made themselves appealing to people and came to develop the close relation to people portrayed in *Garfield*. We are wrong about many of the properties we take cats to have. The robot cats pretend to be aloof but are actually very interested in us and love us. They would like nothing better than to act more like dogs, but their orders are to act aloof. They do not actually purr but use mind-control to make us think so.

I think the story is intelligible and I hope you think so too. But notice that other stories would have been equally intelligible in which cats fail to have other properties that we ordinarily think they have. The world I mentioned is a world considered as actual in which cats are not cute aloof purring animals. But there are other worlds considered as actual in which they lack other properties that we ordinarily think they have. Perhaps all the properties we ascribe to cats—or at least the ones that distinguish them from, say dogs—are in this sense dispensable. Some may want to retreat to *seeming* to have such properties, but in this direction lies the phenomenalism of C. I. Lewis. If the primary intension of “cat” is determined or indexed by such intuitions and captures

the a priori component of content, it looks as if there is very little to the a priori component of content. Maybe one can't imagine a world considered as actual in which cats are not moving middle-sized physical entities—but that will not distinguish a putative a priori component of "cat" from that of "dog." The Chalmers-Jackson response is to note that our intuitions about worlds considered as actual do in fact distinguish between "cat" and "dog," so the primary intensions are not so thin as to be the same for these two words. This response, however, sets up the real worry, which is that given that these intuitions are (or at least index) the foundation of the semantics of these terms, how we are supposed to know whether, in having these intuitions, that is, in considering a world as actual, we end up *covertly changing the meaning of "cat."* That is, how do we know whether in coming up with the best way of thinking about a world as actual, one of the variables we can implicitly adjust is the meanings of the words we use to describe the world?

The problem would be avoided if one had some other notion of the a priori component of content that could be used in defining primary intensions, for example an account along the lines of the suggestion from Kripke that some words can be defined metalinguistically or Katz's more orthodox definitions. The primary intension of "cat" would be the function from worlds considered as actual to what is picked out in that world by the proposed definition. But then we would not need the primary intension as an account of the a priori component of content because we would already have such an account: the definition.

Note that the problem is not one of indeterminacy in our intuitions or of cases not decided by our intuitions—of course there are cases our intuitions do not decide. The problem is with cases that our intuitions *do* decide, like the robot cat case. Our intuitions are a function of the simplest overall account, and as Quineans have long said, *there is no guarantee that anything putatively a priori will be preserved in the simplest account.* If one believes in determinate a priori intensions, the thing to say is that our intuitions present us with situations in which we find it natural to change those a priori intensions. That is, in considering the Putnam robot cat world, we tacitly change our meaning of "cat" (Katz 1972, 1975).

So there is a dilemma for the advocate of primary intensions as stipulated to capture an a priori component of content. If our advocate goes with Katzian or metalinguistic definitions, then there is no need for the notion of a primary intension. However, if our advocate rejects those definitions, then it is not clear why we should believe that our linguistic intuitions index any interesting a priori aspect of content or the primary intensions that are stipulated to capture it. Of course, primary intensions are just functions, and so the primary intension of 'cat' can be said to exist trivially. Yes, but that function may include inputs in which the word "cat" is used in a different sense from the normal one and so could not be said to capture anything semantic. (See the coumarone example in Block and Stalnaker 1999.) The question is: Why should we believe

in a primary intension that *does* capture an a priori aspect of content? *Given the unreliability of the intuitions about cases as a pipeline to an a priori notion of content, primary intensions which are stipulated to capture an a priori notion of content become highly doubtful theoretical entities.* The upshot for the  $E \rightarrow 2M$  form of the Property Dualism Argument is this. If an intension—primary or epistemic—is simply stipulated to capture an a priori aspect of content, then it is in doubt for the reasons just given. If we put this doubt aside, accepting the analog of the  $E \rightarrow 2M$  principle, the identity of those intensions with secondary intensions is in doubt—that is, the other premise of the argument is in doubt. What if the intension is not stipulated to have this a priori significance, but it is claimed to have it nonetheless? The Putnamian considerations I raised cast doubt on that claim, but putting that doubt aside, my view is that to the extent we can show an intension to capture an a priori aspect of content, it will be doubtful that that intension can be identified with a secondary intension, so the two premises of the  $E \rightarrow 2M$  argument will never be satisfied together.

#### Notes

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1. Stephen White (1986, 2006*a*, *b*) has done more than anyone to elucidate the Property Dualism Argument. John Perry’s (2001) book develops machinery that he uses against modal arguments for dualism, Jackson’s Knowledge Argument and the Property Dualism Argument. Christopher Hill (1991, 1997), Joseph Levine (2001), and Colin McGinn (2001) have also put forward versions of the argument. Some of David Chalmers’s (1996, 2004) arguments for dualism involve similar ideas. Brian Loar’s (1990 and 1997) papers are also immersed in the territory of the argument, although not explicitly about it. Jerome Schaffer (1963) discusses the argument but in somewhat different terms than those used more recently. I will focus on a version of the Property Dualism Argument similar to the arguments given by Smart (though see n. 4), White, and Perry, and I will contrast my refutation with Perry’s.

2. I am indebted to Tyler Burge for drawing the Rozemond book to my attention.

3. White (1986, 2006*b*) runs the Property Dualism Argument against both token and type mind-body identities, but I am ignoring the issue of token identity.

4. Part of what Smart says is hard to interpret. I left out a crucial phrase in the Smart quotation that seems confused. What I left out is the italicized phrase in the following: “the objection that

a sensation can be identified with a brain process only if it has some phenomenal property, *not possessed by brain processes*, whereby one-half of the identification may be, so to speak, pinned down." The italicized phrase is puzzling since Smart gives every indication of thinking that the threat from Max Black's objection is from a "double aspect" theory that says that token pains are token brain states, but that the token pains have irreducible *phenomenal properties*. The dualism is supposed to derive from the non-physicality of the phenomenal property, not a failure of the phenomenal property to apply to the brain processes. Perry explicitly avoids Smart's error when he says: "even if we identify experiences with brain states, there is still the question of what makes the brain state an experience, and the experience it is; it seems like that must be an additional property the brain state has."

5. The heavy duty notion of phenomenal concepts has its origins in Brian Loar (1990, 1997); a version that is closer to what I have in mind is described briefly in Block (2002) and accounts that share the structure I am talking about appear in David Chalmers (2003), David Papineau (2002), and in an unpublished paper by Kati Balog.

6. The articles by Paul Churchland, Brian Loar, William Lycan, and Robert van Gulick in Block, Flanagan, and Güzeldere (1997) all take something like this line, as do Horgan (1984) and Sturgeon (1994).

7. Here, and in the rest of the discussion of Mary, unless otherwise stated, I intend both the Fregean and non-Fregean senses of "mode of presentation."

8. I have the sense from a remark in Jackson (2004) that he might agree with this. On another issue: Jackson says that the matter should not be put in terms of whether there is a new fact involved in Mary's acquiring the subjective concept of the experience. When Mary closes her books and steps across the threshold, *everything* she does constitutes a new fact that was not described in her books. However, this would be motivation for a somewhat different way of setting up the Knowledge Argument in which Mary predicts everything that will happen to her in the first day of leaving the room *in physical terms*. So she does know about the fact of what she sees after leaving the room, albeit in physical terms. Using this device, one could then state the issue in terms of whether Mary learns any new facts.

9. Although it would take me too far afield to go into the differences between the Knowledge Argument and the Property Dualism Argument, I should mention one: that the Knowledge Argument as usually stated concerns a supervenience form of physicalism (no mental difference without a physical difference) whereas the Property Dualism Argument is directed against mind-body identity. Indeed, Jackson is thinking of a really extreme form of physicalism which makes a commitment to all the facts following a priori from a set of base physical facts. Chalmers (1996) also regards this view as entailed by physicalism. On that view of physicalism, the Knowledge Argument is much more persuasive, since all that has to be shown is that what Mary learns does not follow a priori from what she already knows. On that form of physicalism, the move made here and in Perry's book of thinking of Mary as learning (or in Perry's case acquiring a sensitivity to) a new subjective concept of a property she already had an objective concept of has little purchase. However, the Knowledge Argument can be discussed as it is here and in Perry's book from the perspective of a mind-body identity account of physicalism. The standard reply I have discussed

is from that perspective, so even though some of the adherents of the Knowledge Argument are thinking of physicalism in a different way, that is irrelevant to the points made here.

10. Chalmers (2003) argues that phenomenal concepts cannot be demonstrative concepts. The main argument could be put as follows: for any demonstrative concept, say “this<sub>i</sub>,” this<sub>i</sub> has phenomenal property *P* would be news. But if the demonstrative concept was genuinely a phenomenal concept, there would be some claims of that form that are not news. I agree with the “not news” rule of thumb, though I would not go so far as to agree that it shows no demonstrative concept can be phenomenal. However, whether or not it shows that there can’t be a concept that is both demonstrative and phenomenal, the demonstrative concepts that Perry is talking about are not phenomenal concepts in the sense required to motivate the Knowledge Argument and the Property Dualism Argument, the sense required to ground the metaphenomenal move.

11. Burge describes the two functions of Fregean sense as sense<sub>1</sub> and sense<sub>2</sub>. (He also mentions a third function, sense<sub>3</sub>, providing entities to be denoted in oblique contexts, which will not be discussed here. Byrne and Pryor talk of two different roles, the informativeness or cognitive significance role and the reference-determination role.

12. A similar but not identical distinction is introduced in arguing for Property Dualism in two papers by Stephen White (White, 2006*a,b*). These are my terms, not White’s, and I do not agree with White about key features of the distinction. I will attribute very little specific content to White’s unpublished papers, since those papers are in draft form as of the writing of this chapter.

13. Although I am defending physicalism in this chapter, I do think there is a genuinely troubling argument for dualism, one that is completely different from Kripke’s and Chalmers’ modal arguments, the Knowledge Argument, and the Property Dualism Argument. What I have in mind is the multiple realization argument discussed in Block (2002): if there could be a creature whose phenomenology has a sufficiently different physical basis from ours, but whose phenomenology is similar to ours, then there would be a phenomenal similarity which is not explained by a physical similarity.

I spoke earlier of double duty. A phenomenal feel in a concept is used to pick out a phenomenal feel. But what I have just suggested amounts to “triple duty.” A phenomenal feel in the CMoP serves to pick out a phenomenal feel as referent via a closely related phenomenal feel as MMoP. I don’t want to make much of this “triple duty.” The notions of CMoP and MMoP are artificial notions that make more intuitive sense in some cases than in others.

14. I take this formulation from Papineau (2002), although he does not use the CMoP/MMoP distinction. See also Block (2002) for a somewhat different formulation.

15. This (putative) example of the failure of the  $D(\text{CMoP}) \rightarrow D(\text{MMoP})$  principle is suboptimal in a number of ways. Something can be wet by being soaked with a liquid other than water and paint can be wet without being soaked at all. The words “water” and “H<sub>2</sub>O” are different, and that might be said to provide a genuine metalinguistic difference in properties. Further, “Water” is simple and “H<sub>2</sub>O” is compositional giving rise to another difference in properties. (Despite these flaws, I will use the example later in the chapter.) These flaws are corrected in a type of counterexample to come now. (See n. 29 as well.)

16. Schiffer (1990) has a similar example. Another case of two CMoPs but only one MMoP might be constructed from a variant of Austin's (1990) two tubes case. The subject looks through two fiber optic "tubes," one for each eye, and sees what he would describe as a red circular patch via each eye—with no differences between the patches. Further, the subject cannot tell which experience comes from the tube on the right and which from the tube on the left. A further wrinkle: unknown to the subject, the two fiber optic channels merge into one, so the object of the two experiences is exactly the same. From the subject's point of view, there are two experiences that may for all he knows be experiences of different things, so there are two CMoPs, but since they are in fact of the redness of one thing, there is only one MMoP.

17. See the discussion of the "semantic premise" in Section VII, The Relation between the Property Dualism Argument and Some Other Arguments for Dualism.

18. The familiar point is put in a rather neat way in Perry's (2004a) rendition: If the putative zombie world contains cortico-thalamic oscillation, then according to the physicalist, it contains phenomenality and so is not a zombie world; but if the putative zombie world does not contain cortico-thalamic oscillation, then it does not fit the physical requirement of a zombie world. So physicalism cannot allow a zombie world.

19. See n. 18.

20. I presented a version of the argument in a reply to David Chalmers at the Philadelphia APA in 1997, partly as a result of conversations with Brian Loar. There is an argument in Loar (2000) that has some similarity to it. McGinn (2001) takes something of this sort to be the Property Dualism Argument, i.e. the one that Smart (1959) and White (1983) had in mind. I have heard unpublished versions of similar arguments by Martine Nida-Rümelin and John Hawthorne.

21. A similar argument can be framed using Chalmers's and Jackson's primary intension/secondary intension apparatus (Chalmers 1996; Jackson 1998). The idea would be that for phenomenal and functional concepts, the primary intension is identical to the secondary intension. (Both views are endorsed by Chalmers (1996).) So if the secondary intension of a phenomenal/functional identity claim is true, so is the primary intension, and hence a phenomenal/psychofunctional identity claim is if true, a priori true. And since for reasons just given it is not a priori true, it is false. I will discuss the  $E \rightarrow 2M$  Argument in this section, and then—in the Appendix—the variant using Chalmers's and Jackson's apparatus. So I will postpone saying what I take a primary intension to be until then.

22. The point can be made with another more controversial type of example. Consider 'This property = this property' where the first demonstrative picks out the property of being water and the second picks out the property of being  $H_2O$ . (See Austin 1990). It could be said that each demonstrative picks out the property directly in the sense that the MMoP just is the property picked out. But if so, the form of the  $E \rightarrow 2M$  Argument would give us a general argument against any empirical property identity!

23. Deflationism with respect to truth is the view that the utility of the concept of truth can be explained disquotationally and that there can be no scientific reduction of truth (Horwich 1990, 1998; Field 1994). Deflationism with respect to consciousness in its most influential form

is, confusingly, a kind of reductionism—albeit armchair reductionism rather than substantive scientific reductionism—and thus the terminology I am following can be misleading. I may have introduced this confusing terminology (in Block 1992, 1993), and though it is both confusing and misleading, it has already taken firm hold, and so I will use it here.

24. Why “a priori or armchair”? Many philosophers adopt forms of functionalism, representationalism, or cognitivism that, it would seem, could only be justified by conceptual analysis, while nonetheless rejecting a priority.

25. The rationale for the functionalist understanding of this point of view is spelled out in Block (1980) and in more streamlined form in Block (1994). Lewis (1980) adopts a more complex mixture of functionalism and physicalism.

26. As Hempel (1969) noted, physicalism has a serious problem of obscurity. Physicalism about properties could be put as: all properties are physical. But what is a physical property? Hempel noted a dilemma (that has been further elaborated by Chomsky (2000); but see the critique by Stoljar (2001)): Horn 1 is: we tie physicalism to current physics, in which case physicalism is unfairly judged false, since there are no doubt physical entities and properties that are not countenanced by *current* physics. These entities and properties would be counted as non-physical by this criterion, even if the physics of next week will unproblematically acknowledge them. Horn 2 is: we define physicalism in terms of future physics. But what counts as physics? We cannot take physics as given in an inquiry about whether physicalism can be unproblematically defined. And we surely don't want to count as physics whatever is done in academic departments called “Physics Departments.” For if theologians hijacked the name “Physics,” that would not make God physical.

27. The big problem in defining physicalism is getting an acceptable notion of the physicalistically non-problematic without simply using the notion of the physical. One approach is to use a paradigm of the physicalistically unproblematic. I have suggested (1978) defining physicalism as the view that everything is decomposable into particles of the sort that make up inorganic matter. This definition uses “inorganic” as a way of specifying what is physicalistically unproblematic (following Feigl 1958, 1967), and so would get the wrong result if the inorganic turns out to be physicalistically problematic, e.g., if pan-psychism obtains (electrons are conscious). Thus it fails as a sufficient condition of physicalism. It does not capture the meaning of “physicalism” (and it does not even try to define “physical property”), but it does better as a necessary condition of physicalism. (See also Montero 1999.) Papineau (2002) takes the tack of specifying the physicalistically unproblematic by (in effect) a *list*. He suggests defining physicalism as the thesis that everything is identifiable non-mentally, that is, non-mental concepts can be used to pick out everything, including the mental. One problem with this way of proceeding is that “mental” has the same problem as “physical.” We may one day acknowledge “mental” properties that we do not acknowledge today (much as Freudian unconscious mental properties are said to not always have been part of our conception of the mind). We can define the mental in terms of a list of currently acknowledged mental properties, which would be as problematic as defining the physical by a list. Or we could appeal to what will be recognized later as “mental,” hitching our concept wrongly to the use of a term by future generations.

28. All three arguments are inspired by conversation with or published or unpublished (at the time of writing) papers by Stephen White. I doubt, however, that he would agree with my renditions or the conceptual apparatus they use.

29. The second example I gave involving Loar's "chat" case is, *prima facie*, not vulnerable to this objection. Or rather what it suggests is that the version of "thin property" needed by the property dualist is something more like "concept-individuated" rather than lacking a hidden essence. So the "chat" MMoPs will be something like *being a furry purring aloof creature*—relative to mental file 1, and *being a furry purring aloof creature*—relative to mental file 2.

30. The quotation is from the 1990 version of Loar's "Phenomenal States," 87. This picture is abandoned in the 1997 version of Loar's paper in which he retains talk of triggering and the direct reference terminology, but with a new meaning, namely: refers, but not via a contingent property of the referent. The view common to both the 1990 and 1997 paper is that a theoretical concept of e.g., neuroscience might pick out a neurological property "that triggers a given recognitional concept, and so the two concepts can converge in their reference despite their cognitive independence" (1990: 88).

31. There is an outstanding issue involving phenomenal concepts that I will raise briefly without attempting to resolve. What makes it the case that a token phenomenal property in a phenomenal concept serves as a token of one phenomenal type or property rather than another? For example, suppose that a token of a mental image of red serves in a phenomenal concept to pick out an experience as of red. Why red rather than scarlet or colored? One answer is an appeal to dispositions. Suppose you are looking at chips in an ideal paint store that has a chip for every distinct color. (Robert Boynton estimates that there would be about a million such chips.) You are looking at Green<sub>126,731</sub>, thinking that color-experience is nice, using a phenomenal concept of that experience. But what experience is it that your phenomenal concept is of? The experience as of Green<sub>126,731</sub>? The experience as of green? The answer on the dispositionalist view is that it depends on the subject's disposition to, for example, treat another experience as falling under the same concept. You are thinking that the experience is nice—but what will you count as another one of those? If only another experience as of Green<sub>126,731</sub> will count as an experience of the same type, the phenomenal concept is maximally specific; if any bluish-green experience will count as an experience of the same type, the concept is more abstract. If any experience of green will count as an experience of the same type, the concept is still more abstract. (Views of this general sort have been defended in conversation by Brian Loar and Kati Balog.)

This sort of view is similar to one interpretation of Berkeley's answer to the question of how an image of an isosceles triangle can be a concept of triangle, a concept that covers non-isosceles triangles as well as isosceles triangles. His answer (on this interpretation) was: because the image functions so as to apply to all types of triangles rather than just to isosceles triangles. There is a problem with Berkeley's answer that also applies to the view of phenomenal concepts I am talking about: namely, that it would seem that it is because one is *taking* the image of an isosceles triangle as a *triangle-image* rather than as an *isosceles-triangle-image* that it functions as it does, rather than the other way around. (This is not to impugn the functionalist idea that the role is what makes the concept the concept it is; rather, the point is that in some cases, there is something about the entity that has the role that makes it the case that it has that role.) Similarly, it is because

one is taking the experience of a specific shade of green as a green-experience rather than as a Green<sub>126,731</sub> experience that makes it function as a concept of the experience of green rather than the concept of that highly specific shade of green. The dispositionalist view seems to get things backwards. However, no view of phenomenal concepts can sign on to the idea that an experience functions in a concept only under *another* phenomenal concept, since that would lead to a regress. My tentative thought is that there is a form of “taking” that does not amount to a further concept but is enough to explain the dispositions. However, I cannot go into the matter further here.

32. I did say the mental option was “useless” in the sense that the dualist and the physicalist could agree on it. The mental option is useful, however, for the physicalist in avoiding the regress argument.

33. Perhaps it will be said that not any old “associated property” is enough to rationalize error. Let us use the notation RF[‘Dylan’] to mean the property to which the subject has given the special reference-fixing authority for using “Dylan.” The view I expect to hear is that to rationalize error, we must ascribe to the subject a justified belief that RF[“Bob Dylan”] is instantiated here, whereas, say RF[‘Robert Zimmerman’] is not. But this is a false picture of what it takes to rationalize error. If I have reason to believe that some abiding property, X, of Bob Dylan is instantiated here but that some abiding property, Y, of Robert Zimmerman is not, then other things equal, I have reason to think Dylan and Zimmerman are different people, no matter how unconnected X and Y are from reference-fixers.

34. Another reason for taking thinness to be a matter of the relation between concepts and properties—say, properties individuated according to concepts—is given in n. 29.

35. Ramsey sentences are defined in the text connected with n. 37.

36. This dialectic appears in Fodor (1982) and Burge’s (1982) reply. See also Burge (1986, 1989, 1995).

37. More specifically the functional definitions work as follows. If “F<sub>17</sub>” is the variable that replaced “pain,” “pain” could be defined as follows: pain = the property of being an x such that  $\exists F_1 \dots \exists F_n [T(F_1 \dots F_n, i_1 \dots i_m, o_1 \dots o_p)]$  and x has F<sub>17</sub>.

38. Loar (1999a) extends this analysis to Chalmers’s and Jackson’s modal arguments. White (2006b), argues for a weakened version of the semantic premise and for its relevance to the Property Dualism Argument.

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