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Singling Out Properties

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## SINGLING OUT PROPERTIES<sup>1</sup>

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Colors have characteristic causes and effects—  
that we do know.

Wittgenstein, *Remarks on Color*

### I.

Who can forget the story of how epistemologists used to do business? Having offered to help you clarify *how* you know that *p*, they would gasp at your reasoning and declare that you *don't* know it—or rather *wouldn't*, if not for a reconstruction of your procedures invented by themselves. Then they would be gone, leaving you struggling to reconceive your relations to *p* along recommended lines.

Of course this, the style of epistemology Putnam once satirized as “intellectual Walden Two,”<sup>2</sup> is now defunct. But the spirit animating it lives on. What the metaphysician offers to clarify is not how *p*'s truth is *known*, but what *makes p* true. Trouble is (you can guess the rest), a review of all likely truth-makers reveals that *nothing* does. Or rather nothing *would*, if not for a certain *substitute* truth-maker identified by the metaphysicians themselves. Whoever would persist in counting *p* true is thus forced to reconceive its truth as flowing from unexpected sources.

With apologies to Putnam, this approach to metaphysics might be called “ontological 1984,” in view of the Party's penchant for tampering with the truth-grounds of everyday statements. Statements about the past, O'Brien explains, are true in virtue of what is preserved in records and memories; numerical claims owe their truth values to the Party's stipulations. “You are no metaphysician, Winston,” O'Brien says when his prisoner boggles at some such revelation. Using the term in O'Brien's sense, this paper explores some strategies for not being a metaphysician.

### II.

Here is the scenario. There is a predicate “F” and we have various things

we want to say with it—things we regard as quite likely true, or even certainly true. But we are troubled. Granted that “F” applies to roughly the objects we suppose, what property or relation or condition or what have you does it apply *in virtue of*? Information about the property is not lacking; there are the various statements we are inclined to make using “F”, and these, being presumably correct, add up to a considerable data base. What bothers us is that the information feels *circumstantial*; we learn what the property is *like*, not what it *is*. The urge thus arises to *identify* Fness,<sup>3</sup> to single it out and elucidate its nature. Only then will we know what makes our predications true.

This sort of scenario is enacted everywhere in philosophy, as a few examples will bring out. Naturalized semanticists have charged Tarski with promising, but failing, to explain what truth is. Tarski *partly* explained truth when he reduced it to denotation; it falls to us, though, to complete Tarski’s task by finding the relation, presumably naturalistic, that words bear to the objects they denote.<sup>4</sup> Or take the debate in the philosophy of mind as to which feature of a person makes her correctly describable as “believing that *p*.” Is it a relation she bears to a sentence of mentalese, or the attribution’s making best sense of her behavior, or the fact that we, in a similar state, would declare that *p*? The pattern even extends to ethics, where the search is on for the property that “perfectly deserves the name ‘value.’”<sup>5</sup> Whether value attributions can be true is disputed, of course, but if they can, the thought is, it ought to be possible to produce for inspection the property that gives them this status.

So: by the looks of things, there are lots of properties standing in need of further identification. However it’s in connection with *qualitative* properties—secondary and phenomenal—that the identification problem becomes really acute. This is because qualitative properties can seem not merely undiscovered but positively *hidden*.<sup>6</sup>

According to one way of drawing the primary/secondary distinction, primary qualities are well represented by our ideas of them. When veridical, which is not always, these ideas portray shape, size, number and so on as they really are. With secondary qualities, it is nearly the reverse: our ideas of taste, smell, color, and so on, though seldom false,<sup>7</sup> convey a very *poor* sense of their associated properties. Thus Reid:

our senses give us a direct and distinct notion of the primary qualities, and inform us what they are in themselves: but of the secondary qualities...[they] inform us only, that they are qualities that effect us in a certain manner...as to what they are in themselves, our senses leave us in the dark.<sup>8</sup>

For this reason, “the nature of the secondary qualities is a proper subject of philosophical disquisition.”<sup>9</sup> Happily, “philosophy has made some progress” in the matter.<sup>10</sup> But philosophy would not be needed if experience had not left these qualities’ identities so obscure.

Now for Reid, the problem about secondary qualities grows out of a contrast

between the qualities themselves, which are unknown, and the sensations they produce in us, which are known full well. So he would not himself see the problem as extending to *phenomenal* properties, like that of sensing greenly or suffering pain. Others however find the cases analogous—some, like Descartes, mentioning them in the same breath:

If someone says he sees color in a body or feels pain in a limb, this amounts to saying that he sees or feels something of which he is wholly ignorant...<sup>11</sup>

Pain-experience, though generally veridical in the sense of occurring only when one is really in pain, gives little indication of what that condition really amounts to. But if we cannot know pain just on the basis of our experience of it, how to proceed? Research will have to be conducted into pain's identity; somewhere a state lies waiting such that identifying pain with *it* honors, in Dennett's words, "all, or at any rate most, of our intuitions about *what pain is*."<sup>12</sup>

### III.

These examples remind us of what is fast becoming standard operating procedure in metaphysics: gather a body of more or less central preconceptions associated with some predicate, and then, guided by whatever clues philosophy and science have to offer, strike out in search of the associated state or property. That a procedure is standard doesn't make it right, of course. But there *do* seem to be reasons for wanting to know the worldly correlates of our predicates.

Nothing counts as a theory of *pain*, Dennett says, unless it honors enough of our intuitions about what pain is. Intuitions being the impromptu, unexamined things they are, though, "a prospect that cannot be discounted is that these intuitions do not make a consistent set."<sup>13</sup> How might we ward that prospect off? The obvious strategy would be to *produce* a state making the intuitions come true. And this seems little different from identifying pain itself.

Rather more worrisome, because less remote, is the prospect that our intuitions clash not among themselves, but with views we hold about the larger world. There is nothing *internally* incoherent, according to Mackie, in the idea of "objectively prescriptive" value properties, or "colors as we see them belong[ing] intrinsically to the...surfaces of objects",<sup>14</sup> it's just that other things we think rule out anything's actually *possessing* such properties. Again, the obvious response would be to identify redness with (say)  $R_{295}$ , a property conspicuously at peace with our larger theory. This is a second reason we might want Fness identified.

"[D]oes it not appear a contradiction," Reid asks, "to say we know that fire is hot, but we know not what heat is?"<sup>15</sup> Even to *understand* the statement that fire is hot, some would say, requires knowledge of what heat is.<sup>16</sup> These formulations can be faulted, no doubt, for treating knowledge and understanding as all-or-nothing affairs. But the underlying idea seems right: the *better* one

knows what Fness is, the better one understands “X is F,” and the less superficial one’s knowledge that it is F. This gives a third motive for the project of singling Fness out.

Next is the motive of simple curiosity. Questions may arise about a property whose answers depend, or seem to depend, on the property’s further identification. Is pain *essentially* painful? Kripke says yes and concludes that pain is not identical to anything physical. But matters arguably belong the other way around: “an opinion on [the] truth or falsity [of the essential painfulness claim] waits upon a theory of what pain is.”<sup>17</sup>

What finally if we have *no* intrinsic interest in Fness, and want only to *communicate* using the predicate “F”? Not even this, it seems, can excuse us from the identificatory project. For communication has a metaphysical side; unless both parties are using “F” in reference to *the same property*, they are talking past each other. Whether this proviso holds, however, depends on (i) the property that we ourselves attribute by use of “F,” and (ii) the property that our interlocutors do. This gives us an interest in (i); and an interest in (i) is an interest in the identity of Fness.

With so many reasons for seeking after Fness’s identity, how could anyone object? Nonetheless I do object, if not to the project’s goal, then in some cases to the project itself. Seeking after a property’s identity makes sense only if its identity is not yet known. That is, there has to be a *better* way of conceiving Fness than what we have already, such that knowing what Fness is means conceiving it like *that*. *But the existence of a better idea of Fness is not something that can be assumed in advance*. The next three Sections look at some of the trouble this assumption can cause; the rest of the paper experiments with dropping the assumption and getting out of the identification racket.<sup>18</sup>

#### IV.

Remember the scenario: we have a body of doctrine involving some predicate “F,” and we seek a better idea of the property we attribute with it. Asked what’s wrong with our existing idea, we’d complain of knowing the property only indirectly, as the whatever-it-is meeting certain conditions. These conditions might take a number of forms, but in the usual examples they are causal. Pain is the state that is brought about by tissue damage, that prevents concentration, that prompts avoidance behavior, and so on. Red is the property producing a certain type of experience in suitably placed observers. While all of this is useful information, the complaint goes, none of it tells us what the property *is* as opposed to what it *does*.

To which the obvious reply is, given enough information about what something *does*, it ought to be possible to track it down and make a positive identification. This is the strategy Armstrong employs in *A Materialist Theory of Mind*. Having argued on philosophical grounds that “the concept of a mental state is the concept of a state of the person apt for the production of certain sorts

of behavior,” he proceeds to ask, “What in fact is the nature of these inner states?” This last is said to be a matter not for philosophy but “high-level scientific speculation.”<sup>19</sup> Armstrong envisages a two-part procedure then. Calling a property *F-ish* if it satisfies the main presumptions about Fness, philosophical analysis reveals that

(1) Fness = the *F-ish* property,

Next, the scientists are brought in to tell us which property is in fact *F-ish*. Not that we can’t make an educated guess. Armstrong himself thinks that “the identification of [mental] states with physico-chemical states of the brain is, in the present state of knowledge, nearly as good as the identification of the gene with the DNA molecule.”<sup>20</sup> And “from the standpoint of total science, the most *plausible* answer is that redness is a purely physical property.”<sup>21</sup>

Now though we run into a famous problem. When Armstrong says that the red-role is played by a physical property, he is only playing a scientific hunch; there *could*, he admits, be “*irreducibly* diverse causes in the physical surfaces bringing about identical colour-appearances for human observers.”<sup>22</sup> But where Armstrong puts this forward as a sort of a doomsday scenario in which colors are reduced to the status of pseudo-qualities, nowadays it is thought to be more or less the situation: “apart from their radiative result, there is nothing that blue things have in common...”<sup>23</sup> Something similar is of course the standard line on suffering things—they too have nothing but a causal syndrome in common. It begins to seem that Armstrong-style concepts of sensations and colors are concepts of precisely nothing.

## V.

What is the property that red things, suffering things, or what have you possess in common, and in virtue of which they are rightly called by those names? While we know, or think we do, how the intended property *behaves*—its causal role—we cannot seem to find a property that covers all and only the cases where the role is actually played.

Or can’t we? If what is wanted is a property covering just the cases where a causal role gets played, why not the property of having a property that plays it? This is the solution urged by *dispositionalism* in the philosophy of color,<sup>24</sup> and the souped-up dispositionalism called *functionalism* in the philosophy of mind. The general format is

(2) Fness = the property of having an *F-ish* property.

Because (2) represents Fness as the property of having a property playing a certain role, let’s call it the *role theory* of Fness. ((1) was the *realizer* theory.) Redness, this theory claims, is the property of having a property playing the red-

role; pain is the state of being in a state playing the pain-role; etcetera.

Having been crafted with an eye to just this result, the properties championed by the role theory have a large advantage over those championed by the realizer theory, viz. satisfaction of the following key preconception about Fness:

*commonality*: it is shared by all and only Fs.

But this is not the only preconception in play. The thing we know best about Fness, our main intuitive grip on the property, is that Fness is *F-ish*, with all the causal powers that entails. Hence a second key preconception is

*causality*: it has F-ish causal powers.

The question is whether the property of *having* an F-ish property—the property that Fness *is* according to the present theory—is *itself* in relevant respects F-ish.<sup>25</sup>

When Reid refers to the colors as the causes of well-known experiential effects, he is only echoing common sense. Unschooled by philosophy, anyone would say that our experiences of a ripe tomato as red are caused by the tomato's *redness*. But is this a view that the dispositionalist can accept? Experiences of color are, for her, *manifestations* of color; they stand to it as sleep stands to dormitivity or death to deadliness. While we may indeed cite dormitivity in the *explanation* of sleep, to indicate that the sleep occurred not by chance but thanks to a sleep-inducing property of the dormitive substance, it is famously *not* plausible to say that the sleep-inducing feature was the dormitivity itself. Still less would we seek a place for the mushroom's *deadliness* in the causal ancestry of the ensuing death.

Is the claim that dispositions lack causal powers altogether? Not at all; the mushroom's deadliness might well influence the property-owner to post warning signs. The claim is not even that dispositions cannot be responsible for the effects they are dispositions to produce. There could be a sleeping potion that worked partly, or even entirely, through our recognition of its dormitivity.<sup>26</sup> And part of the magic of the true charmer is his ability to win you over by his very charmingness. (This is to say nothing of the phenomenon of being famous for being famous.) But the lengths one must go to to find such cases brings it home that, special fiddling aside, dispositions do not cause their manifestations.<sup>27</sup> Dispositions to produce color-sensations are no exception; sensations of redness might be due to various properties of an object, but the property of having a property productive of such sensations is not one of them.<sup>28</sup>

Sure as common sense might be about the causal powers of colors, it is adamant about those of occurrent mental states: pain causes avoidance behavior, itchiness makes us scratch, and so on. Part of the knock against Rylean behaviorism was its reluctance to acknowledge such facts. And part of the attraction of early functionalism was the way it seemed to welcome them and

indeed build them into the essences of the relevant states.

But although this is a story functionalists love to repeat, it doesn't really hang together; given the difficulty of getting a state to *cause* the effects by which it is defined, the part about building various outcomes into pain's essence sits ill with the part about preserving pain as their causal basis. What really happened is that the functionalist succeeded rather too well. Determined not to slight pain's effects, she created a state so tightly bound up with those effects that it could no longer bring them about.<sup>29</sup>

## VI.

Back to the original problem. When Armstrong proposed to identify Fness as *the* state playing a certain role, the reply came that such a thing might not exist, different states playing the role on different occasions. But why did we assume that a *single* state was required? Is it written in stone that "F" must be attributable for the same reason in every case? No, says Lewis. Pain might be

one brain-state in the case of men, and some other...in the case of mollusks. It might even be one brain state in the case of Putnam, another in the case of Lewis... . The seeming contradiction (one thing identical to two things) vanishes once we notice the tacit relativity to context in one term of the identities.<sup>30</sup>

That is, we can agree with the realizer theory that

(1) Fness = the F-ish property

always holds true,<sup>31</sup> without supposing that it expresses the *same* truth in connection with different objects.<sup>32</sup> Rather (1) resembles "the winner = whoever came in first" in maintaining a constant truth value through coordinated fluctuation in the references of its parts. But then, just as it would be clearer to say "the winner of a given race = whoever came in first in that race," we should clarify (1) to

(1\*) Fness in a given thing = the property that is F-ish w.r.t. that thing.

This is Armstrong's original realizer theory amended to take account of the fact that different properties might play the F-role with respect to different objects. But as written the theory is incomplete.

Imagine that itchiness in Pam is I-fiber firing while itchiness in Sam is I-sac fibrillation. Are we to conclude that there is nothing that Pam and Sam have in common when both feel itchy? No such conclusion follows, says Lewis. What is true is that Pam and Sam don't have their *realizer*-properties in common. But there is also (and still) the *role*-property of having *some* property or other playing the itchy-role for a creature like yourself. This latter property may not



be itchiness, but it is a related property, and it's one that Pam and Sam share. For the sake of a label, why don't we call it *the property of having itchiness*?<sup>33</sup> And in general why don't we contrast *Fness*, the realizer-property that varies from object to object, with *the property of having Fness*, the role-property that Fs share? Then in addition to replacing (1) with (1\*), Lewis would replace (2) with

(2\*) the property of having Fness = the property of having an F-ish property.

By this distinction between the property of Fness and that of having Fness, Lewis appears to get the best of both worlds. For whatever names you call them by, he has an itchiness-property that makes him scratch, and an itchiness-property he shares with all itchy creatures of whatever physiological make-up.<sup>34</sup>

Where are we? Armstrong's realizer-properties had the right causal powers but were not common to all of the right things; the role theory (once) championed by Putnam had the opposite virtues. Only with Lewis's mixed theory, it seems, do we get both *commonality*—properties shared by all and only F-things—and *causality*—properties with F-ish causal powers. What could be better?

Here is what. Better than a theory offering *two* F-properties, one shared by all and only Fs and the other with the intuitive causal powers of Fness,<sup>35</sup> would be a theory offering a *single* F-property, common to all and only Fs and possessing the intuitive causal powers of Fness. Otherwise we cannot say that Pam is scratching for the same reason Sam is, viz. itchiness. The closest that a Lewisian can come to this is: Pam and Sam both scratch because both have the property of having itchiness. But this is like saying that mescaline and Audrey Hepburn movies are enjoyable for the same reason, viz. possession of properties conducive to enjoyment.<sup>36</sup> I conclude that the mixed theory is giving us the reverse of what we want. Rather than similar effects due to a common property, we are getting a common property built around the fact of similar effects.<sup>37</sup>

## VII.

Originally we sought to identify "F"'s referent as *the F-ish property*, whatever that might turn out to be. This is recognizably a descendant of Kripke's method in *Naming and Necessity*, except that where we speak of F-ishness, Kripke speaks of the conditions fixing "F"'s reference.<sup>38</sup> That the method works more or less as advertised in connection with terms like "hot" and "gold" can be taken for granted here. But the attempt to extend it to color terms—to identify the referent of "yellow" as

that (manifest) property of objects which causes them, under normal circumstances, to be seen as yellow (i.e., to be sensed by certain visual

impressions)<sup>39</sup>

—runs, it appears, into a familiar sort of trouble; for, as Crispin Wright puts it,

there may simply fail to be any interesting physical essence underlying the manifestations which have a salient similarity for us...we hold out a hostage to fortune in attempting reference fixing of this kind, and the hostage may not be redeemed.<sup>40</sup>

Reference fixing is pointing where one *hopes* an interesting physical essence lies. But some hopes are better founded than others, and it is all too easy to believe that objects making a similar impression on human color sense do so for physically different reasons.

How could Kripke have missed this problem? A possible reply is: what problem? To speak of the “manifest property of objects which causes them...to be seen as yellow” is not to say *anything* about physical essences; the issue of physicality is not addressed.<sup>41</sup> Kripke does tell us that “it is up to the physical scientist to identify the property so marked out in any more fundamental physical terms that he wishes.”<sup>42</sup> But this sounds more like a burden shifting remark (“identify it if you can”) than a profession of faith that the scientist will succeed, much less an insistence on physical specifiability as a condition of successful reference fixing.

Whether handing the identificatory ball off to appropriate experts is sound methodology is not the question; we can assume it is. The question is: what if the experts can make no yardage, and the ball is handed back? Emboldened by their reading, or misreading, of Kripke, many philosophers would take a hard line on this, rejecting not-further-identifiable properties as unreal. (“If there is no *saying* what Fness is, most likely it isn’t *anything*”). But this is because they have allowed the sensibly unpretentious policy of deferring to expert opinion where it exists to harden into the absurdly self-effacing one of *automatically* discounting ordinary, nonexpert, ways of conceiving properties as superficial. Assume that all properties possess hidden depths, and Fness, which refuses to reveal any (or indeed to reveal much of anything about itself not already imputed by common opinion), takes on the feel of a projective fantasy.

Well, suppose we do *not* allow the sensible policy to harden into the absurd one. Then the fact that Fness is impervious to experts admits of a new interpretation: the way the rest of us conceive Fness is the *right* way if you want to know what Fness is. (The rest of us *become* the experts, if you like.) This is what the “hostage to fortune” line overlooks. Fortune might have had a hand to play if yellowness were a theoretical posit, an I-know-not-what postulated to explain the familiar and known. (Depending on whether the explanation could be made to work, yellowness’s claim to reality might or might not hold up.) But the claim here is that yellowness is *itself* something familiar and known; our ordinary, nonexpert ways of conceiving it tell as good a story as any about what it is.

So, then: yellowness is the intrinsic, categorical feature that objects *appear* to have when they look yellow to us, that *makes* them look yellow to us, that yellow things have in common, and so on. Pressed for its “true identity,” the best we can do is reiterate the preconceptions (intrinsic, categorical, yellow-look-making, etc.) while insisting that it is not laziness or any other human failing that prevents a fuller answer, but the property itself.

“Naive objectivism” is the usual name for a view like this—the word “naive” functioning partly to identify the view and partly to mark it as ludicrously simple-minded. This assessment is so deeply ingrained that it is surprising to realize how little explicit argument there is to back it up. “What is beyond dispute,” Dennett says,

is that there is no simple, nondisjunctive property of surfaces such that all and only the surfaces with that property are red...<sup>43</sup>

His evidence boils down to the fact that science offers no simple, nondisjunctive, conception of redness. But this is agreed all around. The most that follows is something else agreed all around: naive redness, if it exists, is not a property that scientists have much truck with.

That they should present an attractive face to science is hardly a core presumption about the colors. But it *is* generally presumed that objects *look* colored as a result of being so; and this might seem equally damaging:

One view about [secondary qualities] seems clearly ruled out. Colors, for example, can't be properties of substances over and above the microstructural properties of them that account for the ways they influence the physical features of the light that impacts on our visual systems...To suppose [otherwise] is either to embrace a view about the causation of our perceptual experiences which is known to be false, namely the view that they are caused by something other than the microstructural physical properties of objects, or to embrace the view that secondary qualities are epiphenomenal and play no role in the production of our perceptual experiences...<sup>44</sup>

Because our color experiences are fully accounted for in terms of the relevant microstructure, colors understood as over and above that microstructure would be causally otiose. (At best they could aspire to “seconding” whatever causal messages were being sent by the underlying physics.<sup>45</sup>) Moral: if you want your colors causally active, better make them microphysical.<sup>46</sup>

Before accepting this result, consider a parallel argument. The scale at a certain weigh-station is adjusted to sound an alarm whenever a truck weighs in at over 70,000 pounds—in a word, whenever a truck is *heavy*. Enter yourself, on an overloaded semi, and the buzzer sounds. Given how the scale is adjusted, it would seem that your truck's property of being heavy was highly relevant to the alarm's sounding. But think again. I forgot to mention that your truck was *barely* heavy, in the sense of weighing *just* over 70,000 pounds. With the truck's *bare*

heaviness being *itself* sufficient for the effect, every *other* aspiring cause is left with nothing to do. Apparently then the truck's heaviness ("another" aspiring cause after all) made no causal difference to the buzzer's sounding. Moral: if you want your weight-properties causally relevant, make them as determinate as possible.

How can this be, though? To be heavy is *part of what it is* to be barely heavy; and how can a part be crowded out by its containing whole? What the truck story really shows is that when properties are so related that to possess one is part of what it is to possess the other—when they are related as determinable to determinate—they do not compete for causal honors.<sup>47</sup>

Imagine that the scale is constructed on a balance-beam model; if a truck weighs enough to lift the 70,000 pound counterweight, then a circuit is broken and the buzzer sounds. So the mechanism is absolutely insensitive to weight differences above 70,000 pounds. With this in mind, what is the property of the truck whose instantiation resulted in the buzzer's sounding? While it is true that the truck's bare heaviness was sufficient for the effect, if we had to name a property as the one responsible, it would be the heaviness pure and simple.<sup>48</sup> For only the latter is *commensurate* with the effect, in the sense of including what the effect needed with a minimum of irrelevant extras.

So a determinable property, far from being preempted by its determinate, is often *better* placed to function as cause. Couldn't this be how it is with the tomato's surface microstructure and its surface redness? If colors were nonphysical determinables of the microproperties thought to preempt them, then no causal competition would be possible. And because color-properties would be *better* proportioned to our perceptual responses than their microphysical determinates—a rose whose color were otherwise microphysically implemented would look as red—they'd be better placed to play the role of cause.<sup>49</sup>

Does it even make sense, though, to think of redness as a determinable of its physical underpinnings? Normally determinates are taken to *entail* their determinables as a conceptual matter. So even if, as seems plausible, colors are *necessitated*, in the metaphysical sense, by their microphysical underpinnings, talk of determinates and determinables is out of place. For plainly, no microphysical state conceptually entails redness.

Yet on second thought, it's the conceptual entailment requirement that's out of place. Determination is above all a relation between *properties*. But as we know from Kripke's examples of "synthetically identical" properties, conceptual entailment is not; a single property, conceived in alternative ways, will have different conceptual consequences. (To put the point in the usual misleading way, entailment relates not properties, but properties-under-a-conception.) Accordingly we drop the entailment condition and explain determination in wholly metaphysical terms: *Fness* is a determinate of *Gness* iff to be *F* is a *way* of being *G*. To have your molecules arranged *thusly* is a *way* of being red, so redness is a determinable of the given microproperty.

## VIII.

Standing back for a minute from the example of color, what is the picture we have arrived at? The goal was a property *Fness* that was common to all Fs, and that played an F-ish causal role. Surmising that only a physical property could play the desired role, we were dismayed to learn that *different* physical properties  $P_1$ ,  $P_2$ , etc. played it in different objects. But the surmise was wrong: the F-role is best played by a nonphysical determinable with  $P_1$ ,  $P_2$ , etc. as determinates. Surmising that coverage of the Fs required a higher-order property existentially generalizing over  $P_1$ ,  $P_2$ , etc., we were dismayed to learn that this property had the wrong causal powers. But the second surmise was also wrong: a determinable with  $P_1$ ,  $P_2$ , etc. as determinates covers the same extensional ground as its higher-order alternative.

Notice that the very same property, what we might call *Fness as such*, gets overlooked both times, despite offering the only real hope of harmonizing some fairly basic convictions, e.g., that red objects have something in common on account of which they *look* red. The tempting conclusion is that philosophers don't really like this property; they dislike it to the point of suppressing it even in contexts where nothing else will do. Because the reasons for such an attitude will be different in different cases, let's consider the reasons for hostility to properties like *redness* as such, that is, to the naive colors. And let's start with the worry that, despite my optimistic noises above, what these *are* remains to be explained.

## IX.

Zinc is explained by showing where it falls in the table of elements; radio waves are explained by pointing to a segment of the electromagnetic spectrum; pokeweed is explained by locating it in the kingdom of plants. To explain what a thing is, then, apparently, one blocks off its ontological neighborhood, enumerates the inhabitants according to some illuminating principle, and indicates which of the enumerated items it is. All that remains is to apply this model to the case of the colors. Explaining what they are would be a matter of spelling out "which properties colors are...in a particular set that is acknowledged on both sides to exhaust the properties of material objects."<sup>50</sup>

But there is no such set, that I know of. To assume that there is is to assume that the colors can be caught in a net designed with other sorts of properties in mind. And why should the naive objectivist accept this? *Sui generis*, unscientific, and of minuscule causal impact, colors as she conceives them have nothing to draw the enumerator's attention.

If redness isn't to be picked out on a master list of properties, what *can* be done to calm our concerns about what it is? Attempting to *define* those concerns would be a good start. Wh-questions notoriously require a *context*: some sort of gap or defect in one's information that one is seeking to remedy. This is why it

makes little sense to wonder, apropos of nothing, who Frank Sinatra is, or where North America might be found. But suppose that one's information about Sinatra was hearsay from what turned out to be a defective source. Then it *would* make sense to wonder who Sinatra was. Similarly, it would make sense to wonder what redness was if our "source" on it proved defective. But this is exactly the situation, according to some philosophers: our "source" on the colors is color experience, and color experience does not portray the colors as they really are. Either it *conceals* the colors, or (worse) it *deceives* us about them.

Does our experience of color fall short in either of these ways? The charge of deception is leveled by Mackie in his book on Locke. Science has left us with only so many candidates for the role of color, Mackie thinks, and the colors as presented by color experience are not among them. Since there are no properties that *are* as the colors *look*, color experience tells a false story. How the story goes can be gleaned from Mackie's remark that

it is most improbable that there is any single quality, an objective 'resemblance' of, say, my sensation of a particular shade of green, in all the things...that give me this sensation.<sup>51</sup>

What forest green *looks* to be, then, is

- (a) the common cause of our experiences of forest green, and
- (b) an objective resemblance of those experiences.

But if this is the story experience tells, it is not obvious why it should be thought false. The only argument offered against (a), that science does not *postulate* a common cause, applies equally to our experiences of things as jagged, loopy, heaped, frizzy, or tangled<sup>52</sup>; science does not postulate common causes here either. The worst that follows is that scientifically speaking, color is in the same boat as these. (And why should the naive objectivist not agree?) How to interpret "resemblance" in (b) is famously unclear, but suppose we take it Mackie's way: "an objective quality resembles the idea of that quality [iff] in this respect things are just as they look."<sup>53</sup> Then to say that reality contains no property "resembling" my experience of forest green is to say that it contains no property that is as forest green looks. This is not an argument for the deception thesis but just a restatement of it.

What about the charge that, while color experience may not lie, it leaves out important parts of the truth? That this should be raised against objectivism is ironic. Dispositionalism and physicalism would seem far more natural targets. Not even Locke thought that red *looked* like a power to produce experiences,<sup>54</sup> and still less does it look microstructural in nature. But what is the argument that redness does not look to be what the naive view says it is: an intrinsic nondispositional *sui generis* color property? This would seem to be *exactly* how it looks.

Not so fast, you might say. Even if naive objectivism does not make the colors microphysical, they do come out *determinables* of microproperties. And redness does not *look* like a determinable of microproperties. This invites the question of how determinables of microproperties may be *expected* to look. It is true that the experience of a color does not suggest the myriad ways in which that color is liable to be microphysically implemented. But if a property's liability to be implemented in thus and such ways is the kind of thing a revealing experience of the property ought to register, then *primary* quality experience is unrevealing too. For: roundness, no less than redness, is implementable in myriad microphysical ways (having outermost molecules arranged like *so*) of which the experience of roundness gives no hint. Yet roundness is the paradigm of a *revealed* property, the kind that redness was supposed to be contrasted with.

## X.

So far we have found no basis for the complaint that color experience is unrevealing. Neither though have we attached much content to the contrary claim: that the experience of a color gets the color *right*.

What standard experiences of color *do* seem to suggest is that redness (e.g.) is intrinsic and categorical. But this much is true of lots of properties—roundness, for instance. To be revealing, shouldn't our experience of a color inform us of features *peculiar* to it? There is even the view that it should lay the color's nature completely bare. Yet as expectations rise about our experience's power to reveal, so too do doubts about the intelligibility of the corresponding feature. Can we really make sense of an *objective* property that is, in Evans's phrase, "exactly as we experience redness to be"?<sup>55</sup>

Here is a way of making the worry sharper. Redness and greenness are fundamentally different, perhaps fundamentally opposed. If color experience is revealing, this ought to be reflected somehow in our different experiences of them. But the only relevant experiential difference would seem to be in qualitative feel. And what can qualitative feel possibly tell us about the nature of an intrinsic, categorical property of external objects, a property that is "there anyway," regardless of the impression it makes on human observers? No wonder Evans complains, against other-than-dispositional conceptions of redness, that "what one conceives when one conceives that objects which appear red to us are in addition really red...is quite opaque."<sup>56</sup>

The challenge is to think what redness could be, that the right way to conceive it is in terms of experiences of such and such a qualitative type. Dispositionalists and physicalists have ready replies. If redness were a disposition to produce red-type experiences, then *clearly*, those experiences would be peculiarly apt to redness, and an invaluable guide to its nature. And although red-type experiences would *not* be peculiarly apt if redness were microphysical, neither would we expect them to be; science, not color experience, would be our guide to the nature of redness. It is only on the naive account that a certain type

of experience is *needed* for knowledge of what redness is (science isn't going to help) at the same as it is *prohibited* (redness being objective). This seeming paradox is our final topic.

## XI.

Near the beginning of "Values & Secondary Qualities," McDowell declares that the colors are not "adequately conceivable except in terms of how their possessors would look."<sup>57</sup> By an "adequate" conception of X, let's take him to mean a conception whereby one knows what X is. Then McDowell's claim is that whoever does not conceive redness in terms of how it makes things look does not know what redness is—or, as we might put it, that it is *epistemically essential* to red to make things look that way. But is this true of red?

With surprising regularity, paranormal perception buffs report the existence of "color-touchers," or individuals capable of detecting color by tactile means. Whether the reports are true doesn't matter;<sup>58</sup> the issue for us is the conceptual one of whether someone who accessed color by touch alone could still be said to conceive them adequately.<sup>59</sup> Take for instance the subjects discussed in "Seeing Color With The Fingers," a story in the June 1964 issue of *Life* on "dermo-optical perception:"

Yellow, they said, felt slippery, soft and lightweight. Blue, while not so slippery as yellow, was smoother and the hand could move more freely over it. Red was sticky and clinging. Green was stickier than red but not so coarse. Indigo was very sticky but harder than red or green. Orange was hard and rough, and inhibited movement... . Black was very inhibiting and clinging, almost gluey, while white was quite smooth, though coarser than yellow.<sup>60</sup>

How shall we describe these people? They have a *way of thinking* about yellowness—an *idea* of it if you like—but that is all. What yellowness *is* they do not know.<sup>61</sup>

The epistemic essentiality claim seems right, then. But McDowell puts a *construal* on the claim that I want to raise a question about. Properties that are "not adequately conceivable except in terms of certain subjective states," he says, are "subjective themselves in a sense that that characterization defines."<sup>62</sup> The question is whether "that characterization" defines a sense of "subjective" at all. To call a property "subjective" is to comment in an ontological vein about what it is. But to say that it is not adequately *conceived* except (e.g.) in terms of how it makes things look is to applaud certain ways of *thinking* of the property. Unless standards of adequate conception are dictated *by the property and it alone*, no ontological conclusions follow.

Now, it may seem *obvious* that the property sets the standards. All that we mean by an adequate idea of X, recall, is one marking its possessor as knowledgeable about what X is. And surely, the standards for knowing what a



thing is flow from *what it is!* To have a name for this view, let's call it *absolutism* about knowing what. *Anti-absolutism* holds that standards for knowing what are sensitive to (so far unspecified) additional factors. Some examples will help us to decide which view is closer to the truth.

Imagine a person who because of some sort of agnosia is unable to recognize presented squares: not by touch nor by sight nor in any other way. Asked whether she knows what a square is, we'd be hard put to say she did. On the one hand, she does have an idea of squareness; she may even know that squares are four-sided regular polygons. On the other, here she is with a square in her hands and she can't ascertain its shape!

Now switch to the property of being a milliagon, here defined as a million-sided regular polygon. With respect to milliagons, all of us are in the position of our agnostic friend, the position of not being able to recognize them either by sight or touch. By parity of reasoning, shouldn't we suspect ourselves of not knowing what a milliagon is? Yet we do not; somehow, to know what a milliagon is, the ability to recognize one is not required. To the absolutist, this can only mean that as  $n$  decreases, the property of  $n$ -sided regular polygonhood puts stronger and stronger demands on those would seek to know it. But the truth is surely that since *most* people can recognize squares perceptually but not milliagons, the ability is required in the one case but not the other.<sup>63</sup>

Listening to the summer weather report, you may hear, in addition to tomorrow's *temperature*, the expected *heat index*—a function of temperature and humidity that is supposed to predict how hot the day will *feel*. Poor Henry ignores this figure; for him, every day is a 100% humidity day, because Henry is unable to perspire. The humidity normally being quite a bit less than 100%, Henry spends much of the summer feeling considerably hotter than we do; on a day when we might be out enjoying the breeze, Henry will be huddled next to the air conditioner.

Of course, Henry appreciates, in a sense, that it's merely warm out there, not hot. Even so, given how he feels on such days, one wants to say: poor guy, he doesn't know what it is for a day to be (merely) warm. How will the absolutist explain this? She must say that Henry's idea is objectively wrong; the *right and true* way to feel when it's warm out is the way that *we* feel. This is wildly implausible, however. Perspiration functions to drop our skin temperature *below* that of the surrounding air, so if anyone is appreciating the temperature "as it really is," it's Henry.<sup>64</sup> (Except for the historical accident of our greater numbers, it would have been wetskins like ourselves that were under suspicion of experiencing the temperature incorrectly.)

Absolutists say that standards of adequate conception are dictated by the (nature of the) thing conceived. But if so, then the following clearly possible thing should *not* be possible: knowing what  $X_1$  is without knowing what  $X_2$  is, even though  $X_1$  and  $X_2$  are identical.<sup>65</sup> All that most people know about sodium chloride (e.g.) is that it is some sort of chemical; what *salt* is, however, they *do* know. And while few have led such sheltered lives as to be ignorant of what

cold is, ignorance of low random kinetic energy abounds.<sup>66</sup> (Note that it could have been the other way around.<sup>67</sup>) Since different things count as knowing what X is depending on how it is picked out, responsibility for the line between adequate ideas of X and inadequate ones does not lie with X alone.

So much is to challenge an influential *argument* for the visual nature of the colors. Now let me raise a doubt about the argument's conclusion. The color-touchers, let's imagine, evolved in isolation from those accessing color in other ways; they found the tactile mode of color perception as natural and inevitable as we do the visual one. Bananas and canaries they called "silft" ("slippery, soft and lightweight"), ripe strawberries were "styngy" ("sticky and clinging"), and so on. To know what silftness and so on *were*, one had to know how they made things *feel*. Only later, when contact was made with the likes of us, was it realized that silftness, to fix on that example, was none other than yellowness. Whereupon some of the more philosophical color-touchers reasoned as follows: since silftness is tactile by nature, yellowness has a tactile nature as well.

Now, the fact that this conclusion is drawn in a counterfactual world doesn't make it any more tolerable. If yellowness *could* have been tactile by nature, then, given the modal fixity of natures, it *is* tactile by nature; and as we know, it is no such thing. This turns the color-touchers' modus ponens into a modus tollens; since yellowness is not of a tactile nature, neither is silftness. But of course, two can play this game. By whatever authority *we* are able to vouch for the non-tactile nature of yellowness, the color-touchers affirm that silftness is not of a visual nature. It follows that yellowness isn't visual either.

## XII.

Yellowness is *supposed* to be conceived in terms of how it makes things look. But the connections between the way a thing is supposed to be conceived, and the way it is, are complicated. Even the obvious-looking principle that "one is not obliged to conceive X as F unless it *is* F" may be doubted. And the stronger one that substitutes "unless X is F by nature" is definitely mistaken.

But our story has a lacuna exactly here. If the ways we are supposed to think of things need not reflect anything metaphysically important about them, why on earth are we supposed to think of them in these ways?<sup>68</sup>

Start with a reason going back in essence to Frege. Agreement, testimony, dispute—all of these depend on words being used in reference to the same items. The Frege point is that that is not enough. Take the case where you say, "Aristotle is amazing," speaking of the philosopher, and I hear "Aristotle is amazing," understanding our friend Aristotle Sundog Greenglass. Obviously, we have failed to communicate; and this remains so even if, unbeknownst to anyone, the philosopher's private researches into generation and corruption were so successful that the two Aristotles are in fact the same. The point applies on the property side as well; if you say, "Zemly is all charged up," meaning that she is excited, and I hear you as talking about Zemly's electrical condition, then the

exchange is not saved if future science reveals that to be excited *is* to be electrically charged.

Along with speaking of the same items, then, communicators aim to think of these items in related ways. (Of course—communication would not be worth the effort unless it had guessable effects on the participants' states of mind.) But how better to arrange for this result than by indexing standards of conception to the pieces of public language that they exchange? So denoted, the Morning Star is to be understood in terms of its morningish appearance, and the Evening Star in terms of how it appears in the evening; the road from Thebes to Athens asks to be envisaged as traveled Athens-ward, the one from Athens to Thebes as traveled the other way. So denoted, salt is a condiment, the Sun is the preeminent celestial body, and sound is something to be heard; sodium chloride, meanwhile, is a chemical, Sol is one star among many, and compression waves are particles in motion.

Now, that it aids communication if different words carry with them different standards of right ideation was *supposed* to be a *non*-metaphysical reason for playing favorites. But any sort of favoritism among ideas stands as a temptation to the metaphysician. What is the relation between the Athens-Thebes road and the Thebes-Athens road? Naively, identity. But when one thinks of these roads in the ways their names prescribe, certain subtle “differences” emerge; one of the roads runs uphill, the other down, one offers better views, and so on. And now Leibniz's Law appears to show that the roads are not identical after all. Or consider the following. Science identifies sound with compression waves—a type of motion. But motion is perceived visually or by touch, while sound is perceived through the ears. So the wave theory of sound is wrong. Both arguments have had their advocates.

Still harder not to read metaphysical meaning into is a second sort of favoritism among ideas. Imagine that the color-touchers' verdicts agree with ours until chemists devise a substance which, although “yellow to the fingers,” is blue to the eye. Who would, or should, win the ensuing argument seems clear. (I assume that the story is not filled out in prejudicial ways.) The visual perspective on color is *privileged*; judgments framed from it are, other things equal, dialectically weightier than those framed from other perspectives.<sup>69</sup> But this privilege surely testifies to some sort of *special rapport* between color and vision. And now it begins to seem that the colors of *their nature* favor vision over the other senses.

Everything here depends on what we make of the bruited special rapport. The first interpretation that comes to mind is simply that vision is a superior *detector* of color; those who look make fewer mistakes than those who touch. But so what if it is? After all, vision is also a superior detector of faces; animals do a remarkable job of recognizing each other by smell; and coastlines are best judged from the air. This hardly suggests that faces are of a visual nature, or that animals and coastlines are olfactory and aerial.<sup>70</sup> The most that follows from a perspective's greater statistical reliability is that if reliability is your goal, that is

the perspective to adopt.

Yet such a reply, although correct within its limits, is superficial. This comes out when we press the question of *why* the colors are most reliably accessed by sight. With coastlines, the reasons are clear: due to their great size they are best viewed from afar; because they are (more or less) planar, the ideal viewing angle is from above or below; because air is transparent and rock is opaque, the view from above is better. Facts about coastlines thus explain *why* the aerial perspective should track the truth about them especially closely. But we have cited no facts about the naive colors that would give the visual perspective a truth-tracking advantage over that of the color touchers. And in fact it is consistent with our fantasy that the color touchers, unbothered by variation in lighting conditions, make *fewer* mistakes than ourselves. Somehow, though, this does not seem to rob the visual perspective of its dialectical advantage. Were a brute conflict to arise in which neither judgment could be written off to ambient lighting, sensory fatigue, or what have you, the visual perspective would prevail.

So color's special rapport with vision runs deeper than statistics. As deep as metaphysics, perhaps? I think we can explain the added depth in another way.<sup>71</sup> Let the color-touchers' idea track yellowness as accurately as you like, this remains a *de facto* connection which both sides stand ready to sacrifice in the interests of protecting the property's *de jure* connection to the visual idea. Silftness, meanwhile, is signified *de facto* by the visual idea, *de jure* by the tactile one; both sides would surrender the first connection to protect the second.<sup>72</sup> So if, contrary to what we suppose, the properties are distinct, the visual idea goes with yellowness and the tactile one with silftness. There are ways of putting this that lend it a metaphysical air; for instance, "the price of cognitive access to *yellowness* is to think of it visually or else in a way that agrees with the visual idea," or, the logical next step, "*yellowness* is *empirically* visual even if not noumenally so." But the point is just that an idea cannot denote yellowness without denoting the same property as our yellowness-idea, which is visual. And this is no more than a truism.

### XIII.

Remember our paradox: to know what yellowness is, one must know how it makes things look; yet if yellowness is objective, the impression it makes on human observers should not be *relevant* to what it is. The paradoxical answer is that there can be perfectly objective properties such that to know what they are, one has to understand them in subjectivity-involving ways.<sup>73</sup> I take these properties to include, in addition to the colors, qualitative properties like feeling itchy and suffering pain; perceptual properties such as that of being shaped like *so*; and normative properties like rationality and goodness. To illustrate with the last example, it may well be that no one who appreciates what goodness is can remain indifferent to it. But if so, the reason is not that goodness exerts an

irresistible magnetic pull; it's that you have to care about goodness to qualify as appreciating what it is.

### Notes

1. This paper began life as comments on Mark Johnston's contribution to the 1989 Colloquium on Color at the University of Michigan. Later versions were read at Queensland University, Australian National University, Monash University, UC Riverside, and UC San Diego; thanks to all who participated, especially Andre Gallois, Peter Menzies, Philip Pettit and Michael Smith. Closer to home I had help from Mark Crimmins, Allan Gibbard, Sally Haslanger, Ted Hinchman, David Hills, Joseph Levine, Gideon Rosen, David Velleman and José Zalabardo. I learned of John Campbell's related ideas ("A Simple View of Color") from Crispin Wright.
2. "Why Reason Can't Be Naturalized" in Putnam 1983. Perhaps I'm not using the phrase in exactly his sense.
3. I use "Fness" stipulatively as the property in virtue of which "F" applies; it's not a foregone conclusion that this'll be the same property in every case.
4. Field 1972. Field might not endorse this project now.
5. Lewis 1989, 136. See also Railton 1986, Boyd 1988, Johnston 1989, and Smith 1989.
6. Oddly, they can also seem entirely open to view; see Campbell 1993.
7. Aristotle says, "I call that sense-object special that does not admit of being perceived by another sense and *about which it is impossible to be deceived*, as sight is connected with color, hearing with sound, and taste with flavor" (*De Anima*, II, 6, my emphasis). Likewise Locke: "blue and yellow, bitter or sweet can never be false ideas" (*Essay Concerning Human Understanding*, II, 32, 16). This view of Locke's is noted in Curley 1972, 463.
8. *Essays on the Intellectual Powers of Man*, II, 17. According to Locke, "the ideas produced in us by these secondary qualities have no resemblance of them at all" (*Essay*, II, 8, 15).
9. *Essays*, II, 17.
10. *Essays*, II, 17.
11. *Principles*, I, 68. Note that Descartes speaks not of pain, the feeling, but pain the thing felt; I ignore the many issues this distinction raises.
12. Dennett 1978, 224.
13. Dennett 1978, 224.
14. Mackie 1977, 35; Mackie 1976, 19.
15. *Essays*, II, 17.
16. See the literature on Russell's principle that lack of acquaintance with any constituent of a proposition prevents understanding; for instance, Russell 1912, 58, and Evans 1985b, chapter 4.
17. Jackson et al 1982, 216.
18. This oversimplifies the eventual proposal; see section VII.
19. Armstrong 1968, 89-90. He treats color similarly. Redness is identified "by reference to the way it happens to affect us and by mentioning objects that happen to be red" (*ibid.*, 276). And "just as there arises the question what, as a contingent matter of fact, a mental state is, so there arises the question what, as a contingent matter of

- fact, the property of redness actually is" (*ibid.*, 277).
20. *ibid.*, 91.
  21. *ibid.*, 277
  22. *ibid.*, 289.
  23. Hardin 1984, 496; he bases the conclusion on Nassau 1980. Campbell 1969 made the point earlier.
  24. I assume the widely accepted second-order property treatment of dispositions; see Prior 1985. Alternative theories treat dispositions as counterfactual properties or as categorical ones. Against the first alternative see Shope 1978 and Wright 1992; Johnston 1993 attempts a fix. Against the second see Prior et al 1982 and Prior 1985.
  25. Here we ask whether the role property is F-ish in causal respects, but the question could be generalized. Part of the role of evaluative properties, for instance, is to merit an appreciative response. But does the property of having an appreciation-meriting property *itself* merit appreciation?
  26. Block's nice example; see his 1990.
  27. This is also the conclusion of Prior et al 1982, Prior 1985, Jackson & Pargetter, 1988, and Block, 1990. Based on his and Jackson's "program model" of causal relevance, Pettit holds dispositions to be causally relevant to their manifestations (Jackson & Pettit 1990). But this model, which counts a higher-level property causally relevant if it "effectively ensures" the instantiation of some causally efficacious lower-level property, seems overly permissive; it makes Brutus's property of being Caesar's killer causally relevant to Caesar's death, and Drano's property of being plumber-recommended causally relevant to the unclogging of my drain.
  28. Some dispositionalists embrace this result gladly. Secondary qualities, McDowell says, "cannot be credited with causal efficacy" (1985, 188). See also McGinn 1983, 15.
  29. On the causal powers of functional states see Block 1990.
  30. Lewis 1980, 233.
  31. Provided that context supplies a unique F-ish property.
  32. Or different objects at different times—I ignore this complication.
  33. "I mean to deny all identities of the form ' $a$  is identical with the attribute of having  $a$ ' where  $a$  is an experience-name definable as naming the occupant of a specified causal role...I take 'the attribute of having pain'...as a noncontingent name of that state or attribute  $Z$  that belongs, in any world, to whatever things have pain in that world" (Lewis 1983, 101).
  34. Similarly, in addition to the pencil's redness, which causes redness's intuitive effects, there is also its higher-order property of having redness, the property it shares with other red things.
  35. Lewis 1986, xi: "...there is a state common to all who are in pain—"being in pain," I call it—but it is not pain, and it does not itself occupy the role of pain."
  36. A similar point applies to Jackson and Pargetter on color. For them, "when I say that an object in [circumstances] C3 is red and another in C4 is red also, I am saying that they...have something in common. Both have what is redness for me now in their circumstances" (1988, 135). But given their Lewisian framework, *that* commonality consists merely in the fact that both are such as to cause red experiences—which cannot be the reason *why* they would cause red experiences.
  37. That is what we are getting if we insist on commonality. Insist on causality and the

problem is different: itchiness does not cause scratching because it's *itchiness*, rather it qualifies as itchiness because (among other things) it causes scratching. This is on top of the fact that it is not shared.

38. Reference fixing conditions are generally conceived as concise (this is suggested by the examples), infeasible (so as to enable a priori knowledge), antecedently graspable (on pain of circularity) specifications of a term's referent. I'm not sure that any of these conditions is strictly demanded by what Kripke says. As characterized on pp. 34ff., for example, a priority looks quite *compatible* with defeasibility. And Kripke seems to show ambivalence about antecedent graspability when he describes as "independent of any view argued in the text" the view that "such terms as 'sensation of yellow', 'sensation of heat', 'sensation of pain', and the like, could not be in the language unless they were identifiable in terms of external observable phenomena, such as heat, yellowness, and associated human behavior" (footnote 71 on p. 140).
39. Kripke 1980, 140.
40. Wright 1992, 131.
41. Not in this passage, anyway; see note 66 on p. 128. *Perhaps* Kripke's use of "physical" in note 66 can be read as expressing commitment to an "interesting physical essence" underlying manifestations of yellowness. But so little weight is put on the word that it is hard to feel sure; it might equally be functioning to bring out yellowness's objectivity or intrinsicness. "Perhaps I am rather vague about these questions, but further precision seems unnecessary here."
42. *ibid.*, 140.
43. Dennett 1991, 376.
44. Shoemaker 1990, 116.
45. Johnston 1992 speaks of "a bizarre pre-established harmony of redundant causes of our visual experience" (227-8).
46. Likewise, apparently, for nonphysical *mental* properties. If neurophysiology sufficed to explain behavior, "we would be forced to say that the extra mental properties postulated...are causally idle; and that the characteristically Parallelist thesis that the mental is unable to affect the physical order in any way is completely correct" (Armstrong 1968, 47). This is a particular theme of Malcolm 1968.
47. This is not to say that determinables *inherit* their determinates' causal powers; see Yablo 1992, note 32. The claim is that determinables are not *preempted* by their determinates.
48. To speak of a property as causing, or being causally sufficient, for an effect, is short for a similar claim about the property's instantiation; so the truck's *bare* heaviness was sufficient, but its *heaviness* was the cause.
49. "The position is inconsistent; properties with physical determinates are themselves physical, yet you say color is *not* physical." I deny the assumption that only physical properties can have physical determinates. *Determinates* are properties such that to have them is to have the original property, not simpliciter, but in a certain way; and *physical* properties are properties whose actual and possible possessors have something physical in common, or form a physically natural class. The assumption in question is therefore this: if for at least one way G of being F, the Gs have something physical in common, then the Fs do too. This is wildly implausible. And it remains so even if we strengthen the premise to: every x that is F at all is F in some specific way G<sub>x</sub>, where the G<sub>x</sub>s have something physical in common. Why

shouldn't a physically unnatural class decompose into physically natural subclasses? (Analogy: Whenever a first-order statement is provable, it is provable in some specific way. But although provability-in-such-and-such-a-way is decidable, provability is not; the decidable parts add up to an undecidable whole.)

50. Boghossian & Velleman 1991, 67.
51. Mackie 1976, 36.
52. "Sesquiary" qualities these might be called. Thanks to David Hills for making me see their relevance.
53. Mackie 1976, 49.
54. Although compare McDowell: "What would one expect it to be like to experience something's being such as to look red, if not to experience the thing in question (in the right circumstances) as looking, precisely, red?" (1985, 112). What bothers me here is the substitution of "experience a thing *as looking red*" for "experience it as *red*." If these are different, then the unrevealingness charge—which concerned the experience of things *as red*—goes unanswered. But to assume their identity is to prejudice one of the main questions before of us, namely, does our experience of redness represent it as ontologically visual?
55. Evans 1985a, 272.
56. *ibid.*, 273.
57. McDowell 1985, 113.
58. They are not true. See Gardner 1966.
59. "By touch alone" because I propose to ignore the fact that most reputed color-touchers, including those about to be discussed, have had normal color vision.
60. Rosenfeld 1964, courtesy of David Hills' paranormally good memory. Duplessis 1975 contains a discussion of color-touching among the blind. See Cytowic 1989 and 1993 for the related, and apparently genuine, phenomenon of synesthesia, or cross-modal perception. See also Churchland 1979, chapter 2, for a nicely elaborated fable about temperature-seeing.
61. The remainder of the paper is greatly indebted to Crimmins 1989. Note that I speak of "knowing what X is" rather than "having the concept of X." These are different. Astrophysicists have the concept of dark matter but they don't know what satisfies it, that is, what dark matter is. And one needn't have the concept of a Platonic solid to know what the Platonic solids are.
62. McDowell 1985, 113. Though compare this, from the same paper: "I have written of what property-ascriptions are *understood* to be true in virtue of, rather than what they *are* true in virtue of" (112, my emphasis).
63. Consider in this connection Oliver Sacks' "twins": "A box of matches on their table fell, and discharged its contents on the floor. '111' they both cried simultaneously...I counted the matches—it took me some time—and there were 111. 'How could you count the matches so quickly?' I asked. 'We didn't count,' they said. 'We see the 111'" (Sacks 1990, 199). Knowing what 111 is would be a different and more demanding thing if more of us had this ability. Mark Crimmins gives a related example: "Some objects reflect light primarily in the infra-red spectrum—outside the band of visible light. Suppose we are given one. This object has a certain color-like property, call it *infra-mauve*, of reflecting such and such frequencies of light to such and such degrees. We cannot recognize visually when an object is *infra-mauve*, but clearly we know what property it *is*. And isn't our situation with respect to *infra-mauve* just like [the sightless person's] with regard to red?" (Crimmins 1989).



64. This is based on a remark of Kripke's at the 1989 Color Symposium.
65. And indeed known to be identical. See Hintikka 1962, 149, note 9, for an evasion of the point.
66. Using "cold" in the sense of low temperature.
67. See Crimmins 1989.
68. What may be the deepest reason I don't feel ready to discuss; we valorize certain styles of conception as part of an ongoing project of grooming ourselves to respond similarly to new cases. (See Pettit 1990 for a congenial account of rule following, especially pp. 16ff.)
69. Not that this privilege could never be lost—a point urged on me by Philip Kitcher and Paul Churchland. Similar privilege accrues to the first-person perspective on sensations as against the third-person, and to the interpretive perspective on intentional states as against that afforded by physics plus (alleged) bridge laws. Here too metaphysical conclusions have been thought to follow, e.g., by Davidson in his attack on psychophysical identities.
70. Another form of the argument is this. The visual idea of yellowness is in closer rapport with it than the tactile one, while with silfness it is the other way around; since identicals stand in the same relations, yellowness can't be silfness. But all the supposed difference in relations comes to is that *attributions* of yellowness and silfness respond differently to the same evidence. Of course—they are different attributions! The properties attributed can still be one and the same. They can even be *believed* to be the same, albeit with probability less than one. Admittedly, if visual and tactile evidence were to push in opposite directions, and push very hard, the identity-belief would come under pressure. But that recalcitrant experience *would* force us to distinguish "two things" doesn't force us to distinguish them *now*. (A good thing too, or few identity claims would be left standing.)
71. Compare Wittgenstein's criteria/symptoms distinction in 1953, para. 354.
72. So we are using an intensionalized version of Wittgenstein's distinction; different things can be criterial for X and Y even though X *is* Y.
73. Someone might say that the objectivist has won a hollow victory; for even if an objective property makes F-attributions true, the property's status *as* truth-maker is owing to subjective factors. This is something I am still pondering, but I agree to this extent: objectivist metaphysics is one thing, objective discourse another.

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