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EPISTEMIC ERROR AND EXPERIENTIAL EVIDENCE

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Epistemic Error and Experiential Evidence

Along with the rise of Western philosophy there took root an ever-burgeoning epistemological anxiety that has continued to undermine the ability of that tradition to flourish and achieve its goal of revealing fundamental truths. This worry takes the form of a constant search, an unquenchable desire for some absolute ground of determinacy that is both ground and criterion for all knowledge. But when the starting point of analysis and interpretation is a dichotomy between the ontological poles of a subjective “soul-self” and an objective world external to the self that meet only in their opposition, it is inevitable that the epistemological problems that have bedevilled Western philosophy from its ancient beginnings to the present—radical skepticism and an eternal impasse between the speculative insight of philosophy and the practical answers of science—should arise. What follows may be seen as adding to the body of work that takes its departure from the Kantian theme of the role of our cognitive and perceptual structures in the grounds of the possibility of human knowledge but which also sees his positing of a transcendent realm as the ground of absolute knowledge as fundamentally in error. Although Kant's epistemological view takes account of the nature of experience, it fails to accord it the ontological importance it deserves.

One of the great success stories of the modern era is the unified conception of the world and the explanatory power made available through the reductionist achievements of philosophy in conjunction with the physical sciences. Whatever there is, claims the reductionist, can be correctly described, at least at some fundamental level (or at some future time), in the quantitative terms of physics: all of reality can be captured by the nomological net of natural, physical law. But the failure of those who maintain such a metaphysical stance to reach a sufficiently deep understanding of conscious experience—its function as well as its products—threatens to cast a pall on the celebration of science's unified grasp of the world.

Philosophers continue to worry about the possibility of finding an explanation of the part of the world that constitutes human cognition and the objects and events that are products of cognitive activity that coheres with the rest of our knowledge, while also broadening the scope of that knowledge. Once we have an idea of how cognitive processes function at a purely stimulus-response level, new difficulties arise in fashioning an interpretation scheme that will allow

translation of the content of mental or representational states into the object language of the physical sciences. Such a task would require a way of distinguishing features peculiar to the particular sort of cognitive mechanisms and electro-chemical events that constitute or at least underlie human mental states and processes (such as thinking and perception) from the “pure” informational content they contain. Once that distinction is made, it might be thought, a clearer notion of what the world is really like will become available, since it will be possible to abstract the character of mental modes of representation from the represented content of intentional states, leaving a residue that has been purged of subjectivity. In what follows we will find reason to question this way of seeing things.

For our purposes here, it will be helpful to invoke a familiar distinction made between intentional (i.e., representational) and nonintentional contents (i.e., qualitative characters, or qualia of mental states or events). The intentional content of a particular mental state would be whatever that mental state is purported to represent or be about, while the nonintentional content, or the quale, of a mental state would be the qualitative character of what being in that mental state is like from an experiential or subjective point of view. Isolating and describing the nonintentional features of mental states independently of the objective world they are taken to represent is difficult not simply because certain qualia always seem to accompany perception or awareness of certain objective states of affairs, but rather because their existence as experiential modes is in part determined by their relation to that world. In other words, it is not entirely clear that the qualia of various representational states would have the sort of experiential “feels” they do have had they evolved in relation to different sorts of environmental stimuli. Moreover, characterizing the objects of representational states, especially states such as perceptions of pleasure or pain, of color, sound, smell, and taste, or beliefs about the aesthetic or moral values

of particular objects or actions, is impossible without making some appeal to the qualitative character of experience. That is to say, at least some intentional states are themselves ontologically dependent on dynamic relations between what is experienced and the nature of the experience itself, and it is through the interactive engagement of the subjective and objective poles of the relation that both relata and the relation itself come to be what they are.

This consideration bodes ill for any straightforward representational theory of knowledge and perception, or for any theory of knowledge that relies on a correspondence theory of truth.¹ These sorts of foundational epistemological theories may be able to handle questions about truth conditions for statements such as “water boils at 212 degrees Fahrenheit,” or “the Earth is spherical, not flat,” or “triangles have 3 sides,” or claims about names that have been given to various things, persons or events, or dates or times when events occurred, and so on. We can be said to have a true belief that plants need water to grow and survive just in case there are such things with such needs: here the way the world is in these respects counts as a criterion of truth in the belief, and there is not much dispute about the existence of such things as plants or their need for water. Although there may be problems with giving a precise account of just how something like a belief—a mental state—can represent or correspond to some objective event, state, or fact, clearly something goes on in our understanding and subsequent behavior that leads us to posit the existence of beliefs. For example, if I have seen plants begin to wilt and turn brown without water, and then revive and grow strong and tall when given lots of water, I will then form the belief that plants need water to grow. Perhaps the belief is embodied by my recalling the image of the dying plant and then thinking about the effect of water on it, and positing a causal relation between the two states, or perhaps it is my affirmation of a proposition

as embodied in language, or by my holding certain concepts together in a single instance of thought.²

In any case, although we are not exactly sure how beliefs might be analyzed in terms of brain states or neural-firing sequences, an account of beliefs as functional states might be able to satisfy our explanatory needs. On a functional account, correspondence can be explained in terms of the belief being a function from observational input (given the presence of desires or other motivational factors) to behavioral output, and the belief corresponds to the world just in case the function achieves its proper end. In the case of conceptual beliefs or beliefs about relations between conceptual entities, correspondence would simply consist in having a clear understanding of the concept or concepts involved.

But what about the belief that snow is white? What must be the case for that to be true? A number of different scientific and philosophical theories of color agree with both ancient and modern theories of color. Democritus, an ancient Greek thinker, famously claimed,

Sweet exists by convention, bitter by convention, color by convention; atoms and void (alone) exist in reality.... We know nothing accurately in reality, but (only) as it changes according to the bodily condition, and the constitution of those things that flow upon (the body) and impinge upon it (Democritus, trans. Freeman & Diels, 2008 [1942]).

John Locke's secondary-quality view of sensory qualities claims that

most of those [ideas] of sensation being in the mind no more the likeness of something existing without us, than the names that stand for them are the likeness of our ideas....a snowball having the power to produce in use the ideas of white, cold, and round—the power to produce those ideas in us, as they are in the

snowball, I call qualities; and as they are sensations or perceptions in our understandings, I call them ideas; which ideas, if I speak of sometimes as in the things themselves, I would be understood to mean those qualities in the objects which produce them in us....such qualities which in truth are nothing in the objects themselves but power to produce various sensations in us by their primary qualities, i.e., by the bulk, figure, texture, and motion of their insensible parts, as colors, sounds, tastes, etc. These I call secondary qualities. (Locke, Bk. 11, Ch. IX).

Contemporary views about the ontology of color that agree with the basic claim of these “secondary-quality” thinkers agree what it means for snow to be white is that it has a certain look—a certain appearance—to perceivers of a certain kind in certain conditions of observation. But now the correspondence theory hits a snag: appearances. If “white” refers to a kind of appearance, then in order for white to be instantiated, there must be a subject of experience who is aware of an appearance with a particular phenomenal character, since appearances are experiential in nature. Now, to what object or state of affairs does this appearance event, which might be described as a mental representing of color, correspond?

The problem for a traditional correspondence theorist is that this thesis requires a commitment to a “pre-existing” objective reality—a world that exists independently of any particular subjective grasp of that world—a reality that may be subsequently encountered by subjects and about which there are facts to be discovered in the attainment of knowledge. But in cases where the purported object of knowledge depends for its existence on the existence of thinking or perceiving subjects, such as in the case of sensory appearances, there is no

nonsubjective, independently existing object that corresponds to the object at the center of the belief in question.

The predictable response of the correspondence theorist is to reject the identity claim between colors and color appearances and simply deny that there can be knowledge of appearances, categorizing such phenomena as rainbows, prismatic refractions, and afterimages, which are uncontroversially thought of as color appearances, as illusions, not genuine or real instances of color. Of course the correspondence theorist will not be able to eschew all appeal to appearances since he needs them in his account in order to explain the role of sensory experience in guiding human behavior. A current version of this sort of view is found in the work of Mohan Matthen, who presents a

semantic theory of color *experience*, on which color experience *represents* or *denotes* color properties, and attributes these properties to visual objects. On such a theory color experience informs us about the external world by means of a semantic relationship, *representation* or *denotation*, that it bears to external world properties, and it attributes these properties to external objects....A central feature of the argument...is that it relies on distinction concerning the degree of certainty that attaches to different kinds of propositions that we come to know through color perception [emphasis in original]. (Matthen, in Cohen and Matthen, 67)

Matthen's view of color, and his account of knowledge about color properties, relies on the very same grounds that support the correspondence theorist: He assumes that objects in the world external to the mind and all experience have colors, and he is concerned with how color perceivers can be said to have knowledge of such external properties in virtue of being presented with experiential or phenomenal qualities such as "looking orange." He argues that perceivers

have “Cartesian certainty” about the colors things appear to have, but not about the color it actually has. That is to say, even if I see the orange I hold in my hand as looking to be orange in color, this orange look is merely an appearance, and is simply a semantic guide to a property I can never be certain about.

In fact, anyone who hews to an objectivist account of color, such as the correspondence theorist, will have to acknowledge the role of color appearances in forming beliefs about colors, let alone in arriving at the possibility of having knowledge about the colors of things. What results from this is that such accounts must place a great deal of importance on making a distinction between veridical and nonveridical appearances. We often come to have true beliefs about the world, a correspondence theorist will say, on the basis of veridical appearances; false beliefs may be engendered by nonveridical or “mere” appearances—these are the illusions of which truth-seekers must be wary. So now, as part of the correspondence thesis, we have the claim that there is some way that the world is, and there is a way that the world can appear to be; an appearance is veridical just in case it represents (somehow) the world as it really is. A nonveridical appearance represents the world as being some way that it is not.

Now how does this claim about appearances square with the claim made above, that appearances necessarily involve a subjective point of view? That is, if appearances always represent the world as it is in relation to a particular subject of experience, yet the objective world the correspondence theorist appeals to in his criterion for truth is the world independent of any relation it has to particular points of view, then how can any appearance be veridical, in an absolute sense? When we look more deeply into the notion of veridicality with respect to appearances, we find that there is always going to be an element of subjectivity; even in the strongest sense of what it is to be a veridical appearance. Yet we arrive at what we think of as

objective beliefs by way of appearances at least in all cases of perceptual beliefs, and in a wide range of other cases that depend on perceptual information. In everyday experience, we take the appearances of things, of the way the world seems to be, at face value. In fact we do not usually think about the appearance of things as such, but rather focus on what it is that has an appearance, that is, in philosophers' parlance, we are interested in the intentional content more than on the character of the representational mode in which that content is made available to consciousness. We are able to switch the focus of our attention onto the qualitative character of representational states, however, and we do make use of the ability. Indeed, this is just the sort of experiential fact it will be necessary to account for in giving a full account of both aspects—the intentional and the purely qualitative—of mental representations, for it is this ability to reflect on and develop or change an attitude toward what we might call “raw qualia”³ that accounts for some of the most interesting aspects of human behavior and experience, the creation of art, or the construction of cultures.

We specifically use the notion of veridical appearance in cases such as when we see a round coin as having a circular rather than, say, an elliptical appearance, or when I see my reflection in a perfectly flat, undistorted mirror rather than in a curved, “funhouse” mirror in which my torso appears several times longer than my legs, or when an object is viewed in bright white light rather than, say, in red light. In all these cases, the force of the notion of veridicality derives from taking a particular set of viewing or background conditions as standard, and setting that up as the criterion of correctness for an appearance. But even this standard or idealized set of conditions will involve a relation to subjective experience. Where appearances are concerned, the best that the correspondence theorist can do is to appeal to intersubjective agreement: “pure” objectivity can never pertain to appearances, for there is no “subjectless” or nonperspectival

position from which to evaluate appearances objectively. All appearances are subjective appearances. In a sense, no appearance is more or less veridical than another if background conditions are more globally considered. The elliptical appearance of a round coin is a product of viewing it from a particular angle rather than head-on; it is only when the head-on position is held up as the correct viewing angle that the elliptical appearance is nonveridical. My appearance in a curved mirror is just the way I look when viewed under these circumstances; if our eyes had similarly distorted lenses, my funhouse appearance might be the veridical one. In the case of color appearances, veridicality is usually ascertained not just in relation to broad-band illumination, but also in relation to a conventionalized notion of what constitutes normalcy in color visual mechanisms. Here an appeal to veridicality is an appeal to conditions or situations that are commonly experienced or easily attainable; color vision evolved in the presence of sunlight, which is a broad-band illuminant, so it follows quite naturally that that should be part of the standardized set of circumstances that determines correctness or veridicality of appearances. But there will always be a way to account for the character of an appearance which will take the edge off of the distinction between veridical and nonveridical by simply making a shift in the set of conditions set up as criterial, and there is no predetermined or absolute criterion for how that criterial set should be constituted.

What these considerations about veridicality of appearances show is that the correspondence theorist really has no objective handhold in the realm of appearances that is not also thoroughly infused with subjectivity. Hence, appearance properties cannot be objects of knowledge, since knowledge, on the correspondence view, must correspond to what objectively exists. The correspondence theorist does not have the appropriate tools to carve or construct the sort of distinctions he wants to make, since, as we have seen, the criterion for veridicality is itself

determined only in relation to various subjective factors. He can supply no objective reason why we should think any differently about so-called “veridical” appearances than cases like seeing a figure of a man in a shadowed crack on a roughly plastered wall, or a horse's head in a passing bank of clouds. The horse's head is a nonveridical appearance par excellence, and it is thoroughly imbued with subjectivity; it depends entirely on seeing the clouds in a certain way, of engaging in a special imaginative act of “seeing as” or “seeing in,”⁴ which involves not only the subject's particular location in space relative to the clouds and their source of illumination, but also integral to this sort of appearance are things the subject brings to the experience such as memories of past experiences of seeing horses or images of horses, or even more complicated and subtle shadings of thought that cannot quite be put into words, but which result in the clouds having a very particular and perhaps intricately detailed appearance. There can be no knowledge here, on a correspondence view, of what the appearance imaginatively represents. There can only be knowledge of the clouds—particulate masses of water molecules and ice crystals—and of the various environmental properties that impinge on the visual system (light waves of various frequencies reflected and refracted by the clouds, revealing the shape of the mass of particles). If I see such an appearance, I cannot make any true claims about the horse's head (e.g., “its nostrils are flared and its ears are pulled back”); I can say only that the clouds appear to me to be in the shape of a horse's head, which looks as if it belonged to an angry horse. The rest is illusion, no more susceptible to truth than claims about the events in my dreams.

This seems a passable result in the case of images in the clouds, or even rainbows or other cases of light refraction in which spectral images appear (and often soon disappear), since what is generally of importance or interest to us are the more permanent, publicly observable, and causally efficacious properties of things. An appearance property, being dependent on the

subject, cannot be causally relevant outside the sphere of the subjective point of view in which the appearance is manifest. Although the appearance may causally affect the experiencing subject, and in this way indirectly cause other events as a result the subject's actions or behavior, the appearance may be thought to have causal properties only insofar as it is a property of the experiencing subject.

What the correspondence theorist must show is that the preferred set of criterial conditions for veridicality is entirely determined by the objective nature of the world considered independently of any particular perceptual or experiential point of view. But how can this be possible if it is true that all appearances necessarily involve a subjective point of view; that is, in what sense can an appearance correspond to a world of which appearances are not a part? Now clearly appearances are part of the objective world insofar as they are grounded in the properties of real subjects. Objectively speaking, we might say that appearances are psychophysical events. But then the objective or mind-independent part of the world to which appearances correspond must include properties of the experiencing subject as well as the world she experiences. This would then be to count subjective properties as objective. This result should either make us reject the idea that there can be any objective account of appearances as such, or think there is reason to reject the dichotomy between subjective and objective realms of existing. In what follows we shall choose the latter course.

Returning to the case of snow's appearing white, or of any sort of object's appearing any color, we can see that the correspondence view will fail us in a larger way. The correspondence theorist will likely identify colors with either light-reflectance or light-emittance capacities (or, in other words, objectively grounded dispositions to reflect, emit, refract, or otherwise transmit light), since color beliefs and attributions will be correct or mistaken according to whether there

is a correspondence between the objective state of light properties in the world and some internal representational state of the perceiving subject. We must stop right there, however, since, as Locke famously pointed out,⁵ it is quite plain that the notion of correspondence in this case gets strained beyond the breaking point. In the first place, although the normal human eye has nearly 7 million cone cells in the retina, there are many different light compositions whose difference is undetectable to normal human trichromatic perceivers; we are equipped to distinguish only a subset of all possible objective states in which light can be reflected or transmitted in some localized array. So this would introduce a large measure of error into our color judgments. But Locke's point gets more to the heart of where the correspondence view falls short in accounting for our knowledge of the world (even though he held fast to a representational theory of knowledge and perception that appealed to a correspondence view). In what sense can the salient qualitative character of an experiential state such as a perception of red in a rose's petal correspond to some quantitative property of the petal's surface? There is no necessary or conceptual connection possible here, as there would be in the case of shape, mass or force (non-sensory properties). The only sort of correspondence there can be between an array of various wave lengths or frequencies of light and color appearances is one that is established ex post facto; this sort of correspondence could be said to exist between any two states that are causally related. (And if Hume is right, this sort of causal connection is itself a mere subjective projection.) But if the notion of correspondence is weakened to this degree, it no longer serves the purposes of the correspondence theorist. This would allow that if a congenitally blind person were to be hooked up with a light-sensitive mechanism that signaled the presence of different compositions of light by emitting sounds of different pitches at different volumes, and that allowed him to discriminate between light-reflectance properties as well as normal visual

perceivers do, the blind man would be capable of making correct color judgments on the basis of sound phenomena. But this is clearly an impoverished notion of color; there is surely something in the visual experience of seeing color that qualifies a perceiver to use color concepts in a way a blind person, even a blind person equipped to detect different frequencies of light through sound sensations, cannot. The blind man is making judgments about variances in properties of light, but there good reason to deny that he is making color judgments. Although sound → color synesthetes may sometimes experience color sensations in response to certain sound phenomena, for the vast majority of color perceivers, the look of blue, or the look of blue next to orange as compared to the look of blue next to green, can never be experienced, can never be known, through hearing sounds.

The correspondence theorist faces a dilemma with respect to his position on the ontology of color. He can accept a flat-footed objectivist account of color, and in that case, our perceptually based beliefs that things are colored are always misleading or mistaken, not because there are differences in light properties that we cannot discriminate, but because, on the correspondence view, nothing in the external, objective world has the subjective properties that are essential constituents of color appearances, which ground our color judgments and beliefs about color. There is nothing external to the mind that has the properties we see objects as having; there are only properties that are causally related to them.⁵ According to the correspondence theorist, we can know only as much about color as can be known about a cause through observing some of its contingent effects.⁶ Or the correspondence theorist can opt for an eliminativist view of color, which still leaves him with an error theory of color judgments, but at least he does not try to posit a correspondence between the phenomenal properties of subjective experience and the quantitative properties of the external world of objects.⁷ This approach

admits that there is a causal relation between light properties and the color judgments we make, but it contends that color judgments and color attributions have no real referents, and hence are one and all error.

Now what has been said about colors will also hold for the other sensory qualities, as well as for any other properties attributed to things, persons, or events that are ontologically dependent on subjective experience. This would of course include value-properties in the aesthetic and moral domains. If one holds to a view of human knowledge based on a correspondence theory of truth, there can be no true beliefs about colors, sounds, tastes or smells; no true claims about the beauty or resonance of works of art or about the moral goodness of an act of unselfish kindness. We can make true claims only about what seems to appear to us in confronting the real world, or what we feel about the ways objective states have had certain subjective properties projected onto them. At this point it becomes clear that the distinction between subjective and objective existence must be dissolved in order to even get close to a correct account of how appearances can be a guide to true beliefs and correct actions. But what is not so clear is that a correspondence view can tolerate such a dissolution, for with that distinction goes the whole thrust of the view, which is constructed around the notion of an ontological boundary that the correspondence relation exists to bridge. If we find a way to account for the nature of the relation between the world external to the mind and the mental structures and events that give us cognitive access to that world, without positing an ontological divide between them, we have no need for a correspondence theory of truth, or any theory of knowledge that grounds truth solely in pure objectivity.

I remarked above that the epistemological consequences we have just encountered bode ill for the correspondence theory. Beyond attributing global error to many of what we take, pre-

philosophically, to be our most well-founded judgments about the world and about our epistemological grasp of it, there are further and more positive reasons for abandoning the correspondence view of truth and its accompanying theory of knowledge. Our divergence into the color ontology debate gives us a way to view its shortcomings. These become even more apparent when the talk turns to something we started out with, which is giving an account of the nonintentional or qualitative character of conscious experience. One question that arises in this regard upon consideration of the arguments adduced above is whether there really is a clear or determinate distinction to be made between intentional and nonintentional contents. The model offered by representational and correspondence theories naturally leads to such a distinction. But is this really the right way to think about our cognitive representational structures? There are reasons to think that a satisfactory analysis of sensory qualities, as well as of aesthetic and moral properties will lead us to posit a different model.

Let us again take color properties as a point of departure. The debate between color objectivists (of whom we've had a glimpse above) and color subjectivists revolves around the very issue addressed by positing a distinction between intentional and nonintentional contents of perceptual or other sorts of cognitive states. Does color experience provide color perceivers with a true picture (or close to it) of how the world is? Or does color experience present a false picture of how things are in reality? Does the mind paint the world with colors, or does the mind simply encode and convey properties that really exist, even if minds did not? The most widely accepted version of color objectivism takes colors to be identical with capacities or objectively grounded dispositions of objects to variously reflect, emit, or in some way transmit light--these are the colors--ways that physical, mind-independent objects transmit light. Subjective theories of color generally take colors, insofar as they may be said to exist at all, to be instantiated by, or at least

ontologically dependent on, features internal to the minds (or properties of the “visual fields” or perceptual systems) of appropriately equipped perceivers. For the subjectivist, colors are not in or on objects; they are ways that perceiving minds or mechanisms make sense of light stimuli, broadly speaking.

If a correct understanding of the relation between color appearances and what they are appearances of can be reached, we can then move from the case of color perception to a more general view about how experiential properties are related to the world outside the mind. In this way, we can work toward an understanding of how consciousness not only fits into an ontology of the real, but also contributes to it. James McGilvray is a recent commentator on color who is clearly in the subjectivist camp. He defends a view of color as a mode of visual sensing, where a mode is a special way of specifying a functional role for “color-events”:

Those events that are color-events (and have colored objects as their “products”) are construed as if they were carryings out of a task, that of producing a nonintentional representation of the organism's locale. They are representings, and also special kinds of experiencings. The events are representings, colors are ways of representing, and the representings are sensings. (McGilvray, 47.)

Here we have an account of color as a nonintentional feature of a representational or experiential state. On the objectivist account of color, since colors are identified with light-reflectance properties of external objects, color would be an intentional property of color representational states (color appearances). That is, the intentional content of color appearances would be color properties. But a purely objective account of color fails to make color experience an essential constituent of color properties, and we have seen that such an account does not do justice to either our ordinary concept of color or to a scientifically grounded account of color as a

psychophysical phenomenon. Does that mean that the subjectivist is right in thinking of color as nonintentional? If he is, that would give some hope to the correspondence theorist who would be willing to adopt an eliminativist stance on color. Does the reality of color or the possibility of having true beliefs about colors depend on color experience being intentional rather than nonintentional?

Another commentator on color, C. L. Hardin, claims to be an eliminativist about colors as properties of objects, but Hardin also claims to be a reductivist about color experience. He states that “colored objects are illusions, but not unfounded illusions” (Hardin, 111). In this way his view might be seen as sympathetic to McGilvray's subjectivist claim that colors are properties of neurophysiological events, and that color-discrimination is properly thought of as a “nonintentional activity of the organism.” Now we have before us a microcosm of the larger web of issues about qualia. If colors are nonintentional features of perceptual experience, as these color subjectivists would have it, then colors are a type of qualia, in the sense of being purely qualitative features of representational states.

Color qualia on this view do not represent colors, since for a subjectivist there are no colors in the external world; color qualia serve only as a way to “flesh out” representations of properties of the external world—relatively stable, independently existing, objective light-reflectance or light-emittance properties. Here error is attributed to our color beliefs and judgments not because we are getting a false picture of the world and thinking of the colors of objects as being the sorts of experientially derived properties that constitute color appearances, when in fact colors are not like that. The error is a projective error: we see objects in the world as having color properties when in fact they do not. Our mistake, claims the subjectivist, is to think that colors are, in an objective sense, real. Alternatively, on the objectivist view, our color

beliefs and judgments are wrong whenever we think of color properties as identical with color appearance properties. According to the objectivist (with whom we have characterized the correspondence theorist as siding), we can have true beliefs about colors only if we dissociate such beliefs from beliefs about the way things look or appear, since colors for the objectivist are properties things have in relation to light, not in relation to minds.

Both of these accounts leave us not just in an uncomfortable position with respect to our beliefs and judgments about colors; the general epistemological consequences they imply should be regarded as intolerable. The problem with both of these sorts of objectivist and subjectivist views is that they each in ontologically impoverished domains. Although they end up disagreeing about the ontology of color, both sides are alike in that they posit, on the one hand, a world of independently existing, determinate, fixed and stable objects, and on the other, a realm of conscious experience, conceived as determinate only insofar as experiential states may be identified with concrete neurophysiological states or processes, and having no necessary or intrinsic connection to the objective world outside the mind. If this were a correct account, there would be little hope for the prospects of human knowledge ever attaining the transparency and unity envisaged by both philosophy and science.

One thing we are questioning here is whether these goals will be reached by continuing to search for a foundation, a ground of absolute being that representational theories of knowledge must posit as the object of reflection of self-contained, individual subjects of consciousness. It has been posited that the exigency of this desire for objective grounds is itself a product of the dualistic conception of the world bequeathed to us most notoriously by Descartes, but which is in fact endemic to the entire Western philosophic tradition. Contemporary philosophers, notably Richard Rorty and Hilary Putnam⁸ have been working hard to overthrow this conception, in

which mind is both elevated and imprisoned; the immediacy of thought first brings a sense of certainty and security (surely this—pointing to the act of thought—is real), but this vanishes as soon as an ontological distinction is posited between the nature of thought and the source of its content, and with this begins the epistemic nightmare of the Cartesian ego's dream. This is brought to life in the impasse one reaches from either direction in the subjective-objective debate about color.

In order to avoid the impasse, we must find a way around dividing the world into separate ontologies in the attempt to make sense of things or of the experience of things. Our bias is to assume there is a pre-existing “given” reality; it makes no more sense to think there could be a “given” without something to which it is given, than to think there could be a mind without a world, since even if all that exists is mind, then for that reason alone a world must exist.

Descending from this sort of abstract reasoning, yet taking a lesson from it, we can apply it to the reality of human experience. We can solve the problem of the ontology of color by simply dissolving the ontological boundaries between subjective appearances and objective reflectances. Color subjectivists such as McGilvray and Hardin have thought the way to do this is to accept the objective causal relations between objective light properties and neurophysiological states. In this way they are really adopting an objectivist stance, because they purport to explain our color beliefs as products of mental processes, which are just physical effects of physical causes; they have circumvented the subjective-objective divide by simply “turning the mind inside-out,” making it susceptible to objective analysis.

While it might seem that they are making headway on the problem of the relation of colors to color appearances by conflating them (i.e., colors are identical to color appearances), they lose whatever ontological ground they might have gained by this move when they reduce

appearances to processes internal to the visual system. Their account of subjectivity really has very little to say about the nature of color qualia since, if their character is completely nonintentional, they have no essential connection to anything outside their own function as representational modes. If the only place we are to find color is in color qualia, then we really have no explanatory account at all. The character of color, which we take to be such a familiar and pervasive feature of our environment, turns out, on the subjectivist view, not to be a feature of the environment at all, as that view conceives it. Little is gained by simply pushing color “inside the head,” relating it in a loose way with neural states and processes (reds and greens are the product of one neural channel, yellows and blues another, and brightness or white/black a third) just leads to another dead end in understanding the nature of conscious states like color perceptions. How can the paucity of the simple mechanistic explanations made available by opponency theory provide an account of the vast assortment of color variations we experience? The colors we see in the world range far beyond the pure spectral hues that color opponency might be able to generate.

If we accept the subjectivist's identification of colors and color appearances while rejecting their internalism, a different sort of account is available, one which countenances appearances as events that comprise both subjective and objective elements. The objective element of an appearance event is the set of light-modification properties of an object or spatial array, while the subjective element is the character of the phenomenal quality experienced in perception. But it would be missing the point to think of the ways things modify light as the cause of color, or the way things look as the effect of color. These states or properties are related not as cause and effect but rather as parts of a whole. Consider appearance events *E1* and *E2*: *E1* is an appearance of red and *E2* is an appearance of blue. Each case is an exemplification of both

(a) a determinate type of light reflectance profile (e.g., one with a peak at 650 nm for *E1* and one with a peak at 420 nm for *E2*), and (b) a determinate type of neurophysiologically embodied experiential state (or pattern of neural stimulation and inhibition). We might label these as the objective and subjective aspects of appearance events, respectively. Light of predominantly long waves, or of predominantly short waves, is not by itself the cause of a color event, nor is an experience of red or an experience of blue either the cause or the effect of a color event. It is the causal interaction between illuminated objects and subjective experience that constitutes an appearance event in which color is exemplified, so each aspect of this causal relation may be thought of as constitutive parts of the whole event. Without the objective stimulus there is no color appearance; likewise, without the subjective response there is no color appearance. So the color is neither entirely in the object nor entirely in the head; it is in the region in which the relation obtains, which is the part of the real world that includes both the object and the mechanisms that instantiate subjective experience. Reflectance capacities do not cause colors, nor do neurophysiological states. (But reflectance capacities do cause neurophysiological effects.) Appearance events are caused by other events, such as a perceiver's confronting, say, a piece of ripe fruit or a leafy tree. An appearance event may be thought to supervene on other properties, relations, or events (e.g., a causal relation between two interactive substances). We can think of appearance events as reducible (if one must think reductively) to a physical interaction that has a sensory or experiential state as one of the interactive elements. As the medium of visual perception, appearance events require sensory experience of the world; they are not features of brains or nervous systems apart from their engagement with an environmental object, or, in some cases, of objects or events inside the brain and body.

What is interesting about color appearances is that they do have this experiential aspect, which is determined only in part by the character of the light-stimulus array confronting the perceiver. Human color experience is highly refined and capable of hyper-categorization due to sophisticated, highly evolved cognitive mechanisms such as memory and imagination. So by studying what goes on when we see color, we are able to get an idea of how cognitive structures contribute to or otherwise shape the character of the world known to us in perception. What does all of this have to say to our worries about the prospects for human knowledge? If the appearance-event view of color is right, then it seems that we are justified in taking a similar approach in the analysis of other sorts of properties that integrally involve cognitive representational structures. That is, whenever the qualitative character of a mental state in some way determines what in fact that mental state either represents or purports to convey knowledge about, it is a mistake to think that there can be no knowledge based on experiential evidence alone. It is through lived experience that much of our world comes to be what it is. We can gain knowledge of properties like qualitative or phenomenal features of mental states only by locating them in the broader context of their function in the generation of experiential states and in relation to the various environmental and situational contexts in which they arise. This is especially true for the current conditions of human life, in which structures generated by and dependent upon semantic properties, for example, the domains of social, cultural, and economic facts, largely determine many of human desires, goals, and purposeful behavior. The lesson here is that the qualitative character of lived experience is adequate evidence for the truth of claims about the world in relation to experience, which is a way the world is. Hence experience counts as evidence for a large number of beliefs about the world. And the truth about the nature of those

experiential qualities, which provide us with such evidence, is to be found nowhere else than in that very same relation.

End Notes

1. For a contemporary version of a representational theory of knowledge see Charles Landseman, *The Eye and the Mind* (1993); also Frank Jackson's *Perception: A Representative Theory* (1977). For a standard version of foundationalism that appeals to a correspondence theory of truth, see Roderick Chisholm, *Theory of Knowledge*, (1977). For a semantic approach to a correspondence view, see Alfred Tarski, "The Semantic Conception of Truth and the Foundation of Semantics," in *The Philosophy of Language*, ed. A. P. Martinich (1985).
2. See, for example, Jerry Fodor, *Language of Thought*, 1975, Hassocks: Harvester; also Sydney Shoemaker, "Functionalism and Qualia," in *Identity, Cause, and Mind* (1984).
3. For an interesting discussion of the possibility of a distinction between what I call "raw qualia" and subjective preferences in relation to such features of representational states, see Daniel Dennett's "Quining Qualia" (1988).
4. For a detailed analysis of "seeing in" see Richard Wollheim's *Painting as an Art* (1987), especially Chapter II.
5. For an explication and rejection of this idea as put forward by John Mackie, see John McDowell, "Values and Secondary Qualities," in Honderich, Ted, ed., *Morality and Objectivity*, (1985).
6. We can shed doubt on the usefulness of this sort of knowledge by asking questions like, What can we know about the true nature of combustion by knowing that it consumes wood and paper but not water or carbon dioxide foam? What can we know about the true nature of a hydrogen bomb if we know only some of its effects through a limited number of tests? and so on.
7. Just such an error view of color beliefs is put forward in Paul Boghossian and David Velleman, "Colour as a Secondary Quality" (1989).
8. See Richard Rorty, *Philosophy and the Mirror of Nature* (1979) and Hilary Putnam, *Reason, Truth and History* (1981).

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