

A History of Qualia

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Abstract The philosophers' concept of qualia is an artifact of bad theorizing, and in particular, of failing to appreciate the distinction between the intentional object of a belief (for instance) and the cause(s) of that belief. Qualia, like Santa Claus and the Easter Bunny, have a history but that does not make them real. The cause of a hallucination, for instance, may not resemble the intentional object hallucinated at all, and the representation in the brain is not *rendered* in special subjective properties (qualia).

Keywords Qualia · Intentional objects · Causes · Humphrey · Nicholas

Several authors have written books about the history of God. Are they asserting the existence of God, or talking about the idea of God or the concept of God? Or what? Karen Armstrong (1993), a former nun, published *A History of God: The 4000-Year Quest of Judaism, Christianity and Islam* in 1993. It seems that she may be an atheist, but she doesn't say. Rodney Stark (2001), a sociologist of religion, opens his 2001 book, *One True God: Historical Consequences of Monotheism* with a passage that brandishes the same ambiguity:

All of the great monotheisms propose that their God works through history, and I plan to show that, at least sociologically, they are quite right: that a great deal of history—triumphs as well as disasters—has been

made on behalf of One True God. What could be more obvious? [2001, p. 1]

What they are doing, pretty clearly, is availing themselves of a familiar way of speaking and writing that is not so much “sociological” or “anthropological” as “literary”: A history of Odysseus or Paul Bunyan or Santa Claus could be an entirely creditable work of scholarship and explanation written by someone who knew full well, and was happy to acknowledge, that their topic was a fictional character, not a real person. When the topic is God, however, there is a long established tradition of eschewing that acknowledgment, out of sincere agnosticism (perhaps, in a few cases) or diplomacy or even fear of ostracism. We can highlight this convenient and familiar silence by contrasting it with Dawkins' (2006) forthright—and shocking to many—description of the God of the Old Testament as “the most unpleasant character in all *fiction* [my emphasis].”¹ We know where Dawkins stands. Jehovah, thank goodness, is just a fictional character, not a real supernatural Lord and Master.

When it comes to speaking and writing about qualia, there is a similar ambiguity, which I long ago attempted to expose, but my joking title, “Quining Qualia” (1984), apparently misled many into thinking that I wasn't *really* saying that qualia were as fictional as leprechauns (about which books could be written, of course)—or if I really meant it, I was obviously wrong. (“What could be more obvious?”)

¹ See Dan Barker's (2016) detailed and scholarly book inspired by it, *God: The Most Unpleasant Character in All Fiction*, which gleefully cites the biblical verses supporting Dawkins' verdict that this character is “jealous and proud of it; a petty, unjust, unforgiving control-freak; a vindictive, bloodthirsty ethnic cleanser; a misogynistic, homophobic, racist, infanticidal, genocidal, filicidal, pestilential, megalomaniacal, sadomasochistic, capriciously malevolent bully.”

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For more than 30 years philosophers and cognitive scientists have continued to insist that they knew what they were talking about when they talked about qualia, and knew that they were perfectly real. In fact, they often assert, it is the *undeniable* existence of qualia that makes the Hard Problem hard! According to those who think this way, I wasn't explaining consciousness in 1991, I was trying to explain it *away*. Haha. It is time to stop joking, and take this way of speaking seriously, and see how it can beguile very good thinkers (or their readers) into missing an opportunity to make real progress on consciousness.

I will use Nicholas Humphrey's essay "The Invention of Consciousness" (this issue) to demonstrate what I mean. I agree with, and have been instructed by, most of what Humphrey says in this essay. I may in fact agree with everything here except some of his expository tactics and choice of language, which I think court misunderstanding by being overly diplomatic, giving illusory comfort to those whose views he is in fact subverting vigorously.

1 What are Intentional Objects Made of?

The non-committal way of speaking exemplified by Armstrong and Stark is *de rigueur* when our topic is what Brentano (1874) called intentional objects. According to myth, Ponce de Leon was searching for the Fountain of Youth—something that doesn't exist. Since there is no known factual basis for that myth, let's consider a slightly less famous, but historically impeccable, case: Sir Walter Raleigh conducted several expeditions in search of El Dorado, the city of gold, in South America. One *could* write a book about El Dorado, full of scholarly truth, and never get around to acknowledging to the reader that it doesn't actually exist. The book would be about real things—real people and real brains (or minds, if you like), real treks, real books and conversations, real maps, real con artists and impostors, real disappointments. And while it is true that Raleigh really had *an idea in his mind* of El Dorado (we might say, loosely speaking), that mental state was not the object of his quest. He already had *it*! He wasn't seeking an idea in his mind; he was seeking a city. And what was El Dorado made of? Marble? Gold? Adobe? It—the *intentional object*—wasn't made of anything. A fictional object can be truly said to "have" plenty of properties—real properties: Santa's coat is red, and his beard is white, and his belly is large and round (properties I have, too—except for the red coat). El Dorado "had" whatever real properties Raleigh believed it had; it didn't exist, but Raleigh was so convinced that it existed he was prepared to devote a large portion of his life to finding it. This non-existent ("intentionally inexistent") El Dorado was the *intentional object* of some of Sir Walter Raleigh's most important beliefs and desires.

What should we say, then, about the intentional objects of normal, veridical beliefs and perceptions? Normally, if I believe there is a red apple on the table in front of me, my belief is caused by a red apple in front of me. The apple exists, and is red, and is the indirect, *distal* cause of my belief. (It causes events in my eyes and visual cortex which cause me eventually to go into the mental state of believing that there is a red apple in front of me.) That belief is not red or round or juicy; it is *about* something red and round and juicy. Nor are the *proximal* causes of that belief red or round or juicy. The *intentional object* of the belief is a red apple in front of me, not the idea of a red apple in my mind, and this is a belief that I can express by speaking of that apple or by reaching out, grabbing it and taking a bite (while ignoring the unripe apple beside it, etc.). There is little harm in the ordinary practice of simply *identifying* the intentional object of a true belief, perception or other mental state with the real object that plays the—typically indirect—stabilizing causal role in the creation and maintenance of that mental state, as long as we remember that when the intentional object is fictional—non-existent, hallucinated, fantasized—there is no role for a substitute real object, an inner real object that "has all the same properties" to be among the more proximal causes of the mental state. There *is* a role for a system of stabilizing internal representations, but they *represent* the properties of the fictional object in roughly the same way the sentences of a novel represent the properties of a fictional character. Seeing a real red apple for real does not require the brain to *render* a "directly seen" phenomenal/subjective red apple that intervenes between the piece of fruit and the belief. Hallucinating a red apple doesn't require an inner rendering either.

I have learned that this is a very counter-intuitive idea for most people to accept. It sure seems that when one hallucinates a red apple, this *must* involve the real existence (in some "dimension" or "arena" that might not be physical) of something that *is* (in some perhaps special, subjective sense) red and round, an object *created* in the mind by whatever it is that creates hallucinations. It is *that* object, *that* phenomenon that one is talking about when one talks about the contents of one's conscious experience. I am insisting that this is a mistake, not the indubitable deliverance of introspection and reflection. What you are doing when you make this mistake is confusing the intentional object of your belief with the proximal cause of your belief. You are "authoritative" about the intentional object of your belief in the same way a novelist is authoritative about the characters in her novel, but you have precious little access to, or knowledge about, the proximal cause[s] of those beliefs.

If asked why I say there is a red apple in front of me, I can reply, sincerely, that I see it with my own eyes, right now. That is a claim about causation. If I am right, then there is in front of me a physical object with such-and-such

physical properties, including the “lovely” property *red* (Dennett 1991), a dispositional property that can only be defined relative to a class of normal observers. But I might be wrong; I might be hallucinating, for instance, or tricked by a parabolic mirror, something I could discover on my own for reaching out for the apple. So while we are usually right in our beliefs about what is causing our other beliefs (and our beliefs about our beliefs, etc.), we have no “privileged access” that guarantees the truth of such beliefs about causes. And if you believe that your belief that there is a red apple in front of you is *proximally* caused by a “phenomenal” red apple-representation produced by your visual system to be the immediate source of your belief, you may well be mistaken. (I am sure you are, but it is my goal in this paper to show you that I might be right, so I won’t assume that I am right from the outset.) Sir Walter Raleigh’s stable, highly developed, obsessed-about beliefs about El Dorado were *not caused* by a real city of gold. We can be quite sure of that. Who knows what tangled network of folklore, deception, wishful thinking, and even indigestion may be implicated? [Recall Ebenezer Scrooge’s address to the *cause* of his current vision of Marley’s ghost: “You may be an undigested bit of beef, a blot of mustard, a crumb of cheese, a fragment of an underdone potato.” (Dickens 1843)]².

What was in Raleigh’s head that anchored, proximally caused, subserved, ... the beliefs and desires he had about this El Dorado? Here we must tread carefully, because while the actual physical, causal goings-on in his brain were nothing Raleigh had any beliefs about—unless he was an amateur cognitive neuroscientist centuries ahead of his time—he had, no doubt, plenty of beliefs about his “ideas” about El Dorado, his yearnings for it, his anticipatory imaginings of it, and so on. To say he had *access* to all these “ideas” is to say that, without any extensive amateur cognitive neuroscience he could distinguish, report, describe them in quite stable fashion. That is, he had beliefs about these apparent inner happenings that could guide his further actions, including reports about them (expressive of those beliefs). These beliefs had their own intentional objects, of course, and, as before, he was incorrigible—the ultimate authority—about the properties “had” by those intentional objects, but he was not incorrigible about which of these intentional objects, if any, were real, and which had causes that were not at all what he would expect them to be.

2 Where are the Qualia?

Qualia are the intentional objects of many of the reflective or introspective beliefs that one may have about one’s own mental states. *What could be more obvious?* In *that* tone of voice, talking about intentional objects, it is clear that people do think about, talk about, wonder about, delight in, ... their qualia. It is just as undeniable a fact as the fact that Sir Walter Raleigh was searching for El Dorado. What is not obvious is that qualia are real, that qualia exist. *If they are not real, they pose no more challenge to Modern Science than Raleigh’s El Dorado.* The Hard Problem (Chalmers 1995, 1996) would turn out to be no problem at all, or rather, it would disintegrate (as I have long urged) into a host of “easy” problems about how people could be seduced into thinking that their qualia were real, which will require us to ask, and answer, a host of questions about what is actually happening in people’s brains that makes them carry on as they do.

Isn’t this “behavioristic”? Yes, in the very bland and non-ideological sense that all science is behavioristic. Meteorology is behavioristic in this sense: once you’ve explained all the meteorological *behavior*, you’ve explained all the phenomena. The “behavior” in this formulation includes everything that happens in the brain, described at every level that is useful, including whatever modulates emotional states, generates preferences, raises or lowers thresholds, turns on orientation responses, triggers memory retrievals, adjusts judgments, obtunds pains, distracts attention, heightens libido or aggression or submissive responses, along with whatever processes drive and guide the production of verbal reactions, either to oneself or to others, fully articulated or half-fleshed out with actual words.

Consider my favorite metaphorical depiction of consciousness, Saul Steinberg’s *New Yorker* cover depicting the man looking at the painting he takes to be by Braque (It can be found on the cover of Dennett 2005). This virtuosic thought balloon is an incomplete catalogue of the sequence of *behaviors* that might occur in a few seconds while he peruses the painting. They are not musculo-skeletal behaviors but internal, covert behaviors, and the one property they share that elevates them into the catalogue, beating out the competition of all the other cognitive-emotional-metabolic behaviors occurring inside the man’s skull, is that they are “accessible” to the man, and indirectly to us, since he can report them, comment on them, describe them, and so forth, according to the heterophenomenological protocol (Dennett 1991).

Here is where the footing gets slippery. In order for these internal behaviors, these things happening in the brain, to occupy this status of accessibility, they must be the reliable causes, shapers, modulators of the beliefs he expresses when he tells us what it’s like to be him at this time. But these

² See my “How and why does consciousness seem the way it seems?” (2015) for further development of related points.

internal things are *not* to be identified with the intentional objects of those beliefs since the intentional objects of those beliefs may be fictions, as unreal as Santa Claus (who is *not* the cause of anybody's beliefs about Santa Claus, by virtue of having the debilitating property of non-existence). This is the heart of Illusionism (Frankish 2016; Dennett 2016). It is one thing to identify the red round apple that causes my belief *that there is a red round apple present* as both the distal cause *and* the intentional object of that belief; it is another thing to identify the internal neural state that causes my belief that that I am currently experiencing a red quale conjoined with a round quale as both the intentional object and the proximal cause of that belief, because that cause is neither red nor round, we can be sure of that.

We *could* claim this identity if we were willing to adopt a certain tendentious attitude, like the attitude of the Freudian critic who insists that the evil female character in the author's novel is *really* the author's mother, much as the author might deny it. The critic thinks that it is no coincidence that the fictional character and the author's mother share a variety of characteristics, and that this somehow explains—causally explains—some of the content present in the author's novel. In fact, the case for identifying the internal neural cause of a belief with the intentional object of that belief might be rather more compelling than the case of the psychoanalyzed novelist since a lot of circumstantial evidence would support the identity in spite of the huge difference in properties. An example: I invite you to imagine a bright blue capital "A" against a black background, and you comply. I tell you that the "A" you then tell me about—it's in a serif font, and the blue is October-sky blue, not baby blue—is *actually* no more blue than its representation in this Word file is blue. It *might*, however, actually be (if you squint right and look in the right place with your cerebroscope) A-shaped! That is, the internal neural representation of the capital A—the actual proximal cause of your introspective belief that you are imagining a capital A—might indeed avail itself of something along the lines of a retinotopic map, which would involve a real roughly A-shaped pattern of real excitation in some part of your visual cortex! Using spatial properties to represent spatial properties is sometimes a very good trick, but whether this trick is being used by your brain is an open, empirical question about which you have no privileged access whatever. See, e.g., the Shepard/Kosslyn/Pylyshyn debate over mental imagery for more on this. Pylyshyn (2002) (including the commentary) is a good overview. And what neurally represents the blue? Some pattern of firings that links the representation of the A shape with a host of dispositions, memories, preferences, affective responses, gathered together as your neural representation of that shade of sky-blue. Something like that is the naturalistic surrogate for the dualistic phantom blue-quale that we tend to imagine on display in the Cartesian Theater (Dennett

1991). But how could such an impersonal, boring pattern of neural firing take the place of a glorious, life-affirming, glowing, heart-breakingly lovely subjective patch of blue? By coming equipped with *many* of the triggers that initiate positive affective responses, dispositions to wax poetical, confidence-boosters, and so forth. (The difference between imagining the shade of blue and actually seeing the shade of blue is, in my opinion, a matter of degree, not kind. More on this below.) The affect is *built in*, a feature of the representations designed by evolution to accompany the mere identification of the surface property involved. (Evolution doesn't have to smear the representations with jam to make them yummy, or douse them with vinegar to make them yucky; their sequelae are those that are the apt reactions to the yummy or yucky properties they represent.)

3 Nicholas Humphrey's Inventions

Now we are ready to see how Humphrey makes these points—for I think he agrees with almost all that I have just said, if not with my ways of putting it. He begins by noting two different meanings of "invention"—a device or process, or a "falsehood, designed to please or persuade": He then claims that "consciousness is an 'invention' in both these senses." (Humphrey 2017).

That is to say, consciousness is:

1. *A cognitive faculty, evolved by natural selection, designed to help us make sense of ourselves and our surroundings.*

But, on another level, consciousness is:

2. *A fantasy, conjured up by the brain, designed to change how we value our existence.*

Exactly, on both counts. As I have put it (Dennett 1991, 2016, 2017), consciousness is a user-illusion, a brilliant simplification of the noisy tumult of causation and interaction (at the molecular and cellular levels, for instance) that needs to be prudently and swiftly sampled in order for a brain to do its work of controlling a large complex body through a challenging, changing world. Consciousness is the brain's user-illusion of itself, or more accurately, it is a whole manifold of user-illusions for various components of the brain that have various different jobs of discrimination and control to accomplish. When we banish the homunculus from the Cartesian Theater and blow up the theater, the distributed, scattered agencies that do all the work need ways of passing information and influence around. This involves not *transducing* the informative events (the signals, if you will) into a different *medium*, the imagined *MEDium* of consciousness, but translating or transforming the signals into neural representations that are well-suited to permit representation-users

to extract what they need. (See the lengthy description and discussion of this translation process in Shakey, the early robot, in Dennett 1991.)

But, on further examination, what about the second sense? What fantasy is Humphrey talking about? One might think he was talking about the menagerie of intentional objects that populates our waking life, the “things” we think about, savor, yearn for, are repulsed by. Some of these intentional objects are perfectly real things in the world—red apples and frightful tigers and awesome sunsets—and some are mere figments of imagination, which are *not* made of “figment” any more than Sherlock Holmes is made of “fictoplasm.” But in fact he is talking about a more restricted set of intentional objects: the “things” we savor or hate “more directly” (it seems) when we direct our attention inward and have beliefs about, premonitions about, yearnings for particular *sensations*, those *inner* goings-on that accompany, modify, enrich many if not all of our perceptual beliefs and desires. Humphrey says.

the fantasy I’m talking about is the kitchen-garden of qualia-soaked intentional objects that make up the subjective world of sensation, *and nothing else*. ... Perceptions, as such, don’t have a qualia-dimension, it’s *not like anything* to perceive there’s an apple that is red. But sensations almost always do have it, it is *like something* to sense red light on my retina. (personal communication, 2017)

I think this resurrects a division between pragmatic, businesslike *cognition* and ecstatic, emotion-laden *affect* that has outlived whatever usefulness it ever had. Humphrey says in his essay (this volume) “I’ll argue that qualia make little if any contribution to the cognitive faculty. However they lie at the very heart of the fantasy.” I, in contrast, think qualia—in the sense I think Humphrey could adopt quite comfortably—play a huge role in cognition “proper.” We can see the sorts of contribution they make in such minimal phenomena as the utility of color-coding in diagrams (which exploits the visual system’s competence *and appetite* for color discrimination), or rhyming mnemonics (which exploits the auditory system’s talent at detecting and insatiable *desire* for aural patterns). I share Humphrey’s admiration for the brain’s inveterate valancing of well nigh all its inputs, approving some stimulus arrays with an A+ or B–, while branding others as D– at best, and flunking still others. Indeed it was Humphrey who first opened my eyes to this perspective. When we see the brain as never *indifferent* about what is going on in it, we begin to get a sense of how control of mental life actually happens: by competition and coalition among valenced (“emotional”) neural activities. There is no boss in the brain figuring out what to think about next. There is sometimes a virtual boss, suppressing some thoughts and working hard to concentrate on others, but as we all know,

this is a mature and intermittent achievement, not part of the underlying operating system of the mind.

But when I say qualia are playing these important causal roles, I mean, of course, the internal, proximal causes of the beliefs expressed by introspectors when they tell us what it is like. Sensations have qualia the way El Dorado was made of gold. And perhaps this is what Humphrey means when he says qualia make little contribution to the cognitive faculty: most of the contributions that matter are made—are at least set in motion—before any articulation of the narrative into a drama. “Unfelt pains” suffered while asleep still manage to keep our limbs in good positions to avoid joint damage, and an adrenaline rush is initiated by limbic fear-discrimination well before there is an intentional object of the fear in the subject’s conscious experience.

Now we get to a problem paragraph:

No one would or could wish *qualia* out of existence. Indeed there will have been times for all of us when conscious experience is *about* little else. A science of consciousness that leaves qualia out is not just ignoring the elephant in the room, it is ignoring the elephant that *is* the room. (Humphrey 2017)

But of course I, for one, do wish qualia out of existence! That is, my attitude towards qualia is exactly the same as my attitude towards Sherlock Holmes, the Loch Ness Monster and the Abominable Snowman: I’m delighted that these intentional objects are a topic of folklore, entertaining and instructive for many purposes, but I really don’t want anybody to believe they are real. If they do, they are suffering from a delusion that might bring them to harm. (Belief in qualia, in contrast, is fairly innocuous, perhaps at worst an embarrassing delusion to suffer, especially if one is a cognitive scientist convinced that those damn qualia are sneaking away, untrapped and untaxonomized, leaving an awful hole in one’s model.)³

Note that I am not denying the existence of the perceptual properties of things in the world: colors, sounds, aromas, textures, liquidity and solidity and the like, any more than I am denying the existence of dollars, pounds sterling or euros. These are real things in the world, as real as real can be, and they are not properties *of* mental events but properties *represented* by mental events. And unlike many other properties (roughly, what Boyle and Locke called the primary properties) these “secondary”

³ I am always amused by cognitive scientists working on consciousness who modestly aver that they are not *trying* to solve the Hard Problem, something they are content to postpone indefinitely. If they think qualia are real, they should be ashamed of such abdication of scientific duty, or at least chagrined to admit they are not tackling the important issues. But maybe this is just a convenient temporizing move, waiting for philosophers to get their act together.

properties owe their very existence and identity to their being represented by mental events. Hume aptly drew our attention to the mind's "great propensity to spread itself on external objects" (*Treatise of Human Nature*, 1739, I, xiv) but this wonderful expression wears its metaphorical intent on its sleeve; Hume was not making the preposterous suggestion that minds somehow projected colors onto the near surfaces of objects, for instance, in the manner of some spectral lighthouse beam. A more sympathetic reading of Hume's insight is that the mind has a propensity to treat objects in the world as having properties that are nicely attuned to the needs and predilections of the mind's owner, *affordances*, as Gibson (1966, 1979) would say. Affordances are real properties, ubiquitously instantiated in the world, and minds are good at detecting them. (See Dennett 2015, 2017, for extensive discussions of this.) But because they are identified or defined in terms of the proclivities of (normal) minds of one species or another—usually us *H. sapiens*—they can be identified as examples of the benign illusions of our evolved user-illusion.

Here is a riddle: how are red things like opportunities? And the answer is that red things in the world depend for their redness on things that happen in our heads, but not *red* things that happen in our heads; likewise opportunities wouldn't *be* opportunities if it weren't for things that happen in our heads, but those things aren't opportunities! (See Dennett 1991, pp. 379–380, on lovely and suspect properties.)

Humphrey does not want to be a Realist about qualia, but has his qualms about Illusionism. "Illusionism undermines—and in many people's eyes devalues—the mystery of human experience." (Humphrey 2017) That is not, I think, a weighty objection; I can conjure up circumstances in which I would want to preserve a holy lie, a sacred, life-saving (or at least life-enhancing) falsehood that I would want to promulgate paternalistically, but I don't think embracing the shocking truth about the unreality of qualia should be any more unsettling than giving up belief in Nessie or yetis or mermaids. After all, "qualia" is a "technical" term devised by philosophers, and its unmasking should be no more distressing than the loss of the ether or centrifugal force. Colors will still be real and ravishing, aromas will still haunt our memories, pains will still be abhorrent, and the ubiquitous quest for orgasms will dwarf Sir Walter Raleigh's famous obsession.

Humphrey, after noting in passing that Stan Dehaene "oddly enough, is something of a 'qualia denier'" (Humphrey 2017) deftly avoids qualia Realism himself:

Even if we were to know in detail how a conscious experience is created neuron by neuron, from red light touching the retina through to the subject *making claims about* [my emphasis] red qualia, we still would not know *what this is good for*. (Humphrey 2017)

Here he leaps without comment over qualia as an intervening (real) variable in the path from retina to report, a good sign of his appreciation that he doesn't need qualia to be *real* properties of events in the brain (or mind) in order to inquire, appropriately, what might be the evolutionary reason for qualia-beliefs to be caused in our minds. Then he accurately skewers both Fodor and Searle, who make the defining mistake of qualia Realists. They are like the (one presumes imaginary) critics of Sir Walter Raleigh who could manage to marvel at how Raleigh could ever be *driven* to such lengths by something—El Dorado—that didn't even exist. Not a mystery. But then I come to a turn in Humphrey's argument that perplexed me at first:

How does exposure to qualia change people's psychology? What beliefs and attitudes are generated? How does it affect people's ideas about who and what they are, and what kind of world they live in? (Humphrey 2017)

His phrase "exposure to qualia" must be unpacked carefully. Frankish (2016, p. 29) finds a reading that Humphrey endorses:

Humphrey proposes that sensations occur when internalized evaluative responses to stimuli ('sentitions') interact with incoming sensory signals to create complex feedback loops, which, when internally monitored, seem to possess otherworldly, phenomenal properties.

It is the internal monitoring of those feedback loops, creating higher-order beliefs about what is going on inside oneself, that generates the fantastic intentional objects. "By lifting sensory experience onto that mysterious, non-physical plane, qualia deepen and enrich your sense of your own presence. You find yourself living in thick time." (Humphrey 2017).

I am not persuaded. I think Humphrey has built in a gratuitous step, perhaps an improvement on the standard naïve line about qualia, but still one step too many. Sir Walter Raleigh was, apparently, living in thick time, with a deep and rich sense of his quest, and it certainly didn't owe anything to any beliefs of his about El Dorado being fairy land or made of ectoplasm or anything like that; he thought it was real and made of real gold. The human fascination with gold is itself a fine topic for research; unlike our love of honey, for instance, it does not have a direct and obvious evolutionary rationale. But I don't think any doctrines of immateriality play a role in gold's psychological importance to us. I similarly have not been convinced by Humphrey that belief in immateriality, or paradoxical "impossibility," plays a role in persuading us to care about our lives and how we live them. This is how he puts it:

Even though it's your own brain that creates the qualia, you can't but project *the special qualities of sensations* [my emphasis] out onto the objects of perception in the outside world. In doing so, you spread a kind of fairy-dust around you. You enchant the world. Take away this magic paintbrush, and the world would lose much of its significance. You'd find it a less awesome place, less fun, less promising. (Humphrey 2017)

We may think our sensations *have* “special qualities” but in fact, I am claiming, our sensations (considered as events in our brains) are better seen as *representing*, not *having*, special qualities—affordances—of things in the world. Sensations, considered as intentional objects, not the causes of our beliefs in sensations, are wonderfully useful illusions. “Projecting” those qualities must mean endowing the things in the world with those properties, skewed as they are in favor of their user-friendliness to us. Things in the world really do have those wonderful (or awful, or boring or exciting, ...) qualities, a fact as much about us as about them. Those properties are not properties of conscious states; they are properties of things in the world of which we are conscious. And when we wax introspective and direct our attention to “things” happening in us—Humphrey's sensations—we find “them” to be sensations with qualia, a useful illusion we can learn to set aside, much as we set aside the illusion of centrifugal force.

Finally, Enoch Lambert has raised a shrewd diagnosis of my difficulties convincing people about my line on intentional objects:

“not all intentional objects are created equal” ... There is a huge difference between the intentional object represented by Raleigh's pronouncements of his intentions to find El Dorado and, say, Raleigh's hallucination of “seeing” El Dorado in the valley below at the end of an exhausting journey. People think there are *obvious* psychological differences here and *want to explain them via properties of the representations* [my emphasis]. (Personal correspondence, 2017)

Yes, and people are not wrong to look to the properties of the representations, but they typically look in the wrong place for those properties! The properties that explain this huge and obvious difference are functional/causal properties of the embedding of those neural representations in the brain, not the magical properties of qualia. We can creep up on Lambert's nice case of Raleigh's hallucination by looking first at simpler cases. What are the differences between thinking about a blue capital A on a black background, going to the trouble of imagining one, hallucinating one, and actually seeing one? In each case we have an intentional object, but we also have rough and ready ways of distinguishing them without any help from cognitive neuroscientists. The

merely thought-about A can be very sketchy; we may not bother settling on a font or a particular shade of blue and still sincerely maintain that we did indeed think about a blue capital A on a black background. The imagined A must be maintained, deliberately, with some effort, but is readily transformed in color or shape by “an act of will” (of which we have no deeper knowledge). The hallucinated A is quite persistent, but tends to depart under any serious scrutiny. (Doubting Thomas knew what he was doing.) The seen A is robust under almost all conditions of further investigation. Importantly, there can be penumbral cases in which one is unsure for some period of time which category of intentional object one is attending to. That's an important part of what we know “from the inside” and it does *not* include anything about qualia, except as the unmagical properties of the intentional objects we are thinking about.

This strongly suggests that the human brain can be stimulated to generate representations that vary hugely in the amount of recoverable, “accessible” detail they invoke. It is close to impossible for anything other than a red, round apple to sustain the information-requiring investigation that is possible in principle, and unless we are in a funhouse or other bizarre environment, we take the testimony of our senses at face value. Hallucinations work (when they do) because they are rare; someone who trips regularly on LSD is not fooled by the hallucinations, enchanting though they may be. The dividing line between imagining and hallucinating is also vague; listening to some blowhard at a party and suddenly becoming transfixed by his resemblance to a braying donkey, a conviction that you cannot shake and that interferes with your ability to follow the conversation, is not quite a hallucination, but close. And even at the sparser levels of detail, such representations can have their affective effects, and sometimes these effects are amplified, not obtunded, by their displacement from reality. Some people are more aroused by pornography than by engagement in real sex, which, one supposes, may involve *too much* information about one's circumstances. So I just got you to *think about* sex, but reflecting on that sentence probably does not arouse you; being provoked by it to engage in a sexual fantasy is another matter.

Now back to Lambert's example. That Raleigh believes in El Dorado and is searching for it, and utters questions and assertions and imperatives that refer to it, etc., is plenty of grounding for an intentional object: Raleigh's El Dorado, which may differ substantially from somebody else's El Dorado (the way Santa Claus differs from *Père Noël*). When Raleigh hallucinates his quest at the end of a long day, he may well “discover” things about El Dorado that had never occurred to him: the city is smaller than he had imagined, the roofs are tiled with terra cotta, not gold, and there is a giant statue of Queen Elizabeth I in the central square! But now what might happen? He might rush back to his base

camp, never doubting his hallucination and adding his “eyewitness testimony” to the content of his intentional object, El Dorado. Or he might pause, marveling at all the new details, but when he tries to take notes for his journal, they disappear in the mist, or seem to have changed from what they were a few seconds ago. He may discover that he was—or still is—hallucinating, and this gives him a new and different El Dorado as intentional object: the El Dorado he hallucinated in the jungles of South America. *This* intentional object is hugely different from the intentional object that led him on his quest, but not in having qualia where his earlier intentional object did not.

There is another theme lurking in Humphrey’s claims that I want to expose to the light, but not try to settle. Is our penchant for introspection, the high probability that at some point in our lives we will reflect on what it is like to be us and wonder about this, a key ingredient in our ability to stay alive and procreate? Humphrey seems to be suggesting it is, but it seems to me that whether or not animals and insects can *love* their lives as much as we can love ours, their instinct for self-preservation and reproduction is if anything more imperious than our own.

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