Chapter 5: Qualia and 'raw feels'

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What are qualia?

As I sit writing this sentence, I am enjoying a wealth of experiences. In front of me, the sky is full of the pink and blue hues of approaching sunset dashed with white clouds. Tropical birds chitter in high pitched trills, while a pair of dogs utter guttural barks at each other. My skin alternately prickles with the last lingering heat of the day, interrupted by the pleasant coolness of an evening breeze.

The scene I have just described is full of experiences with distinctive qualities – colours, sounds, and physical sensations. These qualities of experience are known to philosophers of mind as **qualia**, an oddly obscure term for an aspect of our lives that could scarcely be more familiar to us. Every waking moment of our lives, we are experiencing various qualia associated with sights, sounds, or feelings. Sometimes, we deliberately seek out new qualia, as when we order an unfamiliar dish at a restaurant, eager to learn what it tastes like. On other occasions, we seek urgently to put an end to some **quale** (the singular of "qualia") or another; for example, when we take an aspirin to relieve the throbbing sensation of a headache.

Qualia have been the focus of intense interest in philosophy of mind and cognitive science for several decades. They possess several apparent features that make them both fascinating and hard to explain. All of these properties are controversial (see section 4, below), but they certainly seem to capture several of the intuitive features of qualia.

First, qualia seem to be *private*: my qualia are a feature of my experience alone, and you can never directly access them. You may have wondered in the past whether other people experience colours in just the same way you do, or whether my blue may be your green. These questions arise precisely because of the apparent privacy of qualia: we can never know which qualia other people are experiencing.

Second (and relatedly), qualia are arguably *ineffable*, that is, they cannot neatly be put into words. Imagine trying to explain to a person who is blind what red looks like, or (a less

extreme example) conveying to a lifelong vegetarian what tuna tastes like. While in both cases, we might attempt to use metaphors ("red is like a trumpet") to convey the character of the experience, our attempts to do so will inevitably fail to do justice to the relevant sensation.

A final alleged property of qualia is that are immediately and fully apprehensible to us just by experiencing them. In this respect, they are distinct from the *objects* of our experience. Imagine that you are lying in bed at night and hear a soft thud. You may well wonder what the noise was: a falling object, a door slamming in the wind, or perhaps your housemate returning home. What you don't have to speculate about, however, is what the noise *sounded* like to you: this is something you grasped simply by hearing it. More strongly and more controversially, some philosophers have suggested that we can never make errors of judgment about our qualia: if I say something feels painful to me, for example, then it is nonsensical to suggest I might be in error.

Qualia and the mind-body problem

One reason qualia have so fascinated philosophers is that they are arguably hard to explain in standard scientific terms. Many of us have probably heard neuroscientists talking about things like synapses, neurons, and different regions of the brain. It is perhaps not too difficult to see how this kind of scientific approach might explain various aspects of our behavior. We might understand perception, for example, in terms of the transmission of information from the sense organs through various processing areas of the brain, or unusual aggression in terms of the release of some hormone or neurotransmitter. It is much harder to see, however, how these kinds of scientific descriptions could ever give us a satisfying explanation of why red looks the specific way that it does, or why cinnamon tastes like *this* and vanilla like *that*.

The challenge here is not merely to explain the neuroscience of how vision works or how our tongue relates flavour information to the brain; important progress is being made every day in understanding questions like these, although the science still has a long way to go. Instead, the real difficulty is that while science tells us about how the brain *works*, it seems unable to tell us what experiences are actually *like*. To get an idea of the problem, imagine a person who has been completely deaf since birth who wants to know what Beethoven sounds like. Even if we had perfect brain-scanners and could show them exactly what happens to someone's

neurons when they listen to music, it does not seem like this could ever properly convey to them the subjective experience of hearing the opening bars of the Choral Symphony.

This creates an apparent challenge for a scientific worldview: if science cannot fully explain qualia, then does it follow that science can only offer us a partial understanding of the universe? More strongly, one might wonder whether the seeming inexplicability of qualia in scientific terms shows that the universe we inhabit does not consist solely of things like atoms, molecules, forces, and other objects from the domain of science, but also contains distinctive irreducibly *mental* phenomena.

The challenge is well illustrated by a famous thought experiment called "Mary's Room" developed by philosopher Frank Jackson (Jackson, 1982). Imagine a woman called Mary who is a brilliant scientist. Specifically, we are told that she knows all the physical facts about color perception: she knows all about the physics of light, the biology of the eye, and the neuroscience of color processing in the brain. However, Mary has never seen color herself, having spent her life in a black and white room. One day, Mary leaves her room, and sees a shiny red apple for the first time. "Wow!" she thinks, "So *that's* what red looks like."

Mary's Room attempts to demonstrate that there are certain facts that can't be accessed by scientific knowledge alone. After all, Mary *already* knows all the scientific facts about color before she leaves her room. What she lacks, however, is knowledge of the qualia of color; that is, what colors actually *look* like. She only gains this knowledge when she leaves the room and actually sees colors herself. Hence, the argument runs, there are certain facts that cannot be explained by science, but instead rely on subjective experience. The argument can be presented formally as follows.

(1) Mary knows all the scientific facts about color before she leaves her room.
(2) Mary learns new facts (about what colors look like) when she leaves her room.
(C) Therefore, not all facts are scientific facts.

Mary's Room is one of the most famous thought experiments in all of philosophy and has generated a vast number of responses. Most of them challenge premise (2), above, and argue that in fact Mary doesn't learn anything new when she leaves her room.

For example, **The Ability Hypothesis** claims that what Mary gains is not knowledge but a new set of abilities (Lewis, 1990). Imagine someone who knows a lot about music, but can't play any instruments. However, after lots of practice, they learn to play the piano. The ability hypothesis suggests that something like this applies to Mary: prior to leaving her room, she had never seen red objects, so couldn't recognize a given object as red, or imagine or remember the color red. After leaving the room, her new experiences of red allow her to do all of this. Our sense that she gains knowledge, then, is misplaced – what she gains is a new kind of skill. Some philosophers, however, doubt that this adequately explains away our sense that Mary really does gain a new special kind of knowledge when she leaves her black and white room.

Another important approach we can term the **'old fact, new knowledge'** view (e.g., Tye 1995). Imagine someone knows that Istanbul was founded in 330AD. They then learn quite separately that Constantinople was founded in 330AD. Assuming they do not already know that Istanbul and Constantinople are the same city, it seems reasonable to say that the person learned something new when they heard the information about Constantinople. Certainly, they have an item of trivia at their disposal that they didn't have before. However, "Constantinople" in fact refers to the same city as "Istanbul", we should also say that they have not strictly learned any *new* fact about the universe, having instead encountered a fact she already knew in a different form. Applied to the Mary case, the idea is that Mary really *did* know all facts about color before she left her room. When she sees red for the first time, she simply encounters these same facts in a new way, namely via her own color vision rather than via the theoretical language of science. One challenge for this view is to offer a developed account of this special experiential way of gaining knowledge while avoiding appeal to any non-scientific or non-physical facts or properties.

A final approach adopted by some defiant philosophers (notably Dennett, 2006) is to insist that Mary would not gain *any* kind of new knowledge or ability towards the world when she leaves her room: if she *really* knew all the scientific facts about color before leaving the room, she would in fact already have all the knowledge and abilities associated with seeing colors, despite never having personally seen them. This might sound like a flat denial of the powerful intuition motivating the thought experiment. However, one way to make this approach more persuasive is to focus on the first premise of the argument above, that Mary knows *all* relevant the scientific facts. Is this really something we can easily imagine? After all, current

science is still incomplete, and falls far short of providing us with knowledge of every fact even within its own domain of explanation. Moreover, most scientists are so specialized they know only a small proportion of the facts within their own field. Mary, then, would have be more like a superintelligence from the distant future than a normal human. Given this, should our intuitions about what we can imagine be given much weight?

These responses are only a fraction of the many approaches to Mary's Room adopted by philosophers. While considerable progress has been made in developing rebuttals to Mary's Room, it is probably fair to say that there is no one response that has been generally accepted as solving the problem. The puzzle of qualia for the scientific worldview, then, remains a central area of philosophical research.

How many kinds of qualia are there?

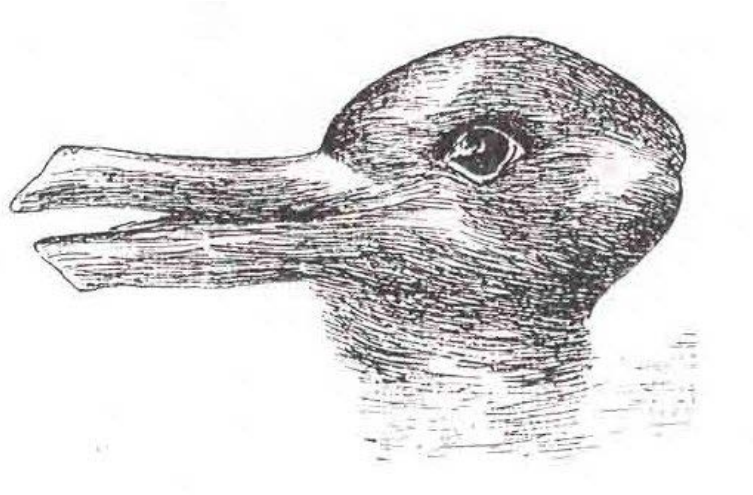
A further important debate about qualia concerns which kinds of mental states actually have them. The usual examples of qualia are things like sights, sounds, and bodily sensations. But some philosophers have argued that there are plenty of other kinds of qualia besides these.

Some example candidates for these additional qualia are things like emotions. It certainly seems like there is a distinctive feeling (or set of feelings) associated with powerful emotions like joy, anger, or sadness, for example. However, it remains controversial whether these feelings involve a special kind of qualia all of their own, or might be understood instead in terms of other qualia, such as, for example, those associated with bodily sensations (a view adopted by one of the founders of modern psychology, William James, in a famous 1884 article). Note, for example, the intense physical sensations that accompany the emotion of excitement: we may experience the feeling of our heart rate going up, our mouth becoming dry, and our muscles tensing. Could such 'bodily qualia' be all there is to the qualia of emotions? The issue remains hotly debated.

Another important debate concerns the range or type of qualia associated with perception. We can all agree that there are qualia associated with our experiences of color and shape, for example. But could there be special kinds of qualia involved in seeing someone as looking friendly, for example, or in recognizing an animal as a raccoon? The idea that there are such

'high-level' qualia associated with properties beyond things like color, shape, and motion is sometimes called the '**rich content view**' (Siegel, 2010). One way to motivate this idea comes from cases where the character of our experience – in other words, our qualia – seems to change despite there being no changes in how we are experiencing the lower level qualities of color, shape, and so on.

Consider, for example, the famous 'duck-rabbit' illusion below. With a little mental effort, we can 'switch' from seeing the picture as a duck to seeing it as a rabbit, and it arguably seems like there is a shift in the way the picture looks. However, it is far from clear that our experience of the low-level features of the image – the colors and shapes – actually changes. If that is right, then it might provide evidence that there are special kinds of qualia associated with seeing the image *as a duck* and seeing it *as a rabbit*.



Source: Jastrow, J. (1899). The mind's eye. *Popular Science Monthly*, **54**, 299-312.

A final important debate concerns whether non-perceptual states like thinking and understanding might have special qualia associated with them. For example, quickly add together the numbers 17 and 48 in your head, and in doing so, consider what feelings or qualities are associated with the experience. Was there a distinctive kind of feeling that accompanied your thoughts about the numbers? Some philosophers have suggested that there is indeed a kind of special experience associated with thinking and understanding (Strawson, 1994). One argument for this kind of "cognitive qualia" (or "**cognitive phenomenology**," as it is also known) comes from cases of hearing a foreign language. Imagine that Jack, an English speaker, and Jacques, a French speaker, are both listening to a French radio broadcast. Jack cannot understand what he is hearing, but Jacques can. Intuitively, it seems like there is a

difference in the quality of their two experiences arising from the differences in their understanding (or lack thereof). Again, the existence of these cognitive qualia is hotly contested. Some philosophers claim, for example, that the qualities associated with experiences like thinking and understanding can be understood just in terms of regular perceptual qualia, like colors and shapes, occurring as images in our minds. Hence perhaps any qualia you experienced in thinking through the math problem above were just a matter of seeing or hearing the numbers in your "mind's eye."

Skepticism about qualia

We have been talking in this chapter about qualia as though their existence, at least, was uncontroversial. In one sense, that is surely true: no-one could deny that we genuinely experience colors and tastes, for example. However, some philosophers remain skeptical about qualia, insisting that the very idea is a confused one. The philosopher Daniel Dennett is one such famous skeptic. In a classic paper, "Quining Qualia" (1988), he gives a number of examples of cases in which the idea of qualia as used by philosophers seems to invite impossible and perhaps nonsensical questions. Consider, for example, the case of two people, one of whom loves cauliflower, and the other of whom despises it. Should we say in such an instance that they must therefore have different qualia when they taste cauliflower, or instead say that they have different reactions to the same qualia? Dennett would have us believe that such questions barely make sense.

To illustrate the point further, he invites us to imagine that we ourselves go from despising cauliflower to loving it (an experience many of us have had with one food item or another). Even in such a case, he suggests, we are not able to say whether our qualia have changed or our attitudes have changed. If that is right, then it seems that some questions about qualia cannot be answered from the first-person perspective; but given that qualia are supposedly private and ineffable, it would seem to follow that they cannot be answered at all! Rather than embrace such mysterious entities, Dennett suggests, we would do better to abandon the very idea of qualia as confused.

Another kind of skepticism about qualia concerns their relationship to the objects of our experience. For a long time, many philosophers thought of qualia as things we could observe in our experience in their own right, quite separate from our experience of objects in the

world (hence the term "raw feels" sometimes used to describe them). However, other philosophers (notably Harman, 1990) have more recently challenged this idea, instead claiming that insofar as we experience qualia at all, we experience them as properties of objects in the world. This is a complex debate, but in essence, these philosophers claim that in looking at a green tree, we do not experience "raw greenness"; rather, what we might call the "qualia of greenness" are actually experienced as properties of an object in the world, namely the tree itself. If this "**transparency thesis**" is correct, then it suggests that even if qualia exist, they might simply be an aspect of our awareness of real objects in the world, rather than some mysterious "mental paint" (Block, 1996). If so, cognitive science might enable us to understand qualia via the broader philosophical and scientific project of explaining how perception makes us aware of the world.

Conclusion

Qualia remain one of the deepest puzzles in all of philosophy, and this chapter has only offered a cursory survey of some of the most important debates in which they feature. Even while science has given us tremendous new insights into difficult questions like the origins of the universe and the human genome, the problem of how to explain qualia seems still tantalizingly out of reach of standard scientific enquiry. Despite or perhaps because of this, many philosophers and scientists view qualia as a vital and exciting frontier for human understanding.

Questions for discussion

- How would you explain to a person blind from birth what red looks like? Would the attempt be doomed to failure?
- Imagine if Mary used her scientific knowledge to build a colour TV, allowing her to see colours without leaving her black and white room. Would that show that we could give a scientific explanation of qualia?
- If I hallucinate a purple elephant, is "the purpleness" I am experiencing located somewhere in my brain?
- We normally think that qualia cause us to do things in the world; for example, the feeling of pain I experience when I sprain my ankle causes me to stop jogging until it

has healed. If qualia are non-physical, does this mean they cannot have effects on the physical world?

Works cited

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- **Dennett, Daniel C. 1988. "Quining Qualia." In** ***[Book Chapter]*****, edited by Anthony J. Marcel and E. Bisiach. Oxford University Press.**
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- **Strawson, Galen. 1994.** ***Mental Reality*****. MIT Press.**
- **Tye, Michael. 1995.** ***Ten Problems of Consciousness*****. Cambridge, MA: MIT Press.**

Suggested further readings

- **Alter, Torin, and Robert J. Howell. 2009.** ***A Dialogue on Consciousness*****. OUP USA.**
  A highly accessible but quite detailed guide to the problems of qualia and consciousness, told through a series of philosophical dialogues.
- **Blackmore, Susan. 2006.** ***Conversations on Consciousness*****. Oxford, New York: Oxford University Press.**
  A series of interviews conducted by consciousness researcher Susan Blackmore with the world's leading experts on consciousness and qualia.
- **Chalmers, David J. 1998.** ***The Conscious Mind: In Search of a Fundamental Theory*****. Philosophy of Mind. Oxford, New York: Oxford University Press.**
  A critically important book-length treatment of the problems of consciousness and qualia, defending the view that qualia cannot be understood purely in physical terms.
- **Dennett, Daniel C. 1991.** ***Consciousness Explained*****. Penguin Books.**
  A classic and highly influential defense of scientific approaches to consciousness and qualia.
- **Montero, Barbara. 1999. "The Body Problem."** ***Noûs*** **33 (2): 183–200.**

In the discussion above, it has been assumed that the notion of "the physical" is relatively straightforward, in contrast to the mysteries posed by qualia. In this important article, Barbara Montero identifies some complications with defining what is and is not physical.

- **Nagel, T. 1974. "What is it like to be a bat?" *Philosophical Review* 83: 435–456.**
  A celebrated and highly influential article on the challenges posed by qualia for our attempts to understand the world in physical terms.