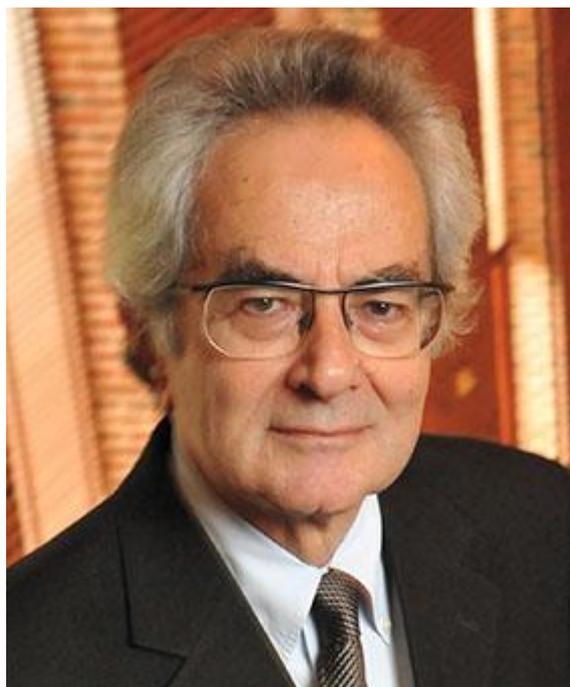


Classic Text 23 - Philosophy of Mind: Qualia

The purported existence of **qualia** (/ˈkwɑːliə/, singular **quale**, from the Latin *quālis* meaning “of what sort” or “of what kind”) have bedevilled philosophers for decades. One definition by Chris Eliasmith (2004) is: “The ‘what it is like’ character of mental states. The way it feels to have mental states such as pain, seeing red, smelling a rose, etc.” While almost everyone agrees that there must be something that it is like to be in a particular conscious state, philosophers differ widely about their implications, if any. In his classic paper “What is it like to be a bat?” American philosopher Thomas Nagel engages in what Daniel Dennett calls “the most widely cited and influential thought experiment about consciousness.” (Dennett, 1991 p. 441) Nagel’s seminal paper, which is the classic text for this study unit, may be downloaded [here](#) for free. Note that South African copyright law allows for the reproduction of individual journal articles for educational purposes.



Thomas Nagel (1937 -) American Philosopher and Emeritus Professor of Philosophy and Law at New York University

In our previous classic texts concerning the mind-body problem (including determinism and freedom) we have come down squarely on the side of physicalism and determinism although we have tried to avoid type identity theory in favour of some or other token identity theory such as Davidson’s anomalous monism or functionalism. On the other hand, we have discussed but not endorsed **reductionism** (the philosophical belief that a complex system is nothing more than the sum of its parts) either of the mental or the biological.

Nagel begins by dismissing what he perceived as the “recent wave of reductionist euphoria” at the time of writing. Examples of these he lists in footnote 1 of his paper. Nagel proposes that genuine reductions of the type water to H₂O or gene to DNA are quite unlike that of mind-body relation and that consciousness is what makes the latter “unique” and “intractable”, at least in the foreseeable future. “Consciousness experience,” he maintains “is a widespread phenomenon.” We can be certain that we are conscious, at least some of the time, and it is reasonable to infer that consciousness is present at many levels of animal life, although “it is very difficult to say in general what provides evidence of it.” Descartes, on the contrary, regarded all animals except for humans as mere automata. This belief however is a natural consequence of his “ghost-in-the-machine” variety of dualism.

Today we are more inclined to regard most animals with a sufficiently complex nervous system as capable of conscious experience, while treating simpler organisms such as insects as biological robots or automata. For that reason we think twice about killing a mammal, especially a primate, and typically give no thought to swatting a fly. On the other hand it is only a small stretch of the imagination to consider the existence of other forms of conscious experience, quite unintelligible to

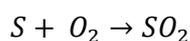
us, on countless planets in other solar systems throughout the universe. However according to Nagel, “no matter how the form may vary, the fact that an organism has conscious experience *at all* means, basically, that there is something it is like to *be* that organism... But fundamentally an organism has conscious mental states if and only if there is something that it is to *be* that organism—something it is like *for* the organism.” This Nagel calls the subjective character of experience. And although he offers no argument for the assertion, a little reflection should convince you of its veracity: There is almost certainly nothing that it is like to be a muscle (bivalve) because, without even a central nervous system, we suppose they have no conscious experience. However there must be something it is like to be a dog or a chimpanzee because they are clearly conscious beings each with an inner life, all be theirs very different to that of human beings’.

Nagel makes the following negative points with regard to this subjective character of experience.

- It is not captured by any reductive analysis of the mental because each such analysis is compatible with the absence of subjective experience.
- It is not analysable in terms of any explanatory system of functional states, or intentional states of organisms because there could be suitably programmed robots (or zombies) that instantiate the same functional states or intentional states so that they are behaviourally indistinguishable from people and yet experience nothing subjective.
- It is not analysable in terms of the causal role of experiences in relation to typically human behaviour.

Nagel does concede that anything complex enough to be behaviourally indistinguishable from a person might (necessarily) have to have experiences, though we could not know this by simply analysing experience. He is also not denying that there is such a thing as conscious mental causation or that it might be given a functional characterisation; instead he is denying that these exhaust the analysis of consciousness. If the subjective character of consciousness is left out of any reductionist program of analysis then it simply fails as a reduction. If we try to simply reduce the mental to the physical and yet have no idea what the subjective character of experience is, then we cannot have a (comprehensive) idea of what is required of the physicalist theory we are after.

When we reduce some occurrence to a physical or chemical process we typically exclude the phenomenological features on the minds of human observers, such as the yellow flour-like appearance of sulphur or its pungent smell when it is burned in air. We simply write down the equation omitting the phenomenological features, thus



However when we try to subject the phenomenological features of experience to a reduction in the same way, the phenomenological features must themselves be given a physical account. But according to Nagel, this is impossible because “every subjective phenomenon is essentially connected with a single point of view, and it seems inevitable that an objective, physical theory will abandon that point of view.”

We are all familiar with the distinction between the subjective and the objective analogous to what Sartre referred to as the *pour-soi* and the *en-soi* as applied to a being-for-itself vs. a being-in-itself respectively. Indeed this subjective-objective distinction is so familiar that we seldom give it another

thought. However, as Nagel points out, facts about what it is like to *be* an X are very peculiar - quite unlike facts about what a Y *is* like. We may even be inclined to doubt the reality of the former or the significance of claims about them in favour of the latter, if pressed. Nagel proposes an example, not so much as to problematize the distinction between subjective and objective, but instead to

- illustrate the connection between subjectivity and a point of view,
- make evident the importance of subjective features, and
- bring out clearly the divergence between the two types of conception, subjective and objective.

Nagel takes it for granted that we believe that bats have experience. Although they are quite unlike us, they are nevertheless mammals and as such share much of their neural architecture with us and other mammals such as mice, whales and dogs. Had Nagel chosen for his example a creature more distantly related to us such as a wasp or a sea slug, we almost certainly would have been less inclined to assume that they possess anything comparable to experience. Although bats are much more closely related to us than insects or molluscs, they occupy a sensory world dominated by the use of sonar or echolocation to navigate and perceive objects. "Even without the benefit of philosophical reflection," Nagel maintains, "anyone who has spent some time in an enclosed space with an excited bat knows what it is to encounter a fundamentally *alien* form of life."

If we believe that bats have experience then we must accept that there is something that it is like to be a bat. Using echolocation, bats can perceive the size, shape, texture, distance and relative motion of objects comparable to way we do using vision. So although they might glean similar information from their environment as we do, their form of perception is quite dissimilar in operation to any sense that we possess. Therefore we must suppose that bat subjectivity is unlike anything we experience or can even imagine.

If we try to imagine what it is like to be a bat or any other creature, our own experience, which is limited, must form the basis of our imagination. While it is possible for one to imagine having webbed arms and fingers, hanging upside-down by day and flying around at dusk and dawn, navigating by sonar and catching insects in one's mouths, this only conveys what it might be like for a *human* to behave like a bat; however such a feat of imagination conveys nothing of what is like for a *bat* to be a bat. Even if we could imagine being gradually transformed into a bat, our present neurophysiological makeup does not allow us to imagine what our future metamorphosed self as a bat would be like. The only evidence that would suffice would be from the experiences of bats, if only we knew what they were like. Therefore extrapolating from our own experience must be "incompletable".

However, we may ascribe general *types* of experience to bats based on what we know about their anatomy and physiology. For example, Nagel proposes that "we describe bat sonar as a form of three-dimensional forward perception." We also certainly expect them experience various forms of touch, pain, fear, hunger, lust and very poor vision; however these are likely to have a species specific subjective character beyond our ability to conceive. The problem is even more acute if we consider other conscious alien life forms that might exist in the universe. For these creatures, it is unlikely that even our most general terms would suffice to describe what it is like to be them. Even between different humans such as one born blind and deaf and another born sighted and hearing,

the subjective character each person's experience is presumably not accessible to the other. Yet that does not (or should not) stop us from treating each other's experiences as having a subjective character.

Nagel turns the problem around and asks us to consider what super-intelligent bats or aliens might conclude if they tried to form a conception of what it is like to be us. It is quite likely that they would be unable to succeed in the task because of their very different mental makeup. Intelligent aliens, if we ever discover them, may not even have neurons or carbon based bodies. Yet they would be wrong to conclude, on the basis of failing to conceive of what it might be like to be us, that there really is precisely nothing that it is like to be us. Of course, we know that they would be wrong in drawing such a sceptical conclusion from the undeniable fact that *we* know what it is like to be us. Similarly, it would be wrong for us to conclude, based on the fact that we might not be able to conceptualise bat or alien phenomenology or accommodate it in our language, that bats or aliens might "have experiences fully comparable in richness of detail to our own."

Nagel makes the following brief observation concerning his realism about the subjective domain. The latter implies a belief in the existence of certain facts beyond the reach of human concepts. It is more than likely that there are such facts. For example, transfinite numbers would have existed even if everyone had been wiped out by the Black Death before Cantor discovered them. But there may also be facts that humans cannot express or comprehend, even if humanity lasted forever, because we do not have the mental structure to operate with them. There may or may not be life forms that have access to humanly inaccessible facts, but their existence is not a condition for the existence of such facts. The upshot of this is that we should recognise the existence of facts which do not consist in the truth of propositions expressible in human language. This does not require that we broaden our definition of **facts** as true statements because those that are beyond our ability to comprehend or even express must be necessarily ineffable (to humans). Nagel does not pursue this matter further, except to note that whatever the facts about what it is like to be a human or a bat or an alien, such facts embody a particular point of view.

We are all familiar with the privacy of experience; however it is often possible to take up another person's point of view so that facts about such experiences need not be limited to our own case. In this sense phenomenological facts are perfectly objective; however Nagel claims that they are subjective in the sense that "even this objective ascription of experience is possible only for someone sufficiently similar to the object of ascription to be able to adopt his point of view—to understand the ascription in the first person as well as in the third, so to speak." The more different we are from another experiencer the more difficult this task becomes. We require no exertion in understanding our own experience because we already occupy the relevant point of view, but we would have as much difficulty in understanding our own experience from the point of view of another species as we would have understanding another species' experience without adopting *its* point of view.

In footnote 8 Nagel mentions the example of some blind people who have learned to echolocate using vocal clicks or taps of a cane. Today most people who learn this skill use a "clicker" because it is less taxing than vocalising clicks; however the effect is the same. Some human echolocators such as Daniel Kish "are so proficient they can draw a sketch of a room after clicking their way around it, or even go mountain biking along unfamiliar routes." (Wilson, 2017) For such people, roughly

imagining what it is like to possess the much more refined sonar of a bat would, by extension, be easier. But even then, one's understanding of what it is to be a bat would be only partial and at best imaginative. Even to form a *conception* of what it is like to be a bat (and *a fortiori*¹ to know what it is like to be a bat), Nagel insists, requires us taking up the bat's point of view.

For Nagel, this goes to the heart of the mind-body problem: If facts about experience (what it is like *for* an experiencing organism) are only accessible from the organism's point of view then "it is a mystery" how such experiences could be reviled by the physical operations of such an organism. The latter, such as bat neurophysiology, could be objectively observed and understood from many points of view, including those of human or alien scientists. Moreover, there is no *a priori* reason why highly intelligently evolved bats or aliens might not learn more about human neurophysiology than even we ever might.

According to Nagel, "This is not by itself an argument against reduction." If it were sold as such it would be an appeal to ignorance. However an alien scientist who had no sense of vision could still understand rainbows, clouds or lightning as physical phenomena without having any concept of the place they occupy in our phenomenal world. Lightning is a good example because it has an objective character that is not exhausted by its visual appearance and it is this objective character that could potentially be investigated by an alien, even one without a sense of vision. According to Nagel, "To be precise, it has a *more* objective character than is revealed in its visual appearance." In moving from the subjective to the objective characterisation, there may be no "end-point" in which it is possible to reach "the completely objective intrinsic nature of the thing, which one might or might not be able to reach." Perhaps Nagel is allowing for something like Kant's **noumenon** or "*Ding an sich*" (thing-in-itself) that exists objectively, though independently of human sense or perception. Either way Nagel suggests, "It may be more accurate to think of objectivity as a *direction* in which the understanding can travel." In trying to objectively understand a phenomenon like lightning would then involve abstracting away as far as possible from the human viewpoint or any particular species specific viewpoint for that matter.

Experience on the other hand, is more intimately connected with a point of view. It does not make sense to speak of the objective character of an experience when moving in the opposite direction would involve abstracting away from that point of view. "After all," Nagel asks rhetorically, "what would be left of what it was like to be a bat if one removed the viewpoint of the bat?" If experience does not have (over and above its subjective character) an objective nature that can be apprehended from many different points of view, then Nagel asks, how it is possible that an alien or human neurophysiologist could observe the physical processes going on in my brain which are my mental processes, only from a different point of view?

In general, the process of reduction involves moving in the direction of greater objectivity by decreasing our reliance on species specific points of view towards the object of our investigation. For example, when we reduce the yellowness of sulphur we set aside the impression made on our visual sense in favour of a description of its absorptive and reflective properties of light of various wavelengths. Thus we can move from a phenomenal point of view that we have of a certain thing to

¹ *a fortiori* from the Latin *a fortiori argumento*: with greater reason or more convincing force —used in drawing a conclusion that is inferred to be even more certain than another (Merriam-Webster.com)

refer to a category of more general effects and properties of that thing, while still thinking about the same thing.

The same movement, from phenomenal appearance to a more objective reality, makes no sense when applied to experience itself. If we were to abandon our initial subjective, human viewpoint in favour of a description accessible to creatures that could not imagine what it is like to be us then, if anything, such a move takes us further away from the phenomenon of human experience. Consider Nagel's example of the reduction of sound to a wave phenomenon in air or other media. Although, in doing so, we set aside one viewpoint in favour of another, what we set aside remains unreduced. There may be aliens who understand sound in terms of the same objective physical events, who thus refer to a common reality that we both apprehend; however this does not require that they understand the phenomenality in which those events appear to our senses or those of other species.

Nagel points out that while we are right to set aside this point of view when seeking a fuller understanding of the external world, we cannot ignore it entirely, "since it is the essence of the internal world, and not merely a point of view on it." If we embrace a physicalist theory of mind then the subjective character of experience must also be explained by that theory. Furthermore there must be something that it is *intrinsically* like to be in a certain physical state or process of states. In footnote 11 Nagel insists that this relation (between the subjective and the physical) must be a necessary one. Saul Kripke made a similar point in *Semantics of Natural Language* (Davidson & Harman, 1972) in which he argues that "that causal behaviorist and related analyses of the mental fail because they construe, *e.g.*, 'pain' as a merely contingent name of pains." Although we do not agree that such theories fail merely on linguistic grounds, we do agree with Nagel in finding that, "the hypothesis that a certain brain state should necessarily have a certain subjective character [is] incomprehensible without further explanation."

Clearly we don't want to throw out the baby with the bath water and conclude that physicalism in general must necessarily be false. It is true to say that we do not yet understand in detail how physicalism could be true in every detail, especially concerning the subjective aspect of experience; however it is unlikely that the identity statement that mental states are states of the body and that those mental events are physical events, could be otherwise given the alternatives. Perhaps it is enough, minimally, to assert that all mental events are physical events without having to spell out just *which* events they are or with Davidson to deny that there is no *lawful* connection between psychological and physical events.

According to Nagel however the 'is' or 'are' of identity statements is deceptive. Usually when we are told that *X* is *Y* we know *how* the identity relationship is supposed to be true. The latter depends on a conceptual or theoretic background that is not covered by the 'is' alone. If we know how both *X* and *Y* refer to the things or events that they do and have a rough idea how their referential paths might converge on the same thing, person or event, then we should have no trouble with their identification. However when the terms identified are quite unlike, we may have no idea how their relationship is supposed to be true, nor may we have even a rough idea how their referential paths might converge or even on what thing or kind of thing they might converge. Indeed, a theoretical framework may have to be supplied in order for us to understand this. Nagel gives the example of being told very early on that all matter is really energy. Despite knowing what 'is' means, most

people never grasp what makes this claim true because they lack the theoretical background or framework in order to understand it.

Nagel claims that “At the present time [1974] the status of physicalism is similar to that which the hypothesis that matter is energy would have had if uttered by a pre-Socratic philosopher.” We do not believe this is true. The pre-Socratic philosophers rejected typical mythological explanations of phenomena they observed and instead focused on “the essence of things.” These included:

- From whence does everything come?
- From what is everything created?
- How do we explain the plurality of things found in nature?
- How might we describe nature mathematically? (Zeller 1955, p 323.)

One of the earliest pre-Socratic philosophers, Thales of Miletus (c. 624 - c. 546 BC) was an early proponent of scientific philosophy. He was well-grounded in geometry and astronomy and successfully predicted the solar eclipse of May 28, 585 BC. Thales reasoned that the fundamental “stuff” out of which the universe was composed must be something out of which all else could be formed - something which could support life, yet be capable of motion and change. For Miletus this “stuff” or matter had to be water; thus everything must be water in one or other form. Heraclitus of Ephesus (c. 535 - c. 475 BC) regarded everything as in a state of flux, while Parmenides of Elea (fl. c. late 6th or early 5th century BC) by contrast, regarded all as an eternal unchanging “One”. Democritus (c. 460 - c. 370 BC) in turn regarded everything as composed of tiny, unchangeable, indivisible particles within the void; hence our word ‘atom’ ἄτομος (átomos, for ‘uncuttable’). All of these pre-Socratic philosophers had careful observations and arguments in support of their position, though they do not matter for the purpose of this detour. What is important is to appreciate that, from the earliest days of Western philosophy, sweeping reductions or identifications were common and widely believed.

The explanatory work needed to be done in order to show how certain mental events refer to the same physical events is demonstrable today with technology that was unavailable at the time Nagel’s paper first came out. *E.g.* we can ask a subject to lie quite still in a functional magnetic resonance imaging scanner (fMRI) and ask him to think of his mother’s face. The radiographer will see a graphic representation of the blood flow in the **occipital face area**, located in the occipital lobe and the **fusiform face area**, amongst others, that are relatively more active than the surrounding regions of the brain during the task. We can be fairly certain that the subject is experiencing a subjective phenomenon rather than reacting in a reflex way to a percept because we specifically asked him to *imagine* seeing his mother’s face. Therefore, we are justified in identifying that subjective mental task with the neuronal activity correlated with a local increase in blood flow in just those face encoding regions of the brain. Both mental and neuro-anatomical terms refer successfully and they converge just in those regions of the brain during the imaginative task. Nagel simply could not have foreseen these and countless other demonstrations of neural correlates of conscious activity. Of course, we have not yet filled in every last detail of the underlying events but we are uncovering more with every improvement in scanning technology on the one hand, and cortical simulations on the other, so as to be wary of Nagle’s scepticism that we lack the theoretical

background or that “we may have evidence for the truth of something we cannot really understand.”

Nagel alludes very briefly to Davidson’s position; however we shall not address those comments here as we have already discussed Davidson’s Anomalous Monism at length in Classic Text 16. Finally, what would normally have been defined or discussed at the beginning of the paper, namely the meaning of the term ‘physical’, Nagel tucks away in his last footnote 15. To say of the physical that it “Obviously [...] does not apply just to what can be described by the concepts of contemporary physics, since we expect further developments,” is a red herring because we will forever expect further developments. At some point we have to affirm, “This is what we believe to be physical,” however provisionally. To say that “whatever else may be said of the physical, it has to be objective,” is a truism however that does not preclude the existence of objective states of matter that also have a subjective quality.

Finally, Nagel’s speculation that “mental-physical relations will eventually be expressed in a theory whose fundamental terms cannot be placed clearly in either category,” has not been borne out by contemporary neurophysiology. With every development we have seen ordinary matter behaving in complex ways. At no stage have we had to invoke novel states of matter or exotic forces in order to explain the underlying physics or biochemistry of neural occurrences. A handful of non-career neurophysiologists have proposed that quantum mechanical phenomena such as quantum entanglement and superposition may play a role in the brain’s maintenance of conscious states, however these ideas remain on the fringe of mainstream research. They have also been criticised on physical grounds because quantum states in the brain would lose coherence on the macroscopic scale and duration of ordinary neural processing. Even then, quantum mechanical phenomena do not represent an alternative physics, instead they underlie and form part of what is today considered ordinary textbook physics. (Wikipedia: Quantum mind)

Task

What is your position regarding physicalism with respect to the mind-body problem? Does Nagel’s (1974) “What is it like to be a bat?” undermine, reinforce it or perhaps shed new light on your position? Motivate your response.

Feedback

We do not know what your position is regarding physicalism with respect to the mind-body problem; however if you have been following our series of classical texts that address the question you would have gathered that we have endorsed a non-reductive physicalist stance that is compatible with token identity theory, functionalism and Davidson’s anomalous monism. Although we recognise that certain types of reductions are possible and theoretically correct such as the reduction of water to H₂O or genes to DNA, individual reductions are of little help in describing such macroscopic dynamic phenomena such as fluid dynamics or conscious recall; therefore Nagel’s charge of reductionism does not affect us.

Physicalism is compatible with the existence of a subjective point of view for an organism, including what it is like to *be* such an organism. Although it is possible in theory for such subjective states to be mere **epiphenomena** that occur alongside or as by-products of certain cognitive functions, we

know that in the case of humans, at least, such subjective states *are* causally efficacious because we can, for example, describe them. However even a creature without language could alter its behaviour in response to some internal representation of some subjective state. Indeed we would be surprised if natural selection had not favoured the representation of subjective states and adaptive reactions to them. This would be akin to the various senses of proprioception, except that instead of representing the position, orientation and forces within the limbs and trunk, such a form of *subjective* proprioception would represent the internal mental state of the organism as a being-for-itself (*pour-soi*). Had Nagel pursued this line of argument we believe he would have thrown more light on the subjective *as* a unique class of mental and hence physical phenomena.

Finally we believe that in Nagel's footnote 15 where he states: "whatever else may be said of the physical, it has to be objective" is ambiguous because according to our understanding of physicalism, certain mental states, which are also physical states, may embody a point of view and may thus be characterised as subjective too.

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