

# The Empiricists // Spring 2016

## Handout 3

### Locke: primary and secondary qualities

E I.viii.12

**THE DISTINCTION.** Once we are allowed the hypothesis that all ideas are drawn from experience, we should observe further that all experience is mediated by senses. Just as I see material things around us interacting between themselves, I should also believe that they interact with my senses. That is, they causally produce sensations and perceptions. The causes of these sensations, then, are the qualities of the bodies. The output that we receive are ideas.

E I.viii.11

E I.viii.7

Some qualities are thought by Locke to be intrinsic to the bodies. These include shape, length, and number. We can say that they are microphysical properties of the bodies. These are *primary* qualities.

On the other hand, there are certain *secondary* qualities that are ‘nothing but’ powers to produce certain sensations in us. These include smell, taste, colour.

E II.viii.10

*Remark 1.* Our discussion of this topic is largely expository. We will have an opportunity for a critical re-examination later in the course when we cover Berkeley.

**A COMPLICATION.** Is taste a quality of the body itself? For some people, this glass of Merlot has a slightly sweet taste, for others it is a bit bitter. So is the wine in this glass itself bitter or sweet? Aristotle may have thought so. We must select a healthy person—an ‘expert’—and whatever taste he has while drinking wine, it will be ascribed to the wine itself. (On the other hand, Aristotle recognises that the verdict of a healthy person will only have authority for his own species: healthy dogs have different tastes from healthy humans.) One might take a different view. The wine is really neither sweet, nor bitter. Really, it is tasteless. Notice how strange this sounds.

NE X.5

This, I take it, is not Locke’s view (but see the Ontology contrast below). He tells us that secondary qualities are powers *in* the bodies. How they produce sensations, however, is explained by the bodies’ possession of primary qualities.

*Remark 2.* This is a subject of the major disagreement among Locke’s readers. We shall see later how Berkeley’s famous argument hinges upon a different interpretation of Locke.

**DIFFERENCES BETWEEN 1-QUALITIES AND 2-QUALITIES.** We can distinguish the following ways in which the two classes of qualities are said to differ.

*Intrinsicness.* Secondary qualities are not in the bodies. They require the presence of an observer. But this flies in the face of what we have just assumed that these qualities are powers *in* the bodies. Consider the porphyry example. Locke seems to argue that a change in light does not produce any real change in the mineral. Porphyry does not *really* change colours: it has no colour in the dark. It only appears coloured to observers under certain conditions (when brought to light). OK, this is complicated. Let us ask this though: does any relational property belong to the body itself? No, we say, because if this body were left alone in the universe, it would not have such property. This is, then, what we say when we say that secondary qualities, as powers in the bodies, are not intrinsic to these bodies.

E II.viii.17

E II.viii.19

On the other hand, primary qualities are in the bodies themselves, always. Locke adduces a most curious remark that refers to the function of artifacts. What does he have in mind? Perhaps that in order to make artifacts work we have to manipulate their real qualities, and these qualities turn up on the list of primary qualities?

E II.viii.23

*Question 3.* Sound is not in the objects themselves. So is there noise when a tree falls in a Siberian forest?

*Explanation.* Primary qualities explain how we receive sensations. If, for instance, I touch a hot piece of iron, then my experience is explained by the secondary quality of the power to produce heat. But this quality is in turn explained by a primary quality of moving particles. Locke’s own example is the sensations of heat and cold produced in two hands put in the same water. Motion of the particles is said to explain these sensations. So primary qualities have explanatory priority over secondary ones.

E II.viii.13

E II.viii.21

*Remark 4.* If this distinction is to stand, we have to supply a model of explanation that we rely on.

*Resemblance.* Ideas of primary qualities are said to resemble them, whereas the ideas of secondary qualities do not. Why cannot we allow the same to hold for secondary qualities? Well, the burden of proof is on the objector. There is *ab initio* a reason to think that our ideas do not resemble qualities in the bodies. Why indeed should they? This is further confirmed by the purported analogy with pain. Very well; but why then should resemblance hold in the case of primary qualities? The answer presumably is that this ensures the accurate representation of the world. Some ideas just have to depict the world as it really is. Ahhh, but how do we know that any such accurate representation exists? The answer presumably refers us back to the successful explanations of physical phenomena and to the certainty of mathematical knowledge. E II.viii.15  
E II.viii.16  
E IV.iv.6

*Remark 5.* The view we are attributing to Locke foreshadows one of the modern arguments for scientific realism.

*Dispositions.* Primary qualities are not dispositions to produce sensations (ideas) in the mind. The proof rests on the assumption that primary qualities remain intact even if we are unable to perceive them. Reason, however, tells us that they are still there. One example is flour. If I grind wheat well, eventually I will no longer see the flour particles. But they are there, since a division of a particle has to produce more particles. Is it, however, true that imperceptible particles have no dispositional powers? They have such powers for a mind equipped with sensory organs or gadgets for perceiving them. Again, suppose a large number of these particles is grouped together. Then we are able to perceive them. But how can we perceive them if none of them, individually, has any powers? E II.viii.9

*Separability.* Secondary qualities are said to be separable from material bodies. Some bodies, we think, are tasteless, some are odourless. Such bodies have no powers to produce taste and odour. Similarly, if our eyes were like microscopes, colours would disappear. Instead we would have perceived a texture of a certain size and shape. Finally, if all observers vanish from the world, there would be no colours, no tastes, no odours. (Compare our earlier example of the Siberian tree.) By this last claim Locke does not mean to suggest that there would be no ideas of colours etc. Such a claim would be trivial. Rather, powers are relations. Once one relatum is no longer, the relation breaks down. E II.viii.5  
E II.xxiii.11  
E II.xxxi.2

On the other hand, no body can fail to have extension or shape. Primary qualities are inseparable from the bodies. E II.viii.9

*Ontology.* Yet another, and a highly controversial, way of drawing the distinction is to deny reality to 2-qualities. Here remember that these qualities are relational. If they are powers to produce sensations in the mind (or changes in other bodies), then they can be represented by a relation between objects and minds. But, on the other hand, we are told that relations are not really real, existing only in the mind. Coupled with this is the assertion discussed above that porphyry has no colour in the dark, which might as well suggest that colours are not real. Not only does porphyry not *change* colour, it does not ‘really’ *have* colour. But this last claim is at best misleading, since the dispositions to produce sensations should remain intact even when no subject of sensation is present. On the whole, I think, there is no happy way to maintain the ontological contrast. E II.xxx.4  
E II.viii.19

*Remark 6.* Some commentators argue that in E II.xxxi.2 Locke denies the ‘real being’ of 2-qualities. As far as I can see, he is only concerned there with denying their intrinsicness.