

Locke's materialism

Locke's version of mechanistic materialism, with his conception of material substances as extramental causes of ideas whose ultimate constitutions are quite possibly unknowable, was an inviting target for many of his sensiblist successors. What role can such substances play in our cognition if they are never present to us in sensation or reflexion, and may ultimately have no resemblance to anything that is? Still, before we consider the objections of Berkeley, Hume, and Kant, or what they proposed to set in place of Locke's materialism, we first need to understand its tenets and the reasoning underpinning them. And the place to begin is with the view any philosophical materialism seeks to supersede: the materialism of the vulgar.

The vulgar – which includes everyone when unreflectively engaged in the affairs of ordinary life, as well as infants and higher animals – never question the independent reality of the objects present to their senses. What they see and touch, as well as the body that sees and touches, are never for a moment considered to exist only as ideas in the mind as pleasure and anger do. Nor do they consider, much less take seriously, the possibility that, like ideas, these objects do not continue to exist when no longer present to the senses. Accordingly, vulgar materialism may be resolved into two constituent beliefs so natural to us that we believe without ever needing to be taught them:

B1) We naturally identify the qualities of bodies that *appear* to our senses with the *real* qualities of the bodies themselves that appear.

B2) We attribute to these real qualities the same existence we attribute to the bodies themselves: an existence *distinct* from (external to and independent of) the existence of our perceptions of them, an existence that *continues* even when no perceptions of them exist.

From these two beliefs, we arrive at the picture of the physical world as something that was much as it appears to humans and other percipient creatures before such creatures existed, that would continue so were all such creatures to go extinct, and that would be this way even if none had ever existed: leaves would still be green, roses red, and the sun

shine; rotting vegetation would still stink, rock falls make a racket, stones be hard, snow cold, boulders heavy, and so on.

The vulgar view faces a problem, however, when, in the case of sensible pleasure and pain, the two natural beliefs come into conflict (ECHU II/viii/§16). For example, the pain and the heat one feels upon touching a hot skillet are indistinguishable in tactual appearance, but only the heat is supposed to have a distinct, continued existence. Similarly, if one stares at the sun, the pain and glare are one and indistinguishable in appearance, yet only the light is supposed to have a distinct, continued existence. Or, again: the ache in, and the hardness of, a molar appear in the tooth; yet, though the sufferer believes the tooth to continue hard even when he is no longer perceiving it, he cannot suppose that it continues to ache when he no longer perceives the pain. Such conflicts between B1 and B2 are invariably resolved at the expense of the former: we do not identify sensible qualities of the bodies that appear to us with the real qualities of the bodies themselves if they cannot be conceived to continue in existence unperceived.

This proceeding raises the question of what criterion the vulgar employ when they distinguish sensible qualities that exist only relatively to the senses from those that exist in the appearing body itself: is this too a matter of appearance – an immediately perceptible sensible quality – or does it depend on the application of some rule or standard to appearances? If the criterion were of the former kind, then, as a matter of immediate appearances, the vulgar could make this distinction even if all memories of past experience *and* the habits of judgment formed on their basis were erased from their minds. This means that in a world where other sensible qualities perfectly mimicked the behavior of pains and pleasures in this world – for example, not only the painful glare but the light too unfailingly vanished the moment one's gaze was averted from the sun, the pan stopped cooking the moment one no longer felt its heat, etc. – the vulgar would still exclude only pains and pleasures from the scope of B1 to the former, while continuing to identify all other sensible qualities besides pain and pleasure with the actual qualities of the bodies. But is that at all plausible? Or, alternatively, suppose that pleasures and pains mimic the behavior of such sensible qualities as colors, as in a scenario sketched by Wittgenstein:

Let us imagine the following: The surfaces of the things around us (stones, plants, etc.) have patches and regions which produce pain in our skin when we touch them. (Perhaps through the chemical composition of these surfaces. But we need not know that.) In this case we should speak of pain-patches on the leaf of a particular plant just as at present we speak of red patches. I am supposing that it is useful to us to notice these patches and their shapes; that we can infer important properties of the objects from them.¹

In such an environment, would the vulgar continue to exclude pains from the scope of B1? And, if not, would the vulgar not extend B2 to pains as well, and suppose them to continue in existence just the colors of surfaces do? Clearly, if the scope of B1 and B2 can vary without the sensible qualities themselves changing in any way, it cannot simply be the immediate appearance of pains and pleasures that makes us exempt them from B1 and B2. Matters external to the appearance, involving experience of the behavior of sensible qualities over time and becoming habituated to their behavior, seem to be essential as well, so that the operative criterion here is conceptual rather than perceptual.

Let us designate the external, conceptual criterion in virtue of which the vulgar override their natural inclination to identify the appearance of corporeal things with their reality (B1) in the case of pleasures and pains “C1”. Satisfying C1 is clearly *necessary* to upholding the truth of B1 in a given case. However, Locke and other early modern philosophers wondered whether it is also *sufficient*. This is a reasonable question to raise if indeed the vulgar segregate pleasures and pains from other sensible qualities on the basis of a conceptual criterion, rather than one internal to the immediately perceived sensible appearances themselves. For might there not be other such criteria, less immediately obvious than C1, failure to satisfy which would oblige us to treat additional sensible qualities the way the vulgar treat pleasures and pains? Or, alternatively, need the failure to satisfy C1 itself always be so obvious as it is in the case of pleasure and pains? We do not have to know what C1 actually is in order to raise these questions. It suffices to acknowledge that the vulgar, in the normal course of events, are not so assiduous in their pursuit of conceptual criteria, or such sticklers in the application of those they already have, for us to treat their verdict as sufficient to decide the question whether the

¹ *Philosophical Investigations*, §312, tr. by G.E.M. Anscombe, 2nd edition (Oxford: Blackwell Publishers, 1958).

notion of an unfelt heat, or an unseen light, may be just as repugnant and unintelligible as that of an unfelt pain.

Like most early modern thinkers, Locke believed that there indeed are less obvious, but no less sound, conceptual criteria in addition to C1 (or, alternatively, additional satisfaction conditions of C1), and that these suffice to show that other sensible qualities exist in the same mind-dependent way pleasures and pains do. Hume captured the contrast between vulgar and learned views nicely:

There are three different kinds of impressions convey'd by the senses. The first are those of the figure, bulk, motion and solidity of bodies. The second those of colours, tastes, smells, sounds, heat and cold. The third are the pains and pleasures, that arise from the application of objects to our bodies, as by the cutting of our flesh with steel, and such like. Both philosophers and the vulgar suppose the first of these to have a distinct continu'd existence. The vulgar only regard the second as on the same footing. Both philosophers and the vulgar, again, esteem the third to be merely perceptions; and consequently interrupted and dependent beings. (THN 192/128)

What mainly distinguishes the learned view from the vulgar in this, as in any other domain (be it watch repair or digging a mineshaft), is the methodical approach adopted to the question, beginning with the conceptual clarification of the matter at issue: the *existence* of corporeal substance.² For insofar as the vulgar conception of it may be incomplete or confused, the move from B1 to B2 becomes questionable. In particular, a new criterion (or new satisfaction condition of C1) could emerge from the analysis of the conception of the existence of body *common to vulgar and learned alike* that is sufficient to prove that sensible qualities the vulgar deem to satisfy C1 (thereby coming within the scope of B1) cannot even so much as be *conceived* to have a continued, distinct existence

² In what follows, one should keep in mind the distinction Locke drew between body and matter: “*Matter* and *Body* stand for two different Conceptions, whereof the one is incomplete and but a part of the other. For *Body* stands for a solid extended figured Substance, whereof *Matter* is but a partial and more confused Conception, it seeming to me to be used for the Substance and Solidity of Body, without taking in its Extension and Figure. And therefore it is that speaking of *Matter*, we speak of it always as one, because in truth, it expressly contains nothing but the *Idea* of a solid Substance, which is every where the same, every where uniform” (III/x/§15). Presumably, matter is not a vulgar

(and so do not, in fact, come within the scope of B2). Clearly, then, the first order of business for the learned was to delineate a clear and distinct concept (a precise definition) of the *existence* of corporeal substance that would permit them to determine which sensible qualities can and which cannot be conceived to partake of that existence.

Notwithstanding a great deal of variation in detail, the notion of existence the learned applied to body is simply an instance of the general notion of existence proper to substances. To conceive a substance as existent is to conceive of it as causally efficacious with respect to some species of action (thought, motion, etc.): it exists if it can act or be acted upon, react or be reacted to. Conversely, whatever is thought to possess neither active nor passive powers to act is *ipso facto* conceived not to exist. Since the only action relevant to the concept of the existence of corporeal substances shared by the vulgar and the learned is motion (“Of Thinking, Body affords us no *Idea* at all,” ECHU II/xxi/§4), it follows that the only ideas humans are capable of forming of their efficacy – and so of their existence – are those that relate exclusively to their motion, and so to “*impulse*, the only way which we can conceive Bodies operate in” (viii/§11).³ The following conceptual criterion, C2, restricting the scope of B2, thence emerges: an idea counts as an idea of the existence proper to corporeal substances *in themselves* – that is, that in virtue of which they can be conceived to have an existence completely independent of the powers of our minds – only if, and only so far as, it enables us to conceive their efficacy with respect to motion. Every other sensible quality that we may vulgarly suppose to relate to them must therefore, by default, be such that, in truth, our minds lack the ability to conceive it as existing in corporeal substances independently of

idea: animals are unlikely to have it, young children, and adults unexposed to learned ways of thinking.

³ If Locke shied away from designating bare or absolute space a substance (ECHU II/xiii/§§17-19), it was surely in part because space, as something that cannot move, be moved, or act or change in any other way, does not meet the condition requisite for ascribing *substantial* existence to it. For, on Locke’s conception of substance, the only idea we have of substance concerns what it does, not what it is (xiii/§19). Since space is unchangeable, and cannot be conceived to do anything or have anything done to it (action, power, efficacy), we lack the requisite ideational ingredient to conceive its existence as being that of a substance, or indeed as bound up with that of substances (modifications, accidents, of substances). Having no other notion of objective existence whereby to conceive it, Locke opted to leave the ontological nature of space unspecified.

their relation to our senses (that is, to the innate constitution of the passive capacities of the human mind).

It was the adoption of C2 that led Locke and other early moderns to relegate color, light, heat, smell, flavor, and other sensible qualities to the same mind-dependent status as pleasure and pain. If, for example, you were to splatter a ripe tomato against a wall, the application of C2 will permit you to attribute a continued, distinct existence (B2) solely to those sensible qualities that can be used to conceive the efficacies concerned in this event. Insofar as the bright red color of the tomato cannot be conceived to contribute in any way to the tomato's passive and active powers to be hurled and to splatter, or for its splatter to adhere to the wall, fall to the ground, vaporize, or otherwise move or be moved from one place to another, its bright red cannot even so much as be *conceived* to pertain to the existence of the tomato itself, considered as a body with a distinct, continued existence with respect to the senses and their constitution. Similar considerations apply to (i) the sound you hear when the tomato splatters, (ii) the smell emitted from it, (iii) its tepidness, wetness, and softness to the touch, as well as (iv) its flavor. By contrast, C2 is satisfied by such sensible qualities as place, size, figure, motion and rest (which are modes of space and duration considered together), impenetrability (solidity), unity, number, and existence.⁴ Since this is just to say that these are the only sensible qualities that tomatoes, chunks of beeswax, and every other corporeal substance can be conceived to possess independently of their relation to the senses, C2 implies that, like pleasure and pain, color and light, odors, flavors, and certain tangible qualities exist, and can exist, only in relation to the mind (even if our vulgar psychology leaves us incapable of relinquishing our natural belief to the contrary).

Locke's distinction between *primary* and *secondary qualities* should be seen as an epistemological corollary to C2. To see why, note first that "quality", in this usage, is just another name for the *power* of a body to affect the human mind with a specific idea

⁴ Unity, number, and existence were classified by Locke as ideas that "are suggested to the mind *by all the ways of Sensation and Reflection*" (ECHU II/iii/§1; also vii). As such they are ideas of the senses, and so too sensible qualities (in the sense of II/i/§3).

of sensation.⁵ Ideas of secondary qualities are merely “*imputed Qualities*” that “are not Resemblances of something really existing in the Bodies, we denominate from them” (ECHU II/viii/§22). Instead, they exist, and can exist, only *incorporeally*, in relation to the sensing mind, never otherwise:

Take away the Sensation of them; let not the Eyes see Light, or Colours, nor the Ears hear Sounds; let the Palate not Taste, nor the Nose Smell, and all Colours, Tastes, Odors, and Sounds, as they are such particular *Ideas*, vanish and cease, and are reduced to their Causes, *i.e.* Bulk, Figure, and motion of Parts. (viii/§17)

Although these features are all vulgarly imputed to bodies, they play, and can play, no role in the affection of our bodily sense organs. Of course, this does not by itself suffice to warrant Locke’s claim that they are merely ideas of secondary qualities, existing only in relation to a mind, since the possibility remains that they might still pertain to corporeal substances independently of their powers to affect our sense organs. So, does it not imply a degree familiarity with the real constitution of bodies inconsistent with Locke’s insistence on our ignorance in these matters? How then did Locke justify his claim that the properties represented in our ideas of secondary qualities “vanish and cease, and are reduced to their Causes,” whenever our sensation of them is interrupted?

I see no way to answer these questions except on the assumption that Locke devised the distinction between ideas of primary and secondary qualities as an epistemological corollary to the conceptual criterion C2, according to which the mind-independent existence of a corporeal substance is conceivable only in terms of its efficacy with respect to motion. According to this criterion, it is not simply the powers that fit corporeal substances to directly or indirectly affect our senses that must be conceived in terms of motive action, but all their powers without exception. Only powers to move, be moved, and exert efficacy on the motion of something else, together with the constitution to confer them on a substance, can enter into our conception of something as a corporeal existent. Solidity and extension are of course also essential to our conception of a

⁵ This one-to-one correspondence between the perceptible qualities present to our minds in sensation and the powers of the imperceptible substances that cause them may have been what led Locke to extend the term ‘sensible quality’ from simple ideas of sensation, as at ECHU II/i/§3, to the corresponding causative powers at xxi/§3.

substance as *corporeal*, but they alone do not suffice for us to conceive of it as corporeally *existent*. This requires, in addition, an idea of the action distinctive to substances *qua* corporeal; and there can be little doubt that, for Locke, a thing that lacks the power to move, be moved, or exert influence on the motion of anything else cannot be conceived as corporeally existent, no matter how extended and solid we may suppose it to be (of course, a solidity that conferred no power on a substance to resist the encroachments of other things into its space would be unworthy of the name).⁶ Since there is good reason to believe that Locke, together with most seventeenth-century mechanistic materialists, was committed to C2, it is reasonable to assume that he would have tacitly relied on it when, of all the ideas of sensation corporeal substances may cause in the minds of creatures (regardless of however few or many external senses they possess), he insisted that only those capable of entering into the conception of the causation of motion can be accounted *ideas of primary qualities*, that is, ideas that resemble features to which corporeal existence may be attributed in the B2 sense (whether, in any given case, the attribution is true or false is here irrelevant; all that matters is that such an attribution, true or false, be *conceivable*). It then makes no difference whether a feature imputed to the real constitution of bodies happens to be incapable of impinging on the senses of the human body. So far as its corporeality is concerned, all that matters is whether its idea is capable of entering into the conception of corporeal efficacy. If not, then it is an incorporeal entity, not even *capable* of existing

⁶ Locke considered impenetrability to be “more a consequence of *Solidity*, than *Solidity it self*” (ECHU II/iv/§1), and so may have supposed that even without this consequence solidity might still exist. Moreover, since he classified solidity as a simple idea of tactual sensation, there would have been nothing in the idea itself to prevent him from conceding that it might coincide in sensation with a failure to resist penetration, for the idea of impenetrability is clearly implicitly a complex idea of relation (cf. Hume’s criticism of Locke’s position: THN 230-1/152). Of course, Locke might have thought of the power of solid things to resist penetration as he did of powers generally, which he classified initially as simple ideas (vii/§8), but later acknowledged to include a complex idea of relation (xxi/§3 and xxiii/§7), and so qualified their status as simple ideas in much the same way he did divisible space/extension. If so, then solidity for Locke is a simple idea of tactual sensation in one respect, but a complex idea of a relation in another (the power to resist encroachment), with the former coming to the fore when the origin of the idea is uppermost in mind, and the latter when its content is subject to stricter criteria of analysis.

otherwise than as an idea in a mind so constituted as to possess the requisite sensory capacity (such *incorporeal existents* must not be confused with *corporeal inexistents* like Hercules, griffins, and the possible progeny of animals belonging to species that happen to have gone extinct). And, for this reason, colors, warmth and cold, sounds, smells, and flavors, notwithstanding their undoubted importance to our understanding of the material world (each “Answering that Power which is in any Body to produce it,” ECHU IV/iv/§4), are incapable of being attributed to corporeal substances objectively, that is, independently of their relation to a mind with a certain sensory constitution.

Locke included among the secondary qualities of bodies the changes in color, smell, and so forth, that one body has the power to bring about in another (the effect of fire on the sensible qualities of wax and clay: ECHU II/viii/§10). This indirect affection extends to the “insensible particles” (corpuscles) that Locke, in agreement with the best science of his day, postulated to operate on, and within, the sensory systems of the human body (viii/§13). For although each is individually imperceptible, masses of them operating together on the masses of similar particles that compose our organs of sense are sufficient to bring about sensations in the mind. Can this supposition be extended to include the bosons and other subatomic particles that cloud-chamber experiments have revealed in our own day, and so on for experimentally unconfirmed particles and particles as yet undreamt-of by scientists, indefinitely into the future? No doubt this was precisely Locke’s intention. He was not wedded to any particular hypothesis regarding the constitution of imperceptible material substances (IV/iii/§16). For his purposes, it suffices to assemble an experiment that, in the context of a theory, could not issue in the sensible outcome it does (registered on a visible monitor, a measuring device, or something of that kind) were it not for the existence of something imperceptible that, although too minute or otherwise incapable of affecting our senses directly, can be adequately conceived by means of the ideas of primary qualities derived from things that are capable of affecting our senses directly.