

THE CAUSAL PRINCIPLE IN LOCKE'S VIEW OF ORDINARY HUMAN KNOWLEDGE

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Abstract

My aim in the present paper is to show how Locke's use of the principle of causation both justifies and sets limits to our everyday knowledge of the outside world. But all that the principle guarantees is that there be *something* which is causing an idea which is present to my mind. I show how Locke can use it to base an account of empirical knowledge which is compatible with his agnosticism about the mechanisms by which the 'corpuscular' external world produces these ideas.

It can hardly fail to escape a reader of Book IV of Locke's *Essay Concerning Human Understanding* that there is a tension between the almost cavalier dismissal of scepticism about the external world in passages like IV. ii. 14 and IV. xi. 8, and the agnosticism about natural philosophy which permeates much of the Book. (See e.g. IV. iii. 22–30 or IV. xii. 12, 13.) Closer reflection reveals a distinction between two *quite different kinds of knowledge*. The distinction was noted in Mandelbaum 1964, p. 13. Mandelbaum points out that throughout the *Essay*, 'Locke is primarily concerned with our ordinary everyday knowledge, and not with the problems of scientific inference'. Although Locke may think that there are severe limits to what natural philosophy can reveal (knowledge of 'things, scientific', as he puts it at IV. iii. 26), yet he also believes that that is no reason to cast doubt on the knowledge claims all of us make in our daily lives.¹ Some of Locke's scepticism about natural

¹ Mandelbaum 1964 (see pp. 38f.) links 'ordinary knowledge' with what Locke says about substance, so that as science advances talk about substance gives way to better accounts. Atherton 1984, on the other hand, wants to link substance with the true scientific account of the world, and thus explain Locke's scepticism about it. In this paper I try to avoid as far as possible any discussion of substance. I cannot avoid it altogether but I want my principal claim to be independent of the notion of substance in Locke. A rather different tension is the tension between the knowledge Locke seems in II. viii to believe we have of primary qualities, and the ignorance of them he alludes to in Book IV. Downing 1998, p. 385 has recently argued that Locke's attachment to corpuscularian mechanism is as an *illustration* of how the world works, in the sense that *if* it is true then one can see what the primary qualities of an object are, and to a certain extent (with the reservations she notes on pp. 406f.) how they conspire to produce in our minds the ideas that they do. Downing's

philosophy might seem no more than a report on its current state. We can't see corpuscles because we lack 'microscopical eyes' (II. xxiii. 12). Yet much in Book IV appears to claim that all but a small amount of natural philosophy is *in principle* unavailable to human understanding, and in this paper I shall take Locke's claim in this way. My aim is to show that if we make a distinction between the two kinds of knowledge and then attribute to Locke the principle of causation as an a priori principle, we can see how this single principle can justify the one kind of knowledge, despite our almost complete lack of the other kind.

The causal principle that I have in mind is just that if an idea is produced in our minds then it must have a cause. In some cases the cause is internal, as when our thinking of something brings to mind another idea. But in other cases there is no internal cause, and therefore there must be an external cause. Locke's treatment of the causal power of items in the external world in II. xxi, has been described as 'brief and lacking in depth'.² In fact almost the only place in which Locke mentions the causal principle *explicitly* seems to be in Chapters x and xi of Book IV. At IV. x. 3 he describes the causal principle as known 'by an intuitive certainty' (see also x. 8)³, and at xi. 4 he takes it as 'too evident to be doubted' that our perceptions are 'produced in us by exterior causes affecting our senses'. In IV. xi. 5 Locke argues that the *irresistibleness* of the production of ideas in sensation is evidence of 'a cause without'. I am inclined to think that his lack of any attempt to justify the principle is because it never occurred to him to doubt it. If he had, it

thesis gives an attractive explanation of the tension between Book IV and Book II. But of course solving that problem does not explain why it is so obvious to Locke that we possess the *ordinary* knowledge that we do.

² Coventry, 2003, p. 96, citing many commentators who have noticed this.

³ In discussing Locke's proof of the existence of God, Jolley 1999, p. 96 comments that, 'For Locke, the causal principle is as intuitively certain as it was for Descartes' and that 'Locke's proof relies on the supposedly a priori principle that something cannot come from nothing'. Khamara 2000 on pp. 340f. accuses Hume of thinking that Locke is trying to *prove* the principle rather than assuming it. Citing the correspondence with Stillingfleet (*Works*, iv. 61f.) Khamara (p. 342) claims that Locke held the principle 'as an ultimate *a priori* "principle of reason" in the form that everything that has a *beginning* must have a cause'. This is the formulation of §140 of draft B of the *Essay* (Nidditch and Rogers 1990, p. 258) though it does not appear to be reproduced in the *Essay* itself in this form. The Draft B formulation is followed by a 'proof' of the principle which, *pace* Khamara, looks suspiciously like the proof that Hume is attacking in the *Treatise*.

might well have disturbed him to be told that he was assuming this principle as *a priori*.⁴ Nevertheless, what I *will* try to show is that this single concession answers at least some of the standard objections to one way of taking Locke's epistemology. The simple-minded view of Locke's theory of knowledge is what is sometimes called the 'veil of perception' view. Locke is well known for holding that all that we can *directly* know are our own ideas—the contents of our own minds—and the 'veil of perception' view is usually held to mean that in so far as we know external things we know them in virtue of the fact that they cause the ideas we directly know. The 'veil of perception' view of knowledge has often received a bad press⁵, and it will not be my aim to establish that Locke held such a view. My claim is that *even if he does*, the assumption of the causal principle lessens the force of much of the argument against it.

⁴ After all, the principle is just like those that Locke argues cannot be innate.

⁵ One reason for the unpopularity of the view is that it is thought to lead to scepticism, since there seems to be no way of establishing that your ideas really do give an accurate picture of the world. (See Woozley 1964, pp. 26f.) But many have noted (e.g. Bermúdez 1992, pp. 31f.) that any view which admits that things may not be as they seem is open to sceptical objections. The argument that Locke cannot be entitled to the causal principle because all we can directly know are the contents of our own minds, may not be quite as strong as it might look. Suppose you accept what I believe is called an *externalist* account of knowledge. This says that two people may be in exactly the same internal state but one have and the other lack knowledge, because of an external difference. This is one way of disabling the sceptical argument which says that if you are supposed to know something, then it is always possible that you be in exactly the same internal state but that you do not know it because it isn't true. Since you would not know it then and you are now in the same internal state, you do not know it now. The externalist response would justify Locke in the sense that even though all we can directly know is our own internal state, that state is knowledge of the external world *if* it has an external cause but not otherwise. The other objection to the 'veil of perception' view is that if all we directly know are our own ideas then we could never even come to have the idea of an external cause in the first place. To this Locke has an answer of a sort. In speaking of the sources of our ideas he mentions both sensation and reflection (II. i. 4). Locke's description of the sources of our idea of power in II. xxi. 1–4, and of cause in II. xxvi. 1,2 may well appear to presuppose that we already have access to the external world, but it is nevertheless open to him to say that reflection on what we do with our ideas produces the idea of power, and that idea is sufficient to bring with it the idea of an external source of power. This may indeed reinforce the suspicion that Locke is able to use ideas of reflection where others would see the need for innate ideas—although to be fair such an idea is produced by experience, and so does not literally count as 'innate', even if it is doing the same work as a rationalist might hold is done by an innate principle. A slightly different account might be given of the origin of the idea of cause, by analogy with the account of the genesis of the idea of substratum in terms of 'supposition' as argued for in Szabó 2000.

On the ‘veil of perception’ account, Locke’s picture would be the one referred to in II. xi. 17. Imagine that we are shut up in a box and ideas are handed to us.⁶ All we can know about the world is that it is apt for handing us these ideas. Why does Locke think we can only know the contents of our own minds? Well, he takes it as obvious that we know things like the nature of whiteness (IV. i. 4) and that we know how things *appear* to us. But he also knows, given the ‘new’ scientific world view which finds its highest expression in the work of Newton, that that is *not* how things are in the external world. The external world (presumably) consists of corpuscles moving around in space. So, in describing the world as it appears to be, all we can be doing is describing its effects on the contents of our own minds. And this makes it easy to see how pessimism about natural philosophy might arise. If all we can directly know is the contents of our own mind then any scientific discovery is just more of the same. What we discover is more and more of the pattern according to which ideas come into our minds. What we can’t know is how the outside world produces knowledge—especially how it is that the primary qualities conspire to produce the ideas we have of secondary qualities. (See IV. iii. 12, vi.14.) ‘Real’ knowledge of how things are would require that we get out of the box. God and perhaps the angels are outside the box, and God *could* let us out, and

⁶ Mackie 1976, p. 44, imagines the box attached in front of the person’s eyes. Mackie comments ‘apart from the cumbrousness of the apparatus, this person would be no worse off than we are’. Many defenders of Locke take the ‘person in the box’ account to be so defective that it should not be attributed to Locke. Thus Woozley, 1964, p. 33, says ‘Locke’s new way of ideas does not have to be interpreted according to the model of a man shut up inescapably in his own private picture gallery’. This led Woozley to claim that Locke thought we *could* know external objects directly. There is a way of taking the ‘veil of perception’ model which makes it look incoherent. That is to regard it as giving an *analysis* of what it is to perceive something. On this way of taking it ‘*x* perceives *y*’ is supposed to *mean* that there is an idea *z* such that *x* perceives *z* and *z* is (in some appropriate way) caused by *y*. As an analysis this is patently circular, but Locke would presumably think it a silly question to ask for an *analysis* of what it is to know the nature of an idea. A better way of understanding Locke’s view is to imagine a person literally shut up in a box and being shown only pictures of what is outside. One might say of such a person that all they can *directly* perceive are pictures, but that they may *in a sense* be held to perceive external objects—in the sense that they can be said to perceive (indirectly) those objects of which the pictures are pictures. This would allow there to be other beings who *could* perceive things directly. The beings in the box would therefore lack knowledge which other beings might have. According to Atherton 1984, p. 416, ‘Locke’s position is that while a knowledge of the nature of substance is in principle possible, it is unattainable by us’. If we were like the angels maybe we could know more (III. vi. 3).

perhaps occasionally, by revelation, gives us this kind of knowledge. But all that natural philosophy provides us with is more ideas.⁷

This may explain Locke's claims about what we *cannot* know about the external world, but it does not yet explain what we *can* know. In Chapter ii of Book IV Locke sets out three different ways in which we may acquire knowledge. We may acquire it by intuition (IV. ii. 1), by demonstration (IV. ii. 3), and by sensation (IV. ii. 14). Intuition enables us to discern the nature of an idea and to tell when two ideas are the same or different. Demonstration enables us to work out, using a chain of connections between ideas, other connections, mostly of what Locke calls *agreement* or *disagreement* between ideas; and sensation enables us to gain knowledge of the world outside us. Locke appears to feel that *moral* knowledge may be had by demonstration (see e.g. III. xi. 15–17, or IV. iii. 18) and I will have no more to say about it. In terms of what exists we have intuitive knowledge of our own existence (IV. ix. 3), demonstrative knowledge of God's existence (IV. x. 1), and knowledge by sensation or memory of the things we are currently perceiving (IV. xi. 1), or have once perceived (IV. xi. 11). Locke acknowledges that sensitive knowledge has less claim to the title 'knowledge' than the other kinds, but accords it authority nonetheless.

Much of Book IV is concerned with expressing scepticism about our ability to know the details of the corpuscular philosophy.⁸ But

⁷ This view of things is in fact very like Berkeley's, in that according to Berkeley all that natural philosophy could discover was the pattern according to which God produced ideas in our minds. The difference between Locke and Berkeley here of course is that Berkeley thought that *genuine* causation of ideas was something that could only be done by spirits. In fact, Berkeley's criticism of Locke is that Locke himself admits that he has no notion of how ideas are produced in us. In terms of ordinary vs. scientific knowledge, Atherton 1984, p. 417, says that it is 'the things that the corpuscular scientist says that represent the lesser knowledge, which must stand in for the greater knowledge of substance achievable only by spirits whose faculties are not limited as ours are'. When Woolhouse 1994, p. 164, suggests that Locke thought that natural philosophy is not a science I would prefer to say that Locke thinks that the discoveries of natural philosophy are only discoveries of the *effects* of science rather than of science itself—since God has put science itself beyond our grasp. Downing's view that corpuscular mechanism is an illustration only, would also fit this picture well.

⁸ On the connection between Locke's views on the corpuscular philosophy and the scholastic theory of the transmission of forms, see McCann 1994, Heyd 1994, and Hall 1995. Duncan 1985 locates Locke at a transitional stage in the development of the mechan-

although Locke may feel entitled to such scepticism the purpose of the *Essay* is to account for, and justify, the kind of knowledge that we have and need in, as he puts it in IV. xi. 10, ‘the ordinary affairs of life’. In the introduction to the *Essay* Locke makes his purpose clear:

Men have reason to be well satisfied with what God hath thought fit for them, since he has given them (as St. *Peter* says,) πάντα πρὸς ζῶην καὶ εὐσέβειαν, Whatsoever is necessary for the conveniences of life, and information of virtue; and has put within the reach of their discovery the comfortable provision for this life and the way that leads to a better. How short soever their knowledge may come of an universal, or perfect comprehension of whatsoever is, it yet secures their great concernments, that they have light enough to lead them to the knowledge of their maker, and the sight of their own duties. Men may find matter sufficient to busy their heads, and employ their hands with variety, delight, and satisfaction; if they will not boldly quarrel with their own constitution, and throw away the blessings their hands are fill’d with, because they are not big enough to grasp every thing. (I. i. 5)⁹

One of the difficulties at this point is the temptation for philosophers to restrict ‘knowledge’ to cases of demonstrative certainty, and Locke is no exception. But he realizes that ‘knowledge’ comes in degrees. Thus at IV. xi. 3 he says:

The notice we have by our senses, of the existing of things without us, though it be not altogether so certain, as our intuitive knowledge, or the deductions of our reason, employ’d about the clear abstract ideas of our own minds; yet it is an assurance that deserves the name of knowledge.

ical philosophy, whereby he is assuming the old Aristotelian (scholastic) idea of causation as the transmission of forms. (Jolley 1999, p. 97, refers to a felicitous phrase from Cottingham 1986, ‘the “heirloom” model of causality’.) Although Locke may have given the scholastic theory up for secondary qualities, Duncan argues that he retains it for primary qualities. On this version of the mechanical view primary qualities would correspond to forms connected with shape and motion, and it would be these that could be transmitted. If so it would mean that these would be precisely the kinds of forms needed to establish knowledge of spatio-temporal continuity. Bolton 1998 sees mechanism in its strict form as involving only physical powers, and argues that Locke had to give up this strict form and admit powers whose operation is mysterious to us to account for the causation of our ideas. Danaher 1992, pp. 96f. points out that we must learn to interpret our ideas if they are to give us knowledge. Danaher links Locke’s rejection of scholasticism with his belief that we could not in principle come to know what the world is really like.

⁹ Quotations follow the Clarendon (Nidditch) edition of the *Essay* except for capitalization and italicization.

... this knowledge extends as far as the present testimony of the senses, employ'd about particular objects, that do affect them, and no farther. (IV. xi. 9)

Beyond that, for instance,

And therefore though it be highly probable, that millions of men do now exist, yet whilst I am alone writing this, I have not that certainty of it, which we strictly call knowledge; though the great likelihood of it puts me past doubt, and it be reasonable for me to do several things upon the confidence, that there are men (and men also of my acquaintance, with whom I have to do) now in the world: but this is but probability, not knowledge. (ibid.)

Nevertheless, Locke has always been scathing about those who despise probability:

If we will disbelieve every thing, because we cannot certainly know all things; we shall do much-wisely as he, who would not use his legs, but sit still and perish, because he had no wings to fly. (I. i. 5)

My claim is that, with the aid of the principle of causation, Locke's scepticism of natural philosophy—i.e. his scepticism about the *mechanisms* by which the world works and by which ideas are produced in the mind—is compatible with all the knowledge¹⁰ we need as human beings living human lives. Such a claim requires argument. For all that the causal principle guarantees is that there be *something* which is causing an idea which is present to my mind. It does not seem to tell me anything about the nature of the thing which is in fact causing that idea. To see how sensitive knowledge is generated look at Chapter viii of Book II. At §8 Locke distinguishes between *qualities* and ideas¹¹ in the following way:

¹⁰ Current philosophical practice would protest against the restriction of 'knowledge' to cases of demonstrative certainty; and, where Locke might prefer to speak of 'opinion' or 'probability', would speak of 'knowledge'. This is certainly in the spirit of the *Essay*. Woolhouse 1994, p. 155, relates Locke's 'knowledge' to what is now called 'a priori' or 'conceptual' knowledge, and Locke's use of 'belief' to 'a posteriori' knowledge.

¹¹ I have argued in Cresswell 2002 that Locke's views should be read as supposing that we can already individuate ideas—that is why intuitive knowledge is the most basic and the most certain—and that external objects are to be individuated according to the ideas they produce in us. It is worth pointing out that Locke's notion of an *idea* is not trouble-free. Take the idea of whiteness. Is it a white idea or is it an idea of a *white thing*? Does it make sense to speak of an idea as having any sort of colour? The view I adopt here and have argued for in Cresswell 2002, is that ideas are individuals (whether substances or

... the power to produce any idea in our mind, I call *quality* of the subject wherein that power is. Thus a snow-ball having the power to produce in us the ideas of *white*, *cold*, and *round*, the powers to produce those ideas in us, as they are in the snow-ball, I call *qualities*; and as they are sensations, or perceptions, in our understandings, I call them ideas: which ideas, if I speak of sometimes, as in the things themselves, I would be understood to mean those qualities in the objects which produce them in us.

Locke is warning us that when he speaks, for instance, of whiteness he sometimes means the idea of white in our minds, and sometimes the power in the object to produce that idea in us.¹²

Suppose that an idea of white is being produced in me and I am therefore prompted to say,

(1) There is something white here.

By my (intuitive) knowledge of the nature of the idea of white I know that an idea of white is being produced in me. I also know

modifications of substances) in particular minds. Isn't Locke's mistake here the mistake of sense-datum theorists? The mistake is to suppose that when we seem to see something white there really has to be something white that we see, and if there is no external white thing that we see then there must be an internal white thing that we see. And if that internal white thing is necessary when there is *no* external white thing then surely it is equally necessary that it is there when there *is* an external white thing. But that route is dangerous. I once used the example of the red tomato (Cresswell 1980). If seeming to see something red requires something red that we actually see, then surely seeming to see a tomato requires that we see something which actually *is* a tomato. If you don't say that the idea *is* white, can you say that an idea, by its essential nature, is an idea *of* white, without presupposing white things? Hall 1995 says (p. 16) 'Actual sensations are very difficult, if not impossible to describe'. Hall's view, both expressed in this article on p. 22, and in his earlier 1987, is that ideas are universals. In this paper I accept that Lockian ideas may be incoherent. Indeed I think they almost certainly are, and some of the problems that lie behind Locke's apparent equivocation between the sense in which an idea is white and the sense in which an external thing is white may derive from his too easy acceptance of the coherence of his notion of idea. But, as I noted in Cresswell 2002, p. 33, I believe that its incoherence is very difficult to make clear to those who have not been brought up with the subtleties of analytical philosophy. Jacovides 1999 (p. 478) bites the bullet, and claims that for Locke the idea of (say) the statue of liberty would literally be higher than it is wide. In saying that Lockian ideas are 'incoherent' I do not mean that Locke is guilty of muddled thinking, but only that what he, to my mind, clearly does believe may not be coherent. As Jolley 199, p. 41, in a slightly different context, puts it: 'Locke may be over-optimistic about the resources of his programme, but he is not guilty of any sort of muddle'. An elaboration of my own view of Locke's account of content may be found on p. 32 of Cresswell 2002.

¹² It is interesting to note the development of this caveat. In Draft A it is tacked on at the end of §45 as a kind of reminder to make himself clear to the reader, as if he had found himself talking carelessly. For more on this see the discussion in Bennett 1996 and Lennon 1998, referred to in footnote 3 on p. 22 of Cresswell 2002.

that it is not being produced by an internal cause. (If it *is* being produced by an internal cause then I know that although I may be thinking about or imagining something I am not *perceiving* anything.) Suppose that the idea of white is a simple idea. Locke says that simple ideas are all *adequate* (II. xxxi. 2), and what he seems to mean is that for an external object to be white is no more than for it to have the power to produce an idea of whiteness. (See e.g. IV. iv. 4 and IV. xi. 2) The causal principle then comes into play to assure me that something external is producing my idea of white. But if an object's being white is *by definition* its having the power to produce the idea of white then I know not only that something is producing the idea but that something *white* is producing the idea, for when I speak of an external thing's being white I am referring to the *quality* of white, which is the power to produce the idea of white.¹³ This does seem to commit Locke to holding that something can never *seem* to be white without actually being white, and in the case of simple ideas Locke seems prepared to accept that there may be no distinction between being white and seeming to be white. He also appears to accept it in the case of at least some complex ideas. Consider

(2) A murder is occurring here.

'Murder' is an example of what Locke calls a 'mixed mode' (II. xii. 5) and it seems natural to say that (2) will be true if there is something in the world which produces the complex of ideas to which we give the name 'murder'. If so (2) would be exactly analogous to (1).

However, unlike simple ideas, complex ideas can be also produced by the operation of *composition* by which a number of simple ideas received in sensation or produced by reflection can be put together in ways which can represent things as they never were. This was a favourite operation for the empiricists. Hume (*Treatise*, Bk. I, Part I, §1) speaks of the New Jerusalem whose streets are paved with gold, as an example of an idea he can put together although it

¹³ The problem in this is noted on p. 166 of Ayers 1991. Part of the solution may lie in recognizing that the perception of many secondary qualities depends on the condition of the perceiver, as, e.g. does the perception of hot and cold discussed in II. viii. 21. Is a white cat still white in the dark? Aren't we inclined to give a 'yes and no' answer, and if so maybe Locke's theory simply mirrors this uncertainty, since if we say that the white cat is still white in the dark we mean that it has the power to produce an idea of white *if* there were light, while if we say it is black in the dark we mean that it does *not* have the power to produce the idea of white *because there is no light*.

is not caused by any impression. At II. xii. 1, 2 Locke appears to speak as though *all* complex ideas are made by composition (see Losonsky 1989). Locke says that mixed modes are ‘voluntary collections of simple ideas’ (II. xxxi. 3); and ‘cannot but be adequate ideas’. He seems to have in mind that since they are caused by composition there is nothing for them to represent beyond themselves, and so in a trivial sense they are adequate. In II. xxxii. 12 he speaks of them as ‘being made by men alone’, and therefore being true. Yet, at II. xxii. 9 Locke is explicit that we may get complex ideas of mixed modes ‘by experience and observation of things themselves’ (‘by seeing two men wrestle’). One way of reconciling, at least partially, these two ways of producing complex ideas is suggested by some remarks on pp. 44–9 of Jolley 1999. If we follow Schouls 1980 (and also, I think, Jolley 1999, pp. 47f.) in assuming that externally produced ideas do not enter the mind as complexes, but enter as unitary phenomena, perhaps as images, which need to be decomposed, it would follow that *all* complex ideas would be produced by composition, and for that reason all would be adequate.¹⁴ I call this a partial solution because not all complex ideas are like (2). Take

(3) There is a snowball here.

¹⁴ Hall 1987 has views similar to Schouls, but is more cautious. Hall argues (p. 16) that Locke ‘ought’ to have held that simple ideas are made by the mind by abstracting from what enters in perception. But Hall does not claim that the complex ideas delivered in perception are made by composition. de Waal 1997 believes that Locke’s view of the adequacy of mixed modes lets in too much as real, but that does not seem to me to be so. If you take complex ideas as being distinguished by their genesis, it is only those which are constructed by composition whose reality is trivial, and that is as it should be if the link with reality is made by the causal principle. de Waal believes that Locke’s view assimilates mathematics to fairy tales, but the matter need not be quite so bad as that. The truths of mathematics are conditional truths, such as that *if* something is a triangle then its internal angles sum to two right angles. Such truths do not make claims about what exists. Similarly, it is a truth about centaurs, as certain as any in mathematics, that they are composed of an upper human body and a lower equine body. Such a truth may appear trivial, but there are less trivial ones. It is a consequence of spatial geometry that, depending on where the human torso is joined to the equine neck, the proportions of head size to foot size can vary. This does not tell us where they *are* joined, and so is a conditional truth about centaurs, but there seems to me no need to drive the wedge that de Waal thinks should be driven between mathematics and fairy tales. Mathematics gets its certainty from the fact that it is about relations among ideas, and so does not need the kind of connection with the external world that substance claims do. So one might say that there is a sense in which mathematics *is* about fairy tales.

In III .vi .2 Locke distinguishes between the *real essence* and the *nominal essence* of a thing in the external world. The idea of a snowball is a complex idea, consisting of, say, the ideas of white, round, cold, ... etc., together perhaps with the idea of something which *has* all these qualities.¹⁵ The quality of being a snowball, i.e. the nominal essence of a snowball, would be whatever it is in the world which has the power to produce this combination of ideas, and, if so, the truth of (3) would be guaranteed by the causal principle in the same way as the truth of (1) and (2). But even everyday knowledge demands more than that. Consider the following claim:

(4) That is the snowball I touched yesterday.

If you doubt the practical importance of statements like (4) think of what would happen if we could not know whether the car before us today is the car *I* bought yesterday, or the car *you* bought yesterday. What would it be to claim that I know that (4) is true? For (4) to be known to be true we have to be able to re-identify the *same* snowball as the one touched yesterday, and it would be inadequate simply to claim that something produced this nominal essence in me today and something produced the same nominal essence in me yesterday. Otherwise it would just be a case of

(5) Snowball here now. Snowball there then.

in which no claim is made about its being the same snowball.¹⁶ (4) makes the additional claim that it is the same snowball on both occasions. Locke spends some time in II. xxvii. 3 discussing identity conditions for what he calls *substances*. He appears to take it that

¹⁵ Even in the case of a simple idea like white one might, following Ayers 1991, p. 160, distinguish between 'white' and 'a white thing'. Note that in defining a nominal essence Locke is guilty (as elsewhere) of a confusion between qualities and the ideas they produce. I have assumed in the text that a nominal essence is a quality not an idea. That seems to be what he ought to say, though at III. vi. 2 he speaks of the nominal essence of gold as 'that complex idea which the word *gold* stands for' and at III. iii. 15, where the phrase 'nominal essence' is introduced we are told that 'things are ranked under names into sorts or *species*, only as they agree to certain abstract *ideas*, to which we have annexed those names, the *essence* of each *genus*, or sort, comes to be nothing but that abstract *idea*, which the general, or *sortal* (if I may have leave so to call it from *sort*, as I do *general* from *genus*.) name stands for'.

¹⁶ There is of course a sense in which we can be wrong about (5) even if we have the same nominal essence at both times. For the second sentence of (5) requires that we remember an earlier occasion on which the idea of snowball was produced. Locke acknowledges that remembered ideas can provide knowledge (IV. xi. 11) and the memory of an idea is a phenomenon which occurs within our own minds, and so does not involve any extra principles connecting our ideas with the external world.

the continued existence of atoms, and therefore of physical bodies, is just a matter of spatio-temporal continuity. If so our knowledge of such a continuity would presumably depend on our having reason to believe that an idea I had yesterday and an idea I have today are linked in such a way as to make plausible that they are caused by a spatial body which has the relevant continuity over time. This means that the claim involved in (4) entails that the power involved in the nominal essence of that particular snowball must be associated with some features of the external world which ensure some sort of continuity between what produced this complex of ideas in me today and what produced it yesterday when I touched the snowball.

In II. xxiii. 3 and III. vi. 9 and elsewhere, Locke speaks of the unknown *constitution* of an object, from which flows its power to produce an idea in us; so that, in attributing the causal principle to him, we must also attribute to Locke the view that causation can only work on the assumption that things have real properties which provide the mechanisms by which the cause operates, even though we may never be able to know just what those mechanisms are. Here's how Locke's thinking might permit the kind of knowledge exhibited in (4). At II. viii. 11 he tells us that the only way bodies can operate is by *impulse*. If so causation is a mark of spatio-temporal continuity. But causation assumes 'that the like changes will for the future be made, in the same things, by like agents' (II. xxi. 1).¹⁷ Therefore, if we want evidence for the re-identification of substances we would need to look to the fact that ideas are produced in a law-like way.¹⁸ This brings us to real essences. The real essence of a snowball would be the combination of those 'real' properties from which flows the power to produce that complex idea which is the nominal essence of 'snowball'. (See e.g. III. vi. 6, 9, 19.) The

¹⁷ Owen 1993 is of course correct in saying on p. 55, 'But nowhere does Locke address the question of how constant experience or constant observation of a sort of thing's behaviour in the past can give rise to the idea that a current instance of that sort of thing conforms to that past experience. That was left to Hume'. What I am arguing here is that, like all thinkers before Hume, Locke considered the causal principle too obvious to be questioned.

¹⁸ This is not to claim that Locke shows an explicit interest in the discussion of 'laws of nature'. Nor is it to take sides on the question of what his attitude to them might be. Woolhouse 1971 (see for instance pp. 22–34) spends time on the question of Locke's view of our knowledge of physical laws, where such knowledge is thought of as the knowledge of *necessary* truths, yet, for example, Milton 2001, p. 221, claims that 'amid thousands of pages of notes on the most diverse topics, there is nothing whatever on the laws of motion or the mechanics of impact'.

assumption of a real essence would ensure that the power which produces *this* complex idea flows from a combination of properties which will continue to produce this complex idea, perhaps with other ideas always attached to it, and perhaps not always with all of *these* simple ideas.¹⁹ Of course we could easily be wrong about facts like (4) since there may be *no* combination of properties which hang together in a sufficiently tight way as to constitute a real essence responsible for the two occasions on which the same complex is produced. Nevertheless the fact that this complex recurs frequently in our experience gives us reason to believe that the properties which conspire to produce it are correlated with a continuing entity. It gives us reason to suppose that there is in the world a combination of (unknown) properties, which attach to a collection of particles in such a way that this collection tends to occur together and to persist together through time so as to produce in us the same nominal essence on repeated occasions. This unknown collection of properties constitutes a real essence, and is responsible for the fact that in (4) we can speak of the snowball as a continuing substance. If there is no such collection this complex of ideas may be said to be false.²⁰

¹⁹ Ferguson 1997, p. 35 describes a nominal essence as *complete* when it contains all and only the simple ideas which flow from the real essence. She argues that it is because Locke believed that no substance idea is complete that he claimed that no substance idea is adequate. Ferguson suggests (on pp. 39f.) that simple ideas are exempt from the completeness requirement since that only applies to complexes that we can choose to put together, and that in the case of simple ideas we have no choice about how to combine them. It is of course true that the *only* way we can come to have a simple idea is by sensation or reflection, and that may have been why Locke thought they were adequate. Yet what he says about the adequacy of simple ideas does not seem to me to distinguish clearly between the situation envisaged in (1) and that envisaged in (3).

²⁰ Locke's belief in real essences has been linked with views on natural kinds, and I have not been concerned with the difference between 'This is the *same piece* of gold' and 'This *too* is gold'. (In this respect there may be more to (5) than to (3).) An important article on the question of Locke on natural kinds is Bolton 1976, and this set the tone for more recent work than is convenient to allude to here. Bolton's view is that when Locke speaks of substance terms he has it in mind that the nominal essence picks out things which *actually* satisfy it, and then the internal constitution of these things determines a set of properties which may mark that class out differently from the way that the nominal essence would. This is in many ways like saying that Locke anticipates the semantical views of Kripke and Putnam in the matter of reference to natural kinds. Laporte 1996 refers to literature which makes just this claim. Laporte's own view is that Locke associates real essences with particulars and nominal essences with kinds. In commenting on III. vi. 19, Laporte (p. 52) says that Locke 'commits himself to the position that things conforming to a given

Although I have used (4) to highlight a *difference* between it and (1), (2), (3), and (5), it is important to realize that there are ways of taking these latter which make them more like (4). Even in (1), if we take Ayers's distinction (see footnote 15) between white and a white *thing* we might say that (1) is a *seeing* white if what is causing the idea is a substance which will continue to cause that idea, and only a seeming to see otherwise. In Chapters xxii and xxiii of Book II Locke examines mixed modes and substance ideas respectively. His examples of mixed modes are in fact events or actions such as murder, stabbing, or procession, while his examples of substances are such things as gold or horses. When he comes to talk of substances in chapter xxiii he speaks at times as if what he has in mind is the substance and accident doctrine, since if a murder occurs there has to be a person who is the murderer. By contrast, in defining a horse one is not defining a characteristic which attaches to a substance characterized in some other way—one is describing the underlying substance itself.²¹ For Aristotle there is no such thing

nominal essence of gold can lack the real essence of *the last guinea*, and/or vice versa'. In the present paper I do not discuss the semantical question of whether the meaning of a general term is the nominal essence or the real essence of the substance in question. I have tried in the text to concentrate on the question of the re-identification of particulars, and thus have a connection with everyday knowledge independent of the *semantic* question of natural kind terms. Although the authors mentioned here do not as a rule consider the question of re-identification, common to all of them is the recognition that, whatever Locke may hold the *semantics* of natural kind terms to be, he certainly thinks that things have an inner constitution which is responsible for both the real and the nominal essence. There is a debate, in the case of substance ideas, between Mattern 1986 and Bolton 1988 on the question of whether, as Mattern believes, completeness is what a nominal essence should *aim at*, or whether, as Bolton believes, the real essence is what a substance term means. Owen 1991 holds that the inner constitution is *individual* and does not by itself determine a sort. Ayers 1981 describes Locke as holding that perceptible things are 'a vast plurality of machines', and goes on to say (p. 255): 'How we should rank them on the basis of our observational knowledge is a matter to be more or less pragmatically determined'. He goes on to say (p. 256) that all there is in the world are 'objective resemblances' not 'natural boundaries'. Shapiro 1999, p. 552, attempts a middle way whereby 'the sorts characterized by these properties are neither exhaustively determined by our abstract ideas, nor constituted by nature independently of the human understanding'.

²¹ This distinction seems to be like the one Woolhouse 1971, pp. 61f., following suggestions by Geach and Bennett, describes as the distinction between *substantival concepts* and *adjectival concepts*. Woolhouse suggests that that distinction is one of two that Locke is using. The second, and more important, distinction in Woolhouse's view is that a substance idea is a complex idea which picks out a real essence, so that they are 'a distinct subtype of substantival concept', (op cit., p. 120.) Locke is clearly unhappy with the distinction between a characteristic of a substance and the substance itself, especially as he

as a 'white'. There are white horses, white snowballs and white polar bears. The words 'horse', 'snowball', and 'bear' would all be substance terms, while 'white' would be an accident term, more specifically a quality term; and it is the mark of such terms, for Aristotle, that an accident attaches to a substance. As a consequence the individuation conditions, and so the re-identification conditions, of a white something, depend on what kind of a thing it is, not on the fact that it is white. Typically a white thing can cease being white without ceasing to exist. Similarly, although it certainly makes sense to suppose that you and I may witness the same murder, a murder is arguably not a substance, and it is not at all clear that we can sensibly claim to know anything like the following:

(6) I saw today the same murder that you saw yesterday.

Events of course can take time, and one can say that the war which began two years ago has only just finished, but we do not say that the whole event is occurring at each moment during the interval at which the event occurs. We say that the event as a whole takes place at that interval and that parts of the event—as it may be the battles which make up the war—take place during the sub-intervals. A substance, on the other hand, exists as a whole at every moment during the entire course of its existence, and that is why the question of how to re-identify a substance is an important one, and one which can be used to distinguish substance ideas from modes.²² And

does not believe that we think of the world in terms of the essential properties of substances (III. vi. 4). We think of the world using nominal essences, and thereby we lose one of the key ways in which Aristotle was able to distinguish between picking out a substance—by its essential features—and picking out an accident—in terms of the accidental features of a substance. This presumably explains the ambivalence of his attitude to substance in places like I. iv. 18, and in II. xxiii. 3. In the latter passage he says that the idea of a particular substance appears to include 'the confused idea of something they [the other qualities] belong to'. A good survey of some of the difficulties is found on pp. 70–8 of Jolley 1999. My focus in this paper of course is not on Locke's views of substance as such, but only on how much of the notion we require to explain ordinary human knowledge; and that is why, unlike Locke—though see IV. xi. 9—I have been concentrating on the issue of how we are able, on the basis of the ideas we have, to re-identify the things we come across in daily life. At the level of practical knowledge, the question of the reality of substance is reflected in the question of the re-identification of sensible particulars.

²² In II. xxii. 8 he speaks of modes as 'fleeting and transient combinations of simple ideas'. It is therefore significant that Locke points out at III. iii. 18 that, in the case of modes, nominal and real essences are the same. Since there are no centaurs it cannot be claimed that there is any real essence which is responsible for the production of the complex idea of their nominal essence, and so the question of adequacy cannot arise. In II.

it is principally because of the need to re-identify particulars that our knowledge of the external world may be probable but is not infallible.

To conclude; despite Locke's belief that we may never be able to have knowledge of the mechanisms by which the external world works, his epistemology, even on the 'veil of perception' view, need not lead to scepticism about the knowledge we have as ordinary men and women living our lives in the everyday world of practical affairs and social interaction. Such knowledge as we do have needs to depend on one principle, and on one principle only, and that is just the causal principle that every event, whether external or internal, has a cause.²³

xxxii. 3 he says that the idea of a centaur has no 'falsehood in it, when it appears in our minds' until it occurs as part of a judgement. It is of course worth noting that *this* difference between modes and substances, in terms of their causal ancestry, is orthogonal to the distinction between substance and accident discussed above. On a causal account the idea of a centaur could not be a substance idea in the way that the idea of a horse is.

²³ Of the many people I have tried this paper out on, and who deserve my thanks, I would like to mention in particular the anonymous referee for *Locke Studies*, whose principal reservation seemed to be that what is correct in the paper is too obvious to need saying. I take this to be the highest compliment that can be paid to a philosopher.

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