

# Substratum

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From: *History of Philosophy Quarterly* 4 (1987), pp. 197–215.

## 1: Introduction

Locke has a theory about the idea of substance considered as a ‘substratum’ or ‘support’ of qualities.<sup>1</sup> It is a strange theory, according to which one part of our conceptual apparatus is both important and disreputable. Nothing else in the writings of any philosopher matches the doubleness of attitude of the passages about substratum in Locke’s *Essay*. This duplicity has been noted by students of Locke, but not explained. I once suggested that Locke believed the hostile side of the theory and intended the favorable side sarcastically, but now I can do better.

My new answer—like my old wrong one—presupposes what I shall call the ‘Leibnizian interpretation’ of the substratum texts. This view about what the substratum theory is, though accepted by most Locke students from Leibniz onwards, has lately been attacked. I shall defend it against the most vigorous of those attacks, the one by M. R. Ayers.

## 2. Locke’s substratum theory

Locke thinks that in our experience of the world, the raw materials of what we experience are properties: we become

aware of being in the presence of an orange by becoming aware of orangeness, sphericalness, and so on. When this happens, we think we are in the presence of something that has the properties, and this thought of ‘the thing that is orange, spherical etc.’ is what introduces the idea of substance in general.

The mind being . . . furnished with a great number of simple ideas, conveyed in by the senses as they are found in exterior things or by reflection on its own operations, takes notice also that a certain number of these simple ideas go constantly together; which being presumed to belong to one thing. . . are called so united in one subject by one name; which by inadvertency we are apt afterward to talk of and consider as one simple idea, which indeed is a complication of many ideas together; Because, as I have said, not imagining how these simple ideas can subsist by themselves, we accustom ourselves to suppose some *substratum* wherein they do subsist and from which they do result, which therefore we call *substance*. (295:4)

<sup>1</sup> The main texts are: *Essay Concerning Human Understanding* I.iv.18 (p. 95); II.xiii.17–20 (pp. 174f), xxiii.1–6, 15, 37 (pp. 295–9, 305, 316f); II.vi.21 (pp. 449f); IV vi.7 (p. 582). I shall give most of my references to the *Essay* through page and line number of the edition by Peter H. Nidditch (The Clarendon Press: Oxford, 1975), on the assumption that it will be owned by anyone with a serious interest in Locke.

Here, as often, Locke speaks of how substratum relates to 'simple *ideas*', but his topic is how it relates to qualities or properties. There is controversy about why Locke writes about qualities in the language of ideas, but not about the fact that he does. Here, for instance:

Our complex ideas of substances, besides all these simple ideas they are made up of, have always the confused idea of *something* to which they belong, and in which they subsist: and therefore when we speak of any sort of substance we say it is a *thing* having such or such qualities, as body is a *thing* that is extended, figured, and capable of motion. . . These and the like fashions of speaking intimate that the substance is supposed always something besides the extension, figure, solidity, motion, thinking, or other observable ideas, though we know not what it is. (297:4)

That is another of the substratum texts. Quite generally, when Locke writes about 'substance in general' and 'substratum', his topic is the instantiation of qualities; he is theorising about the notion of a thing which. . .

José Benardete has remarked to me that if Locke wanted his notion of substratum to help with property instantiation as such, then he ought to have applied it not only to his chosen sorts of examples but also to *The number three is odd*, *The problem of squaring the circle is difficult*, *My idea of man is abstract* and so on; or else to have explained why it doesn't apply to these predications. He might have treated some of them reductively, e.g. claiming that 'The problem of squaring the circle is difficult' really means 'Some people would like to square the circle and nobody can easily do it', but he would not have been comfortable with a reductive

program for predications on *ideas*. So there is something here that he should have faced: granted that minds are enduring while ideas are evanescent, why don't we need a conceptual theory about attributing properties to evanescent particulars? As those remarks indicate, I take Benardete's observation as pointing to a gap in Locke's thought, not as showing that the Leibnizian interpretation of it is wrong.

### 3. What is wrong with the substratum theory?

Many philosophers have said that this notion of pure substance in general, or 'Lockean substratum' as it is often called, is impossible or intolerable. They are right, but why? We can only smile at the idea that unless something lies under the qualities and props them up they will. . . what? Fall flat? Scatter? Disintegrate? But if that were the whole source of the trouble, we could quietly walk away from it as a mere muddled metaphor in which substratum is like a shelf. Setting aside the metaphor, we are left with the notion of a thing that has various properties, e.g. a thing that is orange and spherical and sweet and middlingly heavy. What could be more innocent than this? Where's the problem?

The answer concerns conceptual emptiness: it is thought that because a substratum has to be the bearer of all the qualities it must therefore be, in itself, bare or unqualified in some problematic way. Elizabeth Anscombe understands this in a way that makes it 'so idiotic as to be almost incredible',<sup>1</sup> but here, as so often, her victims are not such fools as she likes to think.<sup>2</sup> The substratum idea does involve a trouble that could be put in terms of the upholder of properties not itself having properties, yet it is not idiotic or absurd.

<sup>1</sup> G. E. M. Anscombe, 'Substance', in her *Metaphysics and the Philosophy of Mind* (University of Minnesota Press, 1981), pp. 37–43, at p. 38.

<sup>2</sup> For a temperate treatment of the mistake that Anscombe derides as 'idiotic', see W. P. Alston, 'Particulars—Bare and Qualified', *Philosophy and Phenomenological Research* 15 (1954), pp. 253–8, at p. 257.

When someone thinks about the thing that is orange and spherical and F and G and H. . . and so on through all the qualities of the orange, and rightly takes that thought to involve the notion of a thing, a concrete particular, a substance, he may reasonably wonder ‘What kind of item is that?’ If he gives the answer ‘The kind *substance*’ or ‘The kind *property-haver*’ he is safe. But he may not be satisfied: there is a temptation to want to know what an item must be like in order to qualify as a haver of properties, what monadic state or condition of it equips it for the property-bearing role. That desire could not be satisfied, however. It presupposes that something might fail the test because it was of such a kind, or in such a state, that it could not bear properties; but a thing’s kind or state is determined—how else?—by what properties it bears.

Alston has criticised the Lockean notion of substratum from a standpoint that is closely related to mine.<sup>1</sup> He argues that the notion of an instantiation relation that has substances and properties as relata is a source of troubles, of which the following is one. If we can think of an instantiating relation between a substance and one of its properties, we must be able to direct our thought at the substance—it must be available as an ‘it’ to which we can mentally refer—independently of its having this relation to any property. To have such a thought of the putative bearer of properties, of the bottom relatum (so to speak) of the relation, we must direct our thought onto a particular without help from any properties that we believe it to have; and that seems to be impossible. Here, as in my own criticism, the substratum theorist is accused of requiring content in something that has been deprived of all content.

<sup>1</sup> Personal communication, and *op. cit.*.

#### 4. Locke’s attitude to the substratum doctrine

These criticisms are of a sort that would appeal to Locke himself. Though less doctrinaire about it than Hume, he was apt to be harsh with any general term that he saw as empty, not cashable in terms of actual or possible experience, etc. Should we then reject the Leibnizian account of what Locke means by ‘substratum?’ M. R. Ayers thinks so:

It is improbable to the point of impossibility that Locke, who is an anti-Aristotelian corpuscularian of the school of Boyle, should himself, using the very term *substratum*, advance a view so analogous to what Berkeley described as ‘that antiquated and so much ridiculed notion of *materia prima* to be met with in Aristotle and his followers’. . . Whatever Locke’s *substratum* is, if he wrote *compos mentis*, it cannot be an entity that is undifferentiated, or ‘other than’ its properties. . . (pp. 78f)

Locke’s substratum notion, according to the Leibnizian interpretation, is indeed like that of *materia prima*, and the latter is treated by scorn not only by Berkeley but by Locke himself (see 499:4). But Locke is also critical of whatever it is that he associates with ‘substratum’: as well as saying that we have and need the notion of substratum, he is scathing about its deficiencies, implying that it is confused and perhaps even non-existent:

The ideas of substances are such combinations of simple ideas as are taken to represent distinct particular things subsisting by themselves; in which the supposed or confused idea of substance, such as it is, is always the first and chief. (165:24)

That is typical of Locke’s double-faced treatments of this matter, and one wonders what he is up to. Here is my answer.

Locke's theory of meaning is permeated by his view that each meaningful general word *W* is linked to an idea-type, which serves as a pattern or criterion to help us to sort particulars into those to which *W* applies and those to which it doesn't. (In deploying this doctrine, we can take 'idea' in either of Locke's ways. One way, the idea-type is a kind of mental state or occurrence, my having which is evidence that I am perceiving a thing to which *W* applies; the other way, it is a property or quality, a thing's having which is proof that *W* applies to it.) But, for the sorts of reasons I have been presenting and of which Locke was aware, the word 'substance'—meaning 'pure substance in general'—cannot possibly have a meaning of that kind, or of either of those kinds; and Locke cannot see what other kind of meaning it could have.

So we have a semantic theorist in an *impasse*. On the one hand, we talk about things that have various qualities; we make sense of such expressions as 'the thing or substance that has all the qualities of the orange', and this seems to be an indispensable part of our conceptual stock-in-trade. On the other hand, Locke cannot see how the supposed idea of 'thing which. . .' or 'substance in general' could be made respectable, and he realized that he can't validate it along the lines he offers for most general terms.

Locke behaves like someone in a jam. Failing to find any account of how there could be a Lockean idea of substance in general, he had to conclude that we really have no idea corresponding to this way of talking; but then he backed off from that, seeing what an important way of talking it is. His ways of backing off vary. Early in the *Essay* he says that men don't have an idea of substance but it would be useful if they did because they generally talk 'as if they had it' (95:23). But later he straddles the fence, speaking of 'the supposed or confused idea of substance, such as it is' as always the 'first

and chief conceptual ingredient in our thoughts of particular things (165:26). And there are other formulations: Locke writes that 'of substance we have no idea of what it is but only a confused obscure one of what it does' (175:13), refers to our 'obscure and relative idea of substance in general' (296:20), says that 'we have no positive idea' of substance (305:28), remarks that 'Our idea of substance. . . is but a supposed I know not what, to support those ideas we call accidents' (305:31), and so on.

It is a strange performance, but an understandable one: Locke was caught between the fact that we do and perhaps must have the concept of a 'thing which. . .' and the inhospitable treatment of this concept by his theory of meaning. Where Ayers cannot believe that Locke would flout 'the familiar party line' (Ayers' phrase), I see him as more thoughtful and more honest than that. He finds the notion of an upholder of qualities embarrassing, but he grapples with it, the party line notwithstanding. It's no wonder that the substratum texts are two-faced: in them we see a genius in a bind.

### **5. How Locke could have escaped from the *impasse***

Locke needed a theory of meaning that gave him more elbow-room, allowing him to understand the concept of generalized 'thing which. . .' not in terms of a defining 'idea' but rather as an operator on other concepts. Then instead of condemning it because it doesn't signify a corresponding idea-type, he could welcome it as a sign that ideas are being mentally operated on in a certain manner—which is the account he *does* give of the meanings of 'particles' such as 'if' and 'but' (III.vii).

Applied to the notion of substance in general, that approach would yield something like this:

When I say ‘This is an orange’ I mean that there are here instances of certain properties such as orangeness, sphericalness etc., and I indicate that I am operating on my ideas of those instances in a certain combining manner.

This, though not great, is less obviously doomed from the outset than what we get from the heartland of Locke’s semantic theory, namely the view that if we are fully entitled to speak of ‘the thing that has all the properties of the orange’ we must associate some idea-type with the word ‘thing’.

Objection: ‘Locke would never accept that account of the concept of *thing* or *substance*, because it implies that although it is an objective fact that I am in the presence of an instance of Fness it is up to me whether I am in the presence of a thing that is F. Locke would never tolerate making statements about what substances there are subjective.’ Indeed he wouldn’t, but my suggested account of substance doesn’t imply that. According to it, how my mind operates on its ideas determines what proposition a given sentence expresses, but has nothing to do with whether the proposition is true.

Anyway, it did not occur to Locke to handle ‘thing’ or ‘substance in general’ as he handles particles; so he went on butting his head against the fact that there could not be a Lockean idea of a ‘thing which. . .’.

Leibniz saw what the trouble was. Commenting on this theme of Locke’s, he says that ‘we conceive several predicates in a single subject, and that is all there is to these metaphorical words “support” and “substratum”,’ and also:

If you distinguish two things in a substance—the attributes or predicates, and their common subject—it is no wonder that you cannot conceive anything special in this subject. That is inevitable, because you have already set aside all the attributes through which details could be conceived. Thus, to require of this ‘pure subject in general’ anything beyond what is needed for the conception of ‘the same thing’—e.g. it is the same thing which understands and wills, which imagines and reasons—is to demand the impossible; and it also contravenes the assumption that was made in performing the abstraction and separating the subject from all its qualities or accidents.<sup>1</sup>

This is good, but Locke need not take it lying down. Leibniz rightly connects the concept of substance with that of identity; Locke holds that a viable concept of identity must be associated with ways of telling whether the F thing is the G thing; and he would say that the empty concept of pure substance in general cannot support any concept of identity that meets that minimal demand. That rejoinder would lead into a problem area where, in my opinion, neither Locke nor Leibniz would be comfortable; it is an area that still troubles us today.

## 6. A rival interpretation

Locke has an important theory which says that the properties we observe things to have supervene on an invisibly fine microstructure, a ‘real internal constitution’, and that the ‘real essences’ of things or kinds of things involves such internal constitutions and are therefore in practice unknowable by us.<sup>2</sup> It has been maintained, by Ayers and others, that this

<sup>1</sup> G. W. Leibniz, *New Essays on Human Understanding*, ed. and trans. by P. Remnant and J. Bennett (Cambridge University Press, 1981), at pp. 217f. The phrase ‘in a substance’ is *dans la Substance*, which could be ‘in substance’.

<sup>2</sup> The main texts are *Essay* II.viii 9–26 (pp. 134–143), xxiii 11–13 (pp. 301–304), xxxi.6 (p. 378), III.iii.17 (pp. 417f), vi.2–3, 6, 19 (pp. 439f, 442, 449), and IV.iii.11–13, 25–26 (pp. 544f, 555–557).

theory is what Locke is expressing when he writes about 'substratum' etc. In brief: Lockean substratum is inner constitution or real essence.

If that is right, Locke has not paraded the fact. The passages where the 'substratum' terminology is dominant have little overlap with the ones in which 'primary quality' and 'real essence' and 'internal constitution' predominate, and Locke does not even hint that these textually segregated clusters of terminology are explorations of the very same issues. Of the five sections of the *Essay* that contain both terminologies, three set them side by side in a manner that puts us under no pressure to think they are about the same issue, while in each of the others the two terminologies are made to collaborate as separate parts of a complex line of thought, thus positively signaling that they are different.<sup>1</sup>

There are, it is true, certain parallels or isomorphisms between things Locke says on one topic and things he says on the other, and this has led some of his successors—though probably not Locke himself—to run the two together in their minds. Berkeley radically failed to distinguish Locke's views about substratum from his views about primary-quality real essences; others have introduced the two doctrines as distinct but then proceeded to confuse them with one another.<sup>2</sup>

More recently, however, some students of Locke have maintained that there was nothing to conflate: that when Locke uses the language of 'substratum' etc. he really is,

always, only, talking about primary-quality internal constitutions and real essences. Locke's topic when he speaks of 'substratum' is not even approximately what the rest of us, from Leibniz on downwards, have thought it to be. The most vigorous proponent of this new position is M. R. Ayers, whose defence of it I shall now discuss.<sup>3</sup>

## 7. The doubleness of attitude

One enormous objection to the new interpretation is that it takes Locke's 'substratum' notion to be something that he is comfortable with. Unlike the Leibnizian interpretation, which attributes to him something that is not properly tenable by him, it cannot explain Locke's strained, awkward, two-faced way of writing about 'substratum' or 'substance in general'. It is time to look in more detail at the facts about that.

(1) With one exception that is right out of line with the rest,<sup>4</sup> the notion of substratum is presented as implicit in our ordinary ways of thinking and talking:

- There is another idea which would be of general use for mankind to have, as it is of general talk as if they had it; and that is the idea of substance (95:22)
- [In] ideas of substances [the idea of substratum] is always the first and chief (165:24)
- . . . not imagining how these ideas can subsist by themselves, we accustom ourselves to suppose some substratum. . . (295:13)
- These and the like fashions of speaking intimate

<sup>1</sup> The three: II.xxiii.3, 37 and III.vi.21. The other two: II.xxiii.2 and xxxi.13.

<sup>2</sup> For details, see my *Locke, Berkeley, Hume: Central Themes* (Oxford University Press, 1971), ch. 4; the evidence regarding whether Locke himself made the conflation is discussed in section 25 ('The conflation's sources in Locke').

<sup>3</sup> M. R. Ayers, 'The Ideas of Power and Substance in Locke's Philosophy', revised edition of a 1975 paper in I. C. Tipton (ed.), *Locke on Human Understanding* (Oxford University Press, 1977), pp. 77–104. Unadorned page-numbers in my text will be references to this.

<sup>4</sup> 'They who first ran into the notion of accidents, as a sort of real beings that needed something to inhere in, were forced to find out the word *substance* to support them' (175:1). This is no help to Ayers either, for Locke could not have written those words as a comment on philosophers who believe that substances have real internal constitutions.

that the substance is supposed always *something* besides. . . (etc.) (297:11)

- All our ideas of the several sorts of substances are nothing but collections of simple ideas, with a supposition of something to which they belong and in which they subsist (316:26)
- . . . collections of such qualities as have been observed to co-exist in an unknown substratum (582:14)

(2) Yet the notion of substratum is also presented as highly criticisable:

- we. . . signify nothing by the word *substance* but only an uncertain supposition of we know not what. . . which we take to be the substratum (95:29)
- . . . the supposed or confused idea of substance, such as it is (165:26)
- . . . the promiscuous use of so doubtful a term. . . in ordinary use it has scarce one clear distinct signification (174:30)
- . . . of substance we have no idea of what it is, but only a confused obscure one of what it does (175:13)
- Our idea of [substratum] substance is equally obscure, or none at all (305:31)
- the confused [idea] of substance, or of an unknown support (450:14)

But if Locke means ‘substratum’ to refer to the real essences of kinds of substance, it gives him no reason to say that the (1) ‘first and chief’ ingredient in a common thought is a (2) ‘supposed or confused’ idea.

(1) He does not take the notion of real essence or internal constitution to be implied in our untutored ways of thinking. Quite to the contrary: when he argues that such real

essences could not be our bases for classifying substances, Locke implies that we should leave thoughts about internal constitutions out of our everyday thinking about the world, since they can do no work for us. That is in striking contrast to the notion of ‘substratum’ which, Locke says, is implied in the very notion of a *thing that is F*.<sup>1</sup>

(2) The worst that Locke finds to say about the idea of real essence or internal constitution is that it is useless because we don’t know what the constitution is of any (kind of things or stuff. Except in one isolated, extraordinary sentence (465:30), he never criticises the idea of internal constitution as ‘supposed or confused’, ‘obscure’, ‘unclear’, or the like.

In brief, if the substratum texts concern real essences, neither side of Locke’s dilemma exists; so he is not in a bind; so how do we explain the extraordinary contrast presented by the two sets of quoted fragments?

## 8. ‘Besides. . .’

The ‘substratum’ and ‘real essence’ terminologies are sharply separated in the pages of the *Essay*. That supports the Leibnizian reading. The only two passages where both are combined support it further. Here is one:

If we. . . had in our complex idea an exact collection of all the secondary qualities or powers of any substance, we should not yet thereby have an idea of the essence of that thing. For since the powers or qualities that are observable by us are not the real essence of that substance, but depend on it and flow from it, any collection whatsoever of these qualities cannot be the real essence of that thing. Whereby it is plain that our ideas of substances are not adequate; are not

<sup>1</sup> Ayers says both that Lockean substratum is the ‘underlying structure’ that explains the observable properties (p. 85) and that ‘Locke believes that the idea of substance is one that we. . . cannot in reason avoid’ (p. 87). This implies that Locke thought that we cannot in reason avoid the idea of underlying structure, and I can find no textual evidence for this.

what the mind intends them to be. Besides, a man has no idea of substance in general, nor knows what substance is in itself. (383:25)

On the face of it, this says that we lack knowledge or thoughts both of the real essence and of the substance, which implies that there are two concepts here, not one. Ayers argues for a different reading:

The word 'besides' is appropriate, not because knowledge of substance would be additional to knowledge of real essence, but because the former is, in a sense, a lesser knowledge, comprised within the latter, as knowledge that something is a plane figure is comprised within knowledge that it is a triangle. The whole sentence therefore means, 'What is more, human beings do not even know the general nature of substance, as it is in itself'. (p. 94)

I cannot tune my ear to the proposed use of 'besides'. Ayers would have us say things like this: 'She doesn't realize that the city block she lives on is square. Besides, she doesn't realize that it is rectangular.' This is not proper English.

### 9. The two-step passage

The other passage is even more telling. In it the notion of primary quality real essences serves as a stepping stone to the notion of substratum, implying that the two are distinct: after we have put behind us the thought of secondary qualities as rooted in primary ones, we then face the thought of qualities as having bearers. Locke writes:

If anyone will examine himself concerning his notion of pure substance in general, he will find he has no other idea of it at all, but only a supposition of he knows not what support of such qualities, which are capable of producing simple ideas in us. . . If anyone should be asked what is the subject wherein colour

or weight inheres, he would have nothing to say, but the solid extended parts. And if he were demanded what is it that that solidity and extension inhere in, he would [have to say it was] something, he knew not what. . . The idea then we have to which we give the general name substance, being nothing but unknown support of those qualities we find existing, which we imagine cannot exist. . . without something to support them, we call that support *substantia*, which according to the true import of the word is in plain English *standing under* or *upholding*. (295:17)

Ayers sees the problem, and offers to solve it:

The answer to this difficulty [is] that the 'solidity and extension' here are *observable* solidity and extension. On this interpretation the 'solid extended parts' are the parts we can perceive, not the 'minute parts'. For the discussion explicitly concerns the unknown support of that which is known by observation, i.e. of 'such qualities which are capable of producing simple ideas in us; which qualities are commonly called accidents'. (p. 89)

Ayers and I agree that the passage goes in two stages. I think it goes from a thought about how secondary qualities are rooted in primary ones, to a thought about the primary ones as having a bearer. Ayers holds that it goes from a thought about secondary qualities as rooted in the primary qualities of big parts to a thought about the latter as rooted in the primary qualities of tiny parts, i.e. in those real essences that Ayers thinks are Locke's topic when he writes of 'substance in general'.

In defence of his reading, Ayers implies that Locke assigned double references to the terms 'solidity' and 'extension,' taking them to denote either observable qualities or unobservable qualities. This supposed double use of quality

words is supposed to help explain a phrase in Locke's next section, namely '... the extension, figure, solidity, motion, thinking, or other observable ideas'. Here, of course, 'ideas' are qualities; all the ones listed are indeed observable, in the sense that some things can be observed to have them; but Locke does not explicitly say, or even weakly imply, that the qualities he is discussing are possessed only by observable things and that invisibly small things have other qualities that go by the same names. If that were Locke's position, it would be a muddled mistake. But 123:23–26 shows that he is not guilty.

This prop of Ayers' interpretation would have stood up better if Locke had spoken not of 'solidity and extension' but rather of 'size and shape'. It does make sense to say 'The big parts have different sizes and shapes from the small parts', unlike the nonsense you get if in that you replace 'sizes and shapes' by 'solidity and extension' or its plural.

Even if the passage had obliged Ayers to that extent, however, its second prop is a broken reed. I refer to this:

The 'solid extended parts' are the parts we can perceive, not the 'minute parts'. For the discussion explicitly concerns the unknown support of that which is known by observation. . .

We are invited to believe that when Locke wrote 'solid extended parts' he meant 'big solid extended parts', because his topic is the unknown support (= cause) of what is known by observation. But when Locke discusses the cause of what is known by observation, he says—over and over again—that our ideas, both of primary and of secondary qualities, are produced 'by the operation of *insensible* particles on our senses' (136:16; emphasis added). Ayers' interpretation—'parts we can perceive'—stands Locke on his head.

So Ayers has no independent backing for his radical rewrite of the disputed passage, in which 'solidity and

extension' becomes 'the shape, size etc. of parts that are big enough to observe', and 'solid extended parts' becomes 'solid extended parts that are big enough to observe'. There is no case for this busy rewriting, and there is good reason to take the two-step passage on its most natural, conservative reading: first, secondary qualities supervene on primary ones; second, basic primary qualities are underpinned by what has or instantiates or upholds them.

### **10. How does substratum relate to internal constitutions?**

I have been asked: If these are two distinct themes in Locke's thought, how does he inter-relate them? He does not discuss this, but I am willing to answer on his behalf. There is a double answer, depending on whether he is thinking of 'substance', and thus 'substratum,' strictly or generously.

He sometimes uses the term 'substance' quite strictly, confining it to basic thing-like items, which are not thought of as aggregates of items that are yet more basic. This, on the physical side, is Locke in his atomist frame of mind. When he is in it he presumably thinks of substratum as that which has the properties of an atom (on the physical side), and of whatever kind of item is to be taken as basic on the mental side. It would be in character for him then to think of a large physical thing as an aggregate of tiny things (at this point the doctrine of real essences comes into play), and to think of each of the latter as irreducibly a thing which. . . (and here the doctrine of substratum is invoked). This is closely related to the two-step passage discussed above.

More often, however, Locke uses the term 'substance' generously, to stand for thing-like items of any kind, including aggregates. In that frame of mind he thinks of substratum as that which has the properties of any thing-like item, and doesn't mind speaking of the substratum that has

the properties of an orange, or of your body, or of a pebble. And then the substratum doctrine has no significant relation with the doctrine of real essences; essences are among the properties that are supported by substrata, and that's all there is to say.

Although I cannot find them actually making a difference to how 'substratum' is handled (except perhaps in the two-step passage), the two uses of 'substance' are visibly present in the *Essay*. Locke is using the term generously when he offers *man* and *horse* as prime examples of substances (296:26 and 297:15); and he is using it more strictly when, in his famous chapter on identity, he says 'Animal identity is preserved in identity of life, and not of substance' (337:17), citing *man* and *horse* as examples.<sup>1</sup>

### 11. What kind of philosopher was Locke?

Ayers connects the differing interpretations of Locke's treatment of 'substratum' with 'different opinions... as to the *kind* of philosopher Locke is', including different views about 'whether he is driven by an interest in "logical" questions as well as in philosophy of science' (p. 78). Ayers does not quite say that Locke was not driven by an interest in logical issues, but if that is not his opinion then I cannot see why he raised the question. If it is his opinion, I am still puzzled. I don't see how anyone could read the *Essay* without sensing, in Book III and elsewhere, Locke's profound interest in problems about our conceptual structures, their expression in language, and their basis of our minds.

Ayers may be continuing the theme of what kind of philosopher Locke was when he characterizes the Leibnizian interpretation as 'brutal linguistic positivism', says that it 'is virtually a product of currently orthodox conceptions of philosophy', and hints that those who are given to it are in-

sufficiently historical and ignore 'the intellectual background of Locke's thought'. I shan't discuss this.

### 12. Substances and kinds of substance

According to Ayers, the substratum texts are concerned with the real essences of kinds of substances, not with particular substances. 'Locke's point is explicitly and always and necessarily made with reference to the definitions and ideas of sorts of substances' (p. 102). This is offered as going against the Leibnizian interpretation.

'Explicitly and always' is exaggerated, but it doesn't matter. Granting that when Locke speaks of ideas or names of substances he often means sorts of substances, it does not follow that in these discussions 'substratum' is playing the role of the primary quality essence of a sort. Consider this passage, for example:

The ideas of substances are such combinations of simple ideas as are taken to represent distinct particular things subsisting by themselves, in which the supposed or confused idea of substance, such as it is, is always the first and chief. Thus if to substance be joined the simple idea of a certain dull whitish colour, with certain degrees of weight, hardness, ductility, and fusibility, we have the idea of lead. (165:24)

Suppose Ayers is right when he says that the example of lead makes it clear that the word 'thing' in this passage 'means "sort of thing" (embracing *stuff*)' (p. 104). That creates no embarrassment for the view that 'the supposed or confused idea of substance' refers to substratum as Leibniz and the rest of us understand it, namely as that which has the qualities of any particular. Look at the ingredients that Locke says make up the idea of lead: substance considered as substratum, off-whiteness, weight, hardness, ductility,

<sup>1</sup> For more about this see William P. Alston and Jonathan Bennett, 'Locke on People and Substances', forthcoming.

fusibility. Each of those is possessed not by the sort, *lead*, but by individual portions of lead; and so the passage as a whole had better be about such individual portions. If it is coherent, the passage means that the general complex idea of lead collects such individual parcels of matter as are off-white, heavy, hard, ductile, fusible, *and substantial*. This last item, the one involving substratum, is thus connected with this or that individual portion of lead. How? Why, as the bearer of its qualities.<sup>1</sup>

### 13. 'Nature of substance'

Certain elements in the substratum texts don't fit the Leibnizian interpretation. Even if I could not explain them away, I would not conclude that the texts always concern primary-quality real essences, for the obstacles to that are even greater. But the untenability of Ayers' interpretation does not prove that the other is right; so the difficulties should be confronted.

I agree with Ayers that on the Leibnizian account of what substratum is Locke should see clearly that substratum cannot possibly have a 'nature' all of its own. Yet in a couple of substratum contexts he uses the phrase 'nature of substance'—once combatively and once sceptically, but not saying anything like 'Of course this is a nonsense phrase; nothing could possibly correspond to it'.

Perhaps there is nothing to be said about this. If I am right about substratum, Locke did fail to think through a certain aspect of his doctrines, and the 'nature of substance' passages might merely show that the failure was even worse than we thought. But I shall try to improve on that.

In one of the two 'nature of substance' passages, Locke suggests that if God, spirits and bodies are all substances

it may follow that they, 'agreeing in the same common nature of substance, differ not any otherwise than in a bare different modification of that substance' (174:17). The location of this is significant: it immediately precedes a section (quoted from in footnote 4 on page 6 above) whose treatment of substratum does not square with the Leibnizian interpretation, or with Ayers' rival interpretation, or with the rest of the *Essay*. Here alone Locke treats substratum not as an embarrassing bit of public property but rather as a gratuitous, dispensable, and wholly criticisable invention of certain philosophers; and so we find him in the preceding section giving a rough handling to the question of whether God and finite spirits and bodies are all substances in the same sense.

(What mistake was made by those philosophers? Locke says that they were driven to look for a 'support' because they 'ran into the notion of accidents, as a sort of real beings' (175:1). This is intelligible as a handful of verbal gravel flung in the general direction of the scholastics, but if we interrogate it closely it is odd. Its best chance of saying something clear and true is to accuse the philosophers of believing that there are individual accidents, property-instances, abstract particulars, items such as *the rectangularity of this page*, as distinct from *rectangularity, which is possessed by (among other things) this page*. The substratum line of thought does perhaps flow more smoothly when it is conducted in terms of individual accidents or property instances; so Locke might be onto something here. But he does not follow it through, and his own work silently tolerates abstract particulars in several guises.)

These two sections where Locke rebuffs substratum as an intruder stand in marked contrast to his usual treatment

<sup>1</sup> It was Alston who showed me that Ayers is right that when Locke discusses names and ideas of 'substances' his topic is usually *sorts of substances*, and that this makes no trouble for the Leibnizian interpretation.

of it as an embarrassing member of the family. Whatever is going on here, it can have little to do with the main thrust of the substratum passages throughout the *Essay*.

The other ‘nature of substance’ passage has a location that may also be significant. It is a sentence beginning ‘Whatever therefore be the secret and abstract nature of substance in general. . .’ (298:11), and it follows one of the four sections in the *Essay* where Locke speaks of the substance of body and of spirit, and more specifically the substance *of* one’s mind and *of* one’s body. This peculiar ‘substance of’ locution occurs in II.xxiii.5,16,23,30 and nowhere else in the *Essay*. It can be reconciled with the Leibnizian interpretation, for ‘the substance of body’ could mean ‘that which upholds the properties of any body’; but still the ‘substance of’ locution is anomalous, and one wonders if something special is afoot in those sections. Perhaps they are left over from a stage in the growth of Locke’s thought when ‘substance’ and related terms were used for another purpose (though much of the chapter does involve substance as the support of qualities).

What could the other purpose be? If it were to express thoughts about primary quality constitutions, that would explain why Locke here writes of substance as having a nature. It would also imply that Ayers is right about a few tiny pockets of II.xxiii—left-overs from earlier drafts, expressing earlier thoughts. I wish I could believe it, but it isn’t credible, because ‘the substance of body’ is too general to fit this reading, and ‘the substance of spirit’ is nonsense if ‘substance’ refers to a primary quality inner constitution. The latter point deserves emphasis: Ayers ties substratum to primary-quality real essences, and does not mention the fact that Locke clearly thinks that the idea of substratum is as relevant to immaterial substances as to material ones.

There are two other main textual difficulties, which I shall discuss in turn.

#### 14. Substratum as cause

Locke often presents a thing’s real essence or internal constitution as a source or cause of its being the way it observably is or of our observations of how it is. Here is a sample:

- the peculiar constitution of bodies and the configuration of parts whereby they have the power to produce in us the ideas of their sensible qualities (287:17)
- supposed to flow from the particular internal constitution or unknown essence of that substance (296:24)
- the real constitution on which their sensible qualities depend (301:23)
- those properties which flow from its real essence and constitution (392:31)
- the. . . unknown constitution of things whereon their discoverable qualities depend (417:7)
- a real but unknown constitution of their insensible parts, from which flow those sensible qualities (418:6)
- that real constitution of any thing which is the foundation of all those properties (442:12) .
- these being all but properties, depending on its real constitution (486:21)
- . . . all united together in an unknown substratum (317:15)
- . . . such qualities as. . . coexist in an unknown substratum (582:14)

From this it is a short step to the idea that substratum doesn’t just hold the qualities up, so to speak, but holds them together, with this being understood causally. In one place Locke says as much:

Besides the several distinct simple ideas that make [up our ideas of substances], the confused one of substance, or of an unknown support and cause of their union, is always a part. (450:13)

This is not embarrassing to the Leibnizian interpretation.

The latter can hardly avoid saying that substratum is a holder-together, a unifier of ideas or qualities, and that seems to imply that it *causes* their unity.

One might suspect, then, that when Locke wrote ‘and from which they do result’ he really meant ‘and from which their unity results’. But I doubt it, because in a bit that was added in the fifth edition Locke again refers to ‘the supposed simple substratum or substance which was looked upon as the thing itself in which inhere, and from which resulted, that complication of ideas by which it was represented to us’ (295:note). It is not likely that his pen slipped twice. I cannot explain Locke’s use of ‘result’ in these two passages, unless it comes from his momentarily allowing his thought about substratum to become infected with isomorphic thoughts about some other topic.

### 16. Possible conflations

The other topic *might* be real essences etc., but the two seem too disparate to be conflatable. How could Locke have spoken of ‘the supposed simple substratum or substance’ if he meant to be talking about internal constitutions?<sup>1</sup> (Ayers, who badly needs an answer to this question, does not mention it. The nearest he gets to discussing substratum and simplicity is when he explains Locke’s saying that ‘the idea of substance is everywhere the same’. This is said, Ayers writes, ‘not because Locke thinks that there is a mysterious undifferentiated substrate, the same in everything, but because the idea is equally lacking in positive content whenever it occurs; the idea of ‘something’ is everywhere the same’ (p. 91). This, of course, could not explain Locke’s phrase ‘the supposed simple substratum’.)

Here is a better guess. Locke sometimes uses ‘idea’ to stand neither for qualities nor for intellectual thoughts or concepts but rather for sensory states, sense-data, or the like; so perhaps he is here letting his substratum line of thought get mixed up with an issue about the outer-world counterparts or causes of our sensory states, i.e. the problem of what if anything lies behind the veil of perception. He has often been seen as running those two together, mostly by commentators who are doing the same thing themselves.<sup>2</sup>

There is an isomorphism that could encourage this conflation: with ‘ideas’ taken as mental particulars, they can be thought to result from ‘some exterior cause, and the brisk acting of some objects without me’ (632:27); with ‘ideas’ taken as qualities, they can be thought to be upheld by an underlying substance. Many philosophers have failed to distinguish these two thoughts, and Locke may sometimes have failed too.

### 17. ‘A certain number . . . go constantly together’

The remaining difficulty comes from the same passage as ‘from which they do result’. Locke says that we suppose a substratum when the mind ‘takes notice . . . that a certain number of these simple ideas go constantly together’. If the Leibnizian interpretation is right, the ‘ideas’ in question should be qualities or properties—universals of some kind—and in that case the notion of some of them constantly going together seems to be out of place. We can see why Locke should connect the supposition of a substratum with ‘a number of [qualities]’, since there couldn’t be a thing that had only one quality; but the ‘go constantly together’ bit is awkward.

<sup>1</sup> And why are the relations of possession, support, and containment that are regularly said to hold between ‘substratum’ and qualities *never* said to hold between ‘essences’ or ‘real internal constitutions’ and sensible qualities?

<sup>2</sup> They seem to have been led into this conflation by Berkeley; but I was probably wrong to allege in my *Locke, Berkeley, Hume: Central Themes* that Berkeley himself was guilty of it. I owe this change of mind to writings, published and unpublished, by Ayers, Mackie and Alston.

Ayers is comfortable with it because he holds that the role of substratum is to be the primary quality essence of a kind of substance, and any notion of a specific kind of substance is associated with ‘experienced constant concomitance of properties’ (p. 86n). I could take over that reading of the phrase, suggesting that Locke has *temporarily* drifted into allowing the primary/secondary relation to get into the act when his proper topic is something else. But that would not be plausible, and I don’t believe it; so I need some other explanation of ‘going constantly together’.

The one I offered in my book invokes again the fact that Locke’s term ‘ideas’ refers to, among other things, sensory states or sense-data. Throughout most of the section we are considering, I think the notion of ‘ideas’ as qualities is uppermost, and Locke’s topic is the supposition of something like *materia prima* as a support for them; but when he wrote ‘go constantly together’ the notion of ‘ideas’ as sense-data may have come to the fore, in which case Locke is saying that the thought of a particular thing or substance—the thought that there is *an orange* here in my hand, for instance—arises from an awareness of a certain kind of sensory constancy: as I move my hand, different spherical portions of my visual field come to be qualitatively marked off from the rest, the qualitative difference always involves a certain color sensation, the more of the field it occupies the more strongly

I have a certain olfactory sensation, and so on; and I explain these concomitances—the fact that these ‘ideas’ of mine ‘go constantly together’ in this sense—by supposing that the ‘ideas’ in question are all perceptual intakes from an orange.

Ayers, commenting on my earlier presentation of this suggestion, says that it accused Locke of having ‘flitted crazily from topic to topic even in mid-sentence’. That, however, is based on his view that Locke’s use of ‘idea’ is simply ambiguous: sometimes he means one thing by it and sometimes another. But that doesn’t survive examination in the light of the text of the *Essay* if the latter is read as carefully as Locke wrote it. My view is that, rather than Locke’s using ‘idea’ ambiguously, he was guilty of a substantive conflation of properties and mental particulars, that his double use of ‘idea’ reflects this conflation. and that in the ‘going constantly together’ section each use of ‘idea’ is at least somewhat tinged with the property thought and the mental particular thought. I shall develop this matter in a separate paper.

Perhaps I am wrong about ‘go constantly together’. It may have to be added to the tiny list of passages that are not properly reconcilable with the Leibnizian interpretation and that create no discomfort for Ayers’ view. Those passages don’t weigh much in the balance, however, against the dozens and hundreds that go the other way.<sup>1</sup>

<sup>1</sup> The help that William P. Alston has given me with this paper goes far beyond the specific mentions of him in the text and notes. I am also indebted to Ian Tipton and John Yolton for useful comments.