I thank Richard Boyd, Gail Fine, Tamar Szabó Gendler, Carl Ginet, John Hawthorne, John Heil, Nicholas Jolley, Norman Kretzmann, Lisa Shapiro, and Sydney Shoemaker for comments and/or discussion on previous drafts on this paper.
Abstract

It is an old charge against Locke that his commitment to a common substratum for the observable qualities of particular objects and his empiricist theory about the origin of ideas are inconsistent with one another. How could we have an idea of something in which observable qualities inhere if all our ideas are constructed from ideas of observable qualities? In this paper, I propose an interpretation of the crucial passages in Locke, according to which the idea of substratum is formed through an elaborate mental process which he calls “supposition.” It is the same process we use when we form the idea of infinity – another problematic idea for an empiricist. In the end, Locke was more liberal than most empiricists in subscribing to the existence of ideas far removed from experience, because he accepted supposition as a legitimate way of constructing new ideas.
1. The problem of the origin of our ideas of substances

Empiricists have a problem with substance. It seems that we are bound to think of particular objects not as mere collections of observable properties, but as bearers of those properties. An apple is not just a certain color, shape, texture and taste but something that has that color, shape, texture and taste. It is, however, unclear what in our experience could distinguish between the apple itself and the collection of all its observable properties. A commitment to a genuine difference here appears to be incompatible with a commitment to empiricism.

For Locke, the problem was especially acute. On the one hand, he believed that all we get from sensation and reflection are ideas of observable qualities, and that these alone provide materials for all our other ideas. On the other hand, he remained firmly committed to the traditional doctrine that observable qualities, not being independent elements of reality, require something else to inhere in. This combination has struck many of his readers, from Bishop Stillingfleet to John Mabbott, as a blatant inconsistency:

It seems clear that, if Locke starts with the belief that only qualities are given to sensation and introspection, he will inevitably be driven to admit that the idea of substance is logically necessitated by them, and therefore inexplicable on his empiricist theory, which was Stillingfleet’s claim. There are only two ways out of this difficulty. One is that taken by Berkeley and Hume: to maintain that nothing but qualities are given, and that the idea of substance is not necessitated by them. A thing is just a collection of qualities. The alternative is stated by Leibniz [...] It denies that qualities alone are given to sensation or introspection.1

One way to see what Mabbott objects to in this passage is this. Locke faces a dilemma in explaining the origin of our ideas of particular objects, say, the idea of an

---

apple. One possibility would be to accept a broadly Humean view, according to which sensible qualities do not require support, so that the idea of an apple need not be anything over and above a collection of the ideas of its sensible qualities. The empiricist credentials of such a position are impeccable, but Locke does not share it. He believes that along with ideas of sensible qualities, the idea of an apple contains the idea of common support. So he needs a story about how we come by this extra ingredient. The straightforward way to meet this challenge would be to say that whenever we see an apple, the idea of common support simply comes along with the ideas of sensible qualities. According to such a Leibnizean view, when we perceive an apple its idea enters the mind as a whole, and the constituents of this idea are abstracted only later. But Locke rejects the Leibnizean picture as well: he thinks that the ideas of the color, shape, texture, taste, etc. of an apple are received separately when we see, touch and taste the apple and that nothing else enters the mind over and above these ideas. So he is stuck with the problem of explaining how these could be sufficient for constructing the idea of a particular object.

To appreciate this difficulty, it is important to keep the terminology straight.

There are particular substances, like an apple, a horse, gold, or the sun; and there is (at

---

2 In the next section, I will argue that this is not exactly Hume’s view. Nor is it, as Mabbott suggests in the passage cited above, a view which can fairly be attributed to Berkeley. Although Berkeley wrote some of the harshest passages against the idea of material substratum and regarded ordinary sensible things as collections of ideas, he also believed that such collections do require a substance – namely, a mind – for their existence. Of course, since the ideas are not predicatable of the mind which perceives them, Berkeley has to insist that they exist in the mind “not by way of mode or attribute, but by way of idea.” Cf. George Berkeley, *Principles of Human Knowledge* §49. In A. A. Luce and T. E. Jessop eds., *Works of George Berkeley*. Vol.2. (London: Thomas Nelson and Sons Ltd., 1948-57).

3 Of course, Leibniz does not hold an empiricist view concerning the origin of our idea of substance. His view is that “reflection enables us to find the idea of substance within ourselves, who are substances.” Cf. G. W. Leibniz, *New Essays on Human Understanding*, ed. and trans. by P. Remnant and J. Bennett (Cambridge University Press: Cambridge, 1981), p.102. But he does believe that the idea of substance in general is contained in ideas of particular objects, and hence, that it could be abstracted from them.
least, according to Locke) substance in general, the infamous “we know not what.” To avoid confusion, we might use the term ‘substratum’ when we talk about substance in general as opposed to particular substances. Locke has a problem concerning the origin of our idea of substratum and – since he holds that this idea is a crucial ingredient of all ideas of particular substances – he also has a problem concerning the origin of ideas of particular substances. Locke is aware of these difficulties. This is how he faces up this task:

The Mind being […] furnished with a great number of simple Ideas, conveyed 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, and Words being suited to common apprehensions, and made use of quick dispatch, are called so united in one subject, by one name; which by inadvertency we are apt afterward to talk 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 our selves, to suppose some Substratum, wherein they do subsist, and from which they do result, which therefore we call Substance.

This passage is one of the most difficult in the Essay. It clearly says that the construction of an idea of substance somehow involves a supposition, i.e. the supposition of something wherein the qualities of which we have simple ideas subsist. But it leaves us in the dark as to what Locke thinks about the justification of this supposition, and about the exact nature of the contribution this supposition makes to the forming of an idea of a particular substance. So, it might appear that Locke simply muddies the waters

---


5 Essay 2.23.1.
with his talk of suppositions and in fact helps himself to the idea of substratum – an idea he cannot have given his theoretical commitments.\(^6\)

In this paper, I will argue that this appearance is misleading: there is a way of interpreting the phrase “suppose some Substratum” that is consistent with the text of the Essay and makes sense of Locke’s account of the origin of our ideas of particular substances. Although I agree that Locke’s account is ultimately unsuccessful, I think its problems arise at a significantly deeper level than it has generally been assumed.

In discussing the problem of the origin of our idea of substratum, I wish to remain neutral on what exactly Locke thought substrata are. This latter question is currently the subject of a fierce scholarly debate. The crux of the issue is whether Locke believes, as Jonathan Bennett interprets him, that all qualities have to be supported by something else, or, as Michael Ayers contends, that it is only the observable qualities that are incapable of independent existence.\(^7\) This problem is orthogonal to my current concerns: I will only rely on what is common ground between Bennett and Ayers, namely, that Locke believes observable qualities do require support. Still, I hope that clarifying how Locke thinks we can come by the idea of substratum can bring us closer to a better grasp of what he thinks substrata are.\(^8\)

---


\(^8\) My position about the nature of substrata is similar to that defended by J. L. Mackie in his *Problems from Locke*, pp. 76-83, (Oxford: Clarendon Press, 1976): Locke probably did not hold consistently the view attributed to him by Ayers, but he should have done so. Ayers makes a very strong case for the coherence of this view with some of the fundamental tenets of Lockeian philosophy in ‘The Foundations of
The structure of my paper is as follows. In the next section, I argue against certain trends in the literature which contend that despite some key passages, Locke did in fact embrace what – following Mabbott – I called above Humean or Leibnizean line, and hence, faces no problem regarding the origin of ideas of substances. In section 3, I discuss what it is to suppose a substratum and how such a supposition can yield an idea of a particular substance. I suggest that an analogy can be drawn between what Locke says about our idea of infinity – another idea which poses problems for empiricists – and his account of the idea of substratum. In light of this analogy, a number of perplexing passages in the *Essay* become clear. Finally in section 4, I briefly present a hypothesis about why Locke might have found this account of the idea of substratum compelling.

2. Locke’s constraints

Locke has a problem about the origin of the idea of substratum only if he thinks, contra Hume, that we have such an idea and if he thinks, contra Leibniz, that such an idea is not directly conveyed to the mind through sensation and reflection. Given these two constraints, he owes us a story about how the idea of substratum can be *constructed* from ideas of observable qualities. But does he really accept the two constraints which force him to face this problem?

I begin with the first constraint, the claim that we do have the idea of substratum. It is the need to distinguish ideas of substances among complex ideas – and in particular,

---

to set them apart from what he called ‘ideas of modes’ – that leads Locke to introduce the idea of support for observable qualities. Ideas of modes “contain not in them the supposition of subsisting by themselves,” whereas “the supposed, or confused Idea of Substance, such as it is, is always the first and chief” within ideas of substances.\(^9\) This structural difference in the ideas is intended to capture the ontological difference between substances and modes: while an idea of a substance represents something as the common source in nature of various observable qualities, an idea of a mode does not represent qualities as forming this sort of natural union.\(^10\) According to Locke, when we form an idea of a mode we merely combine simple ideas – ideas which may have come from a single object or from many different ones – and consider these together as a single idea. When we form an idea of a substance, we need to indicate somehow that these qualities are presumed to be united in nature. Locke seems to have thought that the cause of the union of these qualities is the common support in which they all inhere.\(^11\) So it is reasonable that an idea which represents naturally co-existing observable qualities should represent the common support of these qualities as well. Hence the need for the idea of substratum within each idea of a particular substance.

\(^9\) *Essay* 2.12.4. and 2.12.6. In talking about ‘ideas of modes’ instead of ‘modes’ I do not follow Locke’s terminology exactly in *Essay* 2.12.4. There he calls the complex ideas themselves modes. Locke warns his readers that they should not confound qualities and their ideas despite the often careless phrasing of the *Essay* (cf. *Essay* 2.8.7. and 2.7.8.). Although Locke says at several places that modes themselves are ideas constructed by the mind, there are other places (especially in Books III and IV of the *Essay*, but see also *Essay* 2.22.9.) where he talks about ideas of modes.


\(^11\) “...all the Ideas we have of particular distinct sorts of Substances are nothing but several combinations of simple Ideas, co-existing in such, though unknown, Cause of their Union, as makes the whole subsist of itself.” *Essay* 2.23.6. “...and in Substances, besides the several distinct simple Ideas that make them up, the confused one of Substance, or of an unknown Support and Cause of their Union, is always a part.” *Essay* 3.6.21.
One might argue that the distinction between ideas of substances and ideas of modes can be sustained without taking the idea of substratum seriously. This seems to be exactly Hume’s proposal:

The idea of substance as well as that of a mode, is nothing but a collection of simple ideas, that are united by the imagination, and have a particular name assigned them, by which we are able to recall, either to ourselves or to others, that collection. But the difference betwixt these ideas consist in this, that the particular qualities, which form a substance, are commonly refer’d to an unknown something, in which they are supposed to inhere; or granting this fiction should not take place, are at least supposed to be closely and inseparably connected by the relations of contiguity and causation.\footnote{David Hume, \textit{A Treatise of Human Nature} 1.1.6. Edited by L. A. Selby-Bigge, revised by P. H. Nidditch (Oxford: Clarendon Press, 1978).}

Everything is perfectly Lockean in this passage, except for Hume’s claim that to assume that there is a single cause for the union of the observable qualities in a substance and that we could include the idea of this cause in the idea of the substance is nothing but a “fiction.” Hume rejects both the idea of substratum and substrata themselves. He opts for the thesis that the principle of union for ideas of particular substances is simply that the simple ideas within them represent qualities which are supposed to be spatio-temporally and causally interrelated.

Is it possible that Locke himself held such a view? After all, all he says is that “we accustom our selves, to suppose some Substratum” and this seems quite compatible with the Humean thesis that this supposition is misguided. One critic who pressed Locke hard on this issue was Bishop Stillingfleet:

...is this all indeed, that is to be said for the being of substance, “that we accustom ourselves to suppose a substratum”? Is that custom grounded upon true reason, or not? If not, then accidents or modes must subsist of themselves, and these simple ideas need no tortoise to support them: for figures and colours, &c.
would do well enough for themselves, but for some fancies men have accustomed themselves to.\textsuperscript{13}

Locke gives a reasonably straight answer to Stillingfleet. He says that our ground for supposing a substratum – which is the fact that we cannot conceive how sensible qualities could subsist by themselves – is a “true reason,” and he asserts that there is complete agreement in this regard between him and the bishop.\textsuperscript{14} Later he says that the qualities we find in a substance are “perceived by the mind to be by themselves inconsistent with existence.”\textsuperscript{15} This is a strong statement, since Locke has never suggested that in perceiving inconsistency the mind could be subject to systematic error. On the basis of his remarks in the correspondence with Stillingfleet, we must interpret Locke as affirming the existence of substrata.\textsuperscript{16}

This interpretation is largely in accordance with the text of the \textit{Essay}; the only problem is the famous passage about the poor Indian philosopher.\textsuperscript{17} Here Locke appears to mock the thesis that observable qualities cannot exist by themselves. Drawing an analogy between the questions ‘What supports the earth?’ and ‘What supports observable qualities?’, Locke suggests that they deserve similar answers. And since, one might argue, the correct answer to the first question is ‘nothing,’ one might conclude that that is the answer Locke really intended to give to the second as well.

\begin{itemize}
\item \textsuperscript{13} Quoted by Locke in his Correspondence with Stillingfleet, \textit{op. cit.}, p.16.
\item \textsuperscript{14} Correspondence with Stillingfleet, \textit{op. cit.}, p.19.
\item \textsuperscript{15} Correspondence with Stillingfleet, \textit{op. cit.}, p.21.
\item \textsuperscript{16} In his ‘Locke on Substance-In-General: Part I’ (\textit{Ratio} XXII, 1980, pp. 91-105) Peter Alexander provides a careful analysis of all the important passages discussing the idea of substratum and reaches a similar conclusion. Cf. also Edwin McCann ‘Locke’s Philosophy of Body’ in Vere Chappell ed., \textit{The Cambridge Companion to Locke} (Cambridge: Cambridge University Press, 1994) pp. 76-86.
\end{itemize}
However, it isn’t clear that the correct answer to the first question is ‘nothing.’ To say that there is nothing that supports the earth is less than a full answer, because it doesn’t address the reason why the question arises: it fails to explain why the earth does not fall down. Instead, one might say something like this: the reason that the apple on the table does not fall down is that it is supported by the table; the reason that the table does not fall down is that it is supported by the earth; and the reason the earth does not fall down is that it is something that does not require support. And the reason for this is that it is kept in place – or more precisely in orbit – by gravitational force exerted on it by other bodies, such as the apple, the table, the other planets, and the sun. Perhaps this is the answer Locke had in mind, and perhaps he thought the answer to the second question could have a similar shape. Perhaps an observable quality can be supported by an unobservable quality, and that quality by another one, but with the regress ending somewhere. What exactly this endpoint could be, we don’t know. And we especially don’t know why this entity requires no further support. It’s certainly true that Locke finds the idea of substratum obscure and confused, but this does not mean that he thinks we can do without it. As he puts it in his correspondence with Stillingfleet:

…those passages were not intended to ridicule the notion of substance, or those who asserted it, whatever “it” signifies: but to show, that though substance did support accidents, yet philosophers, who had found such a support necessary, had no more clear idea of what that support was, than the Indian had of that which supported his tortoise, though sure he was it was something.


18 Locke does not believe that an observable quality can be supported by another observable quality. Cf. Essay 2.23.4., where he says “we cannot conceive how they [i.e. sensible qualities which we find united in a thing] should subsist alone, nor one in another.”

19 Correspondence with Stillingfleet, op. cit., p.448.
So the difference between Locke and Hume is real, and indeed fundamental. They agree that ideas of substances differ from ideas of modes insofar as they represent a certain collection of observable qualities as forming a natural union. They agree that the principle of this union must be somehow represented within ideas of substances. They agree that the mind is inclined to suppose the existence of a common support for these qualities and to include an idea of this common support within ideas of substances as a representation of the principle of union within the collection of qualities. But they disagree in their attitudes towards this inclination. Locke thinks that the thesis that observable qualities require something else for their existence is a solid ground for forming the idea of substratum; Hume disagrees.

Let me turn now to the second constraint of the problem concerning the origin of our ideas of substances. Had Locke agreed with Leibniz in thinking that ideas of particular substances enter the mind as a whole and the ideas of the qualities of the substance are created later via abstraction,\(^{20}\) he would have no problem in explaining the origin of our idea of substratum. But, as I will argue, this could not be Locke’s view because he believes that ideas of particular substances are all complex and that no complex idea is received passively in experience.

Locke distinguishes between simple and complex ideas on the basis of two sets of considerations, which I call phenomenological and genealogical. Phenomenologically simple ideas appear uncompounded in the sense that we can’t distinguish any parts or features in them\(^{21}\); genealogically simple ideas are received passively, in such a way that

\(^{20}\) G. W. Leibniz *op. cit.*, p. 217f.
\(^{21}\) Cf. *Essay* 2.2.1.
we could never have them if we weren’t exposed to a certain type of experience\textsuperscript{22}. I think one of Locke’s central theses is that these two categories coincide: ideas that display no phenomenological complexity are exactly those which were received passively. These simple ideas serve as building blocks for the construction of all others.\textsuperscript{23} Experience provides us only with phenomenological simples; internal complexity within ideas is of our own making.

This interpretation sits well with Locke’s description of how we perceive external objects. He says that our senses convey into the mind “several distinct \textit{Perceptions} of things, according to those various ways, wherein those Objects do affect them: And thus we come by those \textit{Ideas}, we have of \textit{Yellow}, \textit{White}, \textit{Heat}, \textit{Cold}, \textit{Soft}, \textit{Hard}, \textit{Bitter}, \textit{Sweet},”\textsuperscript{24} each of which represents a sensible quality:

For though the Sight and Touch often take in from the same object, at the same time, different \textit{Ideas}; as a Man sees at once Motion and Colour; the Hand feels Softness and Warmth in the same piece of Wax: Yet the simple \textit{Ideas} thus united in the same Subject, are as perfectly distinct, as those that come in by different senses. The coldness and hardness, which a Man feels in a piece of \textit{Ice}, being as distinct \textit{Ideas} in the Mind, as the Smell and Whiteness of a Lily; or as the taste of Sugar, and smell of a Rose.\textsuperscript{25}

Locke is unambiguous that the simple ideas which compose the idea of a piece of ice are distinct when they enter the mind: without the ability to put these ideas together in the appropriate way, I would not have the idea of the piece of ice. This is a clear rejection of the Leibnizean view about the origin of our ideas of particular substances.

\textsuperscript{22} Cf. \textit{Essay} 2.1.25.
\textsuperscript{23} “But as the Mind is wholly Passive in the reception of all its simple Ideas, so it exerts several acts of its own, whereby out of its simple Ideas, as the Materials and Foundations of the rest, the other are framed.” \textit{Essay} 2.12.1. Cf. also \textit{Essay} 2.12.8.
\textsuperscript{24} \textit{Essay} 2.1.3.
\textsuperscript{25} \textit{Essay} 2.2.1.
There are, however, passages where Locke seems to contradict his official view. First, there are places where he seems to indicate that we can get complex ideas by observation, so that we have genealogical simplicity without phenomenological simplicity. So, for instance, we can get the complex ideas of fencing or wrestling by experience, when we observe two men engaged in those activities.\(^{26}\) Moreover, Locke occasionally talks as if ideas arrive to us from particular objects ready-made and as if such ideas could be simply ‘taken in’ by the mind.\(^{27}\) Second, there are passages which suggest that simple ideas are obtained by abstraction, so that we have phenomenological simplicity without genealogical simplicity. Locke says that we form the idea of whiteness by abstraction when we observe the same color “to day in Chalk or Snow, which the Mind yesterday received from Milk.”\(^{28}\) This seems to indicate that simple ideas are abstracted from complexes, i.e. that they are framed by us through a mental operation and are not received passively. One might combine these objections and argue that for Locke genealogical simples are usually phenomenologically complex ideas of particular objects or events and phenomenological simples are obtained from these by abstraction.\(^{29}\)

It’s not clear that Locke’s position concerning the nature of simple ideas is entirely consistent, but I think there is a way of reading him that diminishes the tension between these passages and the official view.

\(^{26}\) Essay 2.22.9.
\(^{27}\) For example, Essay 2.11.9., 2.12.1., and 3.6.28.
\(^{28}\) Essay 2.11.9.
The fact that complex ideas, like those of fencing and wrestling, can be obtained by experience does not mean that experience in itself is sufficient for these ideas. Locke doesn’t say that the idea of fencing enters passively into our minds when we, for the first time, see people fencing. He says merely that in some cases all the constituent simple ideas are given at once in experience, so that all a mind needs to do is to unite them into one complex idea. But the unifying is still an act of the mind. The unity of an idea of mixed mode, like fencing, is always “from an Act of the Mind combining those several simple Ideas together, and considering them as one complex one.”

Similarly, the fact that a particular idea is received from a particular object doesn’t mean that a unifying act of the mind plays no role in bringing such a particular idea into being.

What should one say about Locke’s assertions that the idea of whiteness is framed by abstraction? When Locke says that the idea of whiteness can be abstracted from the particular ideas of a piece of chalk, a pile of snow, and a glass of milk, he does not say that our idea of whiteness comes into being through this act of abstraction. On the contrary, all the simple ideas that are constituents in the particular idea of the piece of chalk – the ideas of white, of hardness, of a certain shape, etc. – are taken into the mind passively when the chalk is perceived. They are united by an act of the mind into a complex particular idea, and it is only after this has been done that they can be separated out again and considered as representatives of a certain class – the class of white things, the class of hard things, the class of things of a certain shape, etc. – via abstraction. This

---

30 *Essay* 2.22.4. Cf. also *Essay* 3.5.5.

31 *Essay* 2.11.7. might seem problematic for this interpretation. Here Locke seems to suggest that although a dog does not combine the simple ideas it receives from its master into a complex one, it nevertheless has such a complex idea. It is, however, more likely that Locke believes that the dog does not have a genuine complex idea, only a congeries of simple ones. This is also Michael Losonsky’s line in his ‘Locke on the Making of Complex Ideas,’ *Locke Newsletter* XX (1989), pp. 35-46.
explains Locke’s claim that it requires considerable skill to discern simple ideas. The
skill is required not for the reception of simple ideas, but for the process of recovering
them from complex ideas of particulars: in order to abstract, one must first discern.\footnote{Cf. \textit{Essay} 2.1.8. and 2.11.2. This does not mean that the structure of complex ideas is hidden from children. On the contrary: if they were to reflect on their complex ideas, they could clearly discern their simple constituents. It is just that children tend not to reflect on their ideas.} It is
true that simple ideas can be \textit{recovered} through abstraction, but this does not threaten the
claim that they are all genealogically simple, i.e. that they are \textit{received} passively in
experience.

So, I think the orthodox psychological atomist interpretation of Locke is
defensible. Collections of simple ideas, and only collections of simple ideas, are given
directly in experience. Complex ideas of particular things are made by the unifying act of
the mind. And from these complex ideas the mind can create new ideas through various
mental operations.

Let me summarize the results of this section. I argued (against a Humean reading)
that Locke believes that our ideas of particular substances contain a component – the idea
of substratum – which is distinct from all the ideas of observable qualities and their
various relations to one another. I also argued (against a Leibnizean reading) that Locke
does not think that we receive our ideas of particular substances as a whole and instead
accepts the thesis that only simple ideas of observable qualities are given to us in
sensation and reflection. Consequently, he owes an account of how we can construct
ideas of particular substances from simple ideas. To do this, he needs to explain how we
can form the idea of substratum, which is a constituent in all ideas of particular
substances.
3. Substratum and infinity

Locke explicitly mentions three mental operations that are used in creating new ideas from old ones: comparing, abstracting and compounding. From the ideas of light and dark we can create by comparison the relational idea of *lighter than*; from the ideas of particular colors we can create by abstraction the abstract idea of *color*; and from the ideas of white and soft we can create the compound idea of *white-and-soft*. But it is not immediately clear how the idea of substratum could be created by successive applications of these three operations.

The most obvious suggestion is that the idea of substratum is created from ideas of particular substances via abstraction.\(^{33}\) Of course there is no question that in Locke’s theory, once we have ideas of particular substances, we can abstract the idea of substratum from these. The idea of substratum, like the idea of whiteness, can be recovered from the idea of any white object by abstraction. But this cannot be the way the idea of substratum was *originally* formed. For it is not helpful to say that we form ideas of particular substances from ideas of observable qualities and the idea of substratum *and* that we form the idea of substratum by abstraction from ideas of particular substances. The circle must be broken somewhere.

---

\(^{33}\) E.g. Correspondence with Stillingfleet *op. cit.*, p. 16. reads: “… I say in more places than one […] that they [i.e. general ideas] are all made by abstracting; and therefore could not be understood to mean, that that of substance was made any other way.”
The next suggestion might be that we originally form the idea of substratum by compounding from its simple constituents. Here is the most detailed description Locke gives us of the process by which we form the idea of substratum:

… all the ideas of all the sensible qualities of a cherry, come into my mind by sensation; the ideas of perceiving, thinking, reasoning, knowing, &c. come into my mind by reflection: the ideas of these qualities and actions, or powers, are perceived by the mind to be by themselves inconsistent with existence; or, as your lordship well expresses it, “we find that we can have no true conception of any modes or accidents, but we must conceive a substratum or subject, wherein they are;” i.e. that they cannot exist or subsist of themselves. Hence the mind perceives their necessary connexion with inherence or being supported; which being a relative idea superadded to the red colour in a cherry, or to thinking in a man, the mind frames the correlative idea of a support. For I never denied, that the mind could frame to itself ideas of relation, but have showed the quite contrary in my chapters about relation. But because a relation cannot be founded on nothing, or be the relation of nothing, and the thing here related as a supporter or support is not represented to the mind by any clear and distinct idea; therefore the obscure, indistinct, vague idea of thing or something, is all that is left to be the positive idea, which has the relation of support or substratum to modes or accidents; and that general indetermined idea of something, is, by the abstraction of the mind, from the positive, simple ideas got by sensation or reflection: and thus the mind, from the positive, simple ideas got by sensation or reflection, comes to the general relative idea of substance; which without the positive simple ideas, it could never have.\(^{34}\)

The last two sentences of this quote suggest the following story about how we form the idea of substratum. First from simple ideas, we use comparison to form the relative idea of support, abstraction to form the general idea of something. Then by combining these two we obtain the idea of something that supports qualities – the idea of substratum.

But there are difficulties with this reading. Although Locke does say that we can form the relational idea of being supported and the abstract idea of something, he does not say that the idea of substratum is made from these ideas via combining. What we learn from the passage is that the relative idea of being supported is “superadded to the

\(^{34}\) Correspondence with Stillingfleet, op. cit., p. 21.
red colour in a cherry, or to thinking in a man,” not to the idea of something. So it seems that in order to combine it with the idea of something, we would have to first detach the idea of being supported from the ideas of qualities. Given the detail of description in the passage, it is curious that Locke says nothing about either the detachment or the subsequent combination. Furthermore, it is problematic to think of the last two sentences of the passage as providing a self-standing account of the genesis of the idea of substratum. These sentences appear to be a gloss on the previous remark, which already tells us how the idea of substratum is made. According to Locke, we create the idea of substratum because our ideas of the simple qualities of a cherry are “perceived by the mind to be by themselves inconsistent with existence.” In order for us to think of these qualities as existing, we have to suppose a substratum wherein they inhere. In other words, the recognition of a certain truth plays an essential role in the process of creating the idea of substratum. We need to understand what this role is.

I will try to illuminate the problem of the genesis of our idea of substratum by an analogy. Besides the idea of substratum, there is another idea that poses serious problems for empiricists. That is the idea of infinity, which Locke discusses in detail in Chapter XVII of Book II of the Essay. I will argue that he gives structurally identical accounts of how we come to have the two ideas.

Locke’s discussion of infinity in the Essay grew out of a reply to an objection directed against his central empiricist thesis. The objection stems from “those men who say they have a positive Idea of Infinite, which Idea cannot possibly be had from our
sense & therefor that we have Ideas not at all derived from our senses.”

Those men are presumably the followers of Descartes, according to whom the idea of infinity, which is joined to each of the ideas of attributes within the idea of God, is clear and distinct.

According to them, the terms ‘finite’ and ‘infinite’ are misleading; the idea of infinity is prior to the idea of finitude, which is merely its negation. Grasping the nature of finite quantities presupposes a positive innate idea of infinity.

The standard empiricist answer to the Cartesian view is a defense of the priority of the finite: there is no problem in conceiving of finitude; it is ascriptions of infinity that have to be explained. In replying to Descartes’s Meditations, Hobbes says the following about the attribution of infinity to God:

This substance, [i.e. God] moreover, is infinite (that is, it is impossible for me to conceive or imagine any supposed limits or extremities without being able to imagine further limits beyond them). And it follows from this that what arises in connection with the term ‘infinite’ is not the idea of the infinity of God but the idea of my own boundaries or limits.

Infinity is not a detectable feature of some object. A correct ascription of infinity is rather a consequence of our own way of thinking about an object. What “arises in connection with the term ‘infinity’ ” is not an idea of infinity, it is rather the proposition that finite quantities can be enlarged without limit. And from this, Hobbes contends, it follows that

36 In a journal entry, Locke specifically identifies the Cartesians as the source of this view. Cf. An early draft of Locke’s Essay together with excerpts from his journals, ed. R. I. Aaron and J. Gibb (Oxford, 1936, pp. 111-12. In his paper, ‘Innate Ideas and the Infinite: The Case of Locke and Descartes,’ (Locke Newsletter XXVI (1995), pp. 49-67) G. A. J. Rogers argues persuasively that the Cartesian objection from the idea of infinity against the thesis that there are no innate ideas was of prime concern to Locke.
38 Objections and Replies AT VII 186. [CSM Vol.2, p. 131]
we cannot frame the idea of infinity. As he says at another place “Whatsoever we imagine is *Finite*. Therefore there is no Idea, or conception of any thing we call *Infinite*.”  

Locke’s aim is to reject the Cartesian claim that we have a clear, distinct, positive, innate idea of infinity without accepting Hobbes’s conclusion that we cannot have an idea of infinity at all. He follows Hobbes’s diagnosis of what prompts us to ascribe infinity to something, but, surprisingly, he thinks that the idea of infinity arises “from the contemplation of Quantity, and the endless increase the Mind is able to make in Quantity, by the repeated additions of what Portions thereof it pleases.”  

Repeated addition is not itself mysterious; it is relatively uncontroversial that we can repeat in thought our idea of some distance, say a foot, and thereby arrive at the idea of a distance of two feet. But Locke’s claim is far more ambitious: “This Power of repeating, or doubling any *Idea* we have of any distance, and adding it to the former as often as we will, without being ever able to come to any stop or stint, let us enlarge it as much as we will, which gives us the *Idea of Immensity*. ”  

Recognizing that we can add our idea of a particular finite quantity to another idea of a particular finite quantity without limit, we recognize that there is no largest finite quantity. But while this suggestion seems plausible, it remains unclear how such a recognition could lead to the forming of an idea. And, even more importantly, such a story about the genesis of the idea of infinity leaves it open what that idea is.

---

40 *Essay* 2.17.7.
41 *Essay* 2.13.4.
Locke does say that the idea of infinity “consists in a supposed endless Progression,”[^42] but this seems to be a mere confusion. To say that we can think of ideas of quantities as forming an unbounded progression is one thing; to say that we can have an idea of the unbounded progression itself is another. In fact, Locke seems to think that the latter is an idea no one could have:

For our Idea of Infinity being, as I think, an endless growing Idea, but the Idea of any Quantity the Mind has, being at that time terminated in that Idea, (for be it as great as it will, it can be no greater than it is,) to join Infinity to it is to adjust a standing measure to a growing bulk; and therefore I think it is not an insignificant subtlety, if I say, that we are carefully to distinguish between the Idea of the Infinity of Space, and the Idea of Space infinite: The first is nothing but a supposed endless Progression of the Mind, over what repeated Ideas of Space it pleases; but to have actually in the Mind the Idea of a Space Infinite, is to suppose the Mind already passed over, and actually to have a view of all those repeated Ideas of Space, which an endless repetition can never totally represent to it, which carries in it plain contradiction.[^43]

So, Locke distinguishes between two ways of ascribing infinity to space. The first way involves the proposition that the idea of space allows for an endless progression of ideas, i.e., that for every given idea of a spatial region one has, one can form another idea of a larger spatial region. The second way involves the proposition that the idea of space encompasses the entirety of an endless progression of ideas, i.e., that there is an idea of a maximally large spatial region. Locke considers this latter proposition incoherent: to think of space in this way would amount to adjusting “a standing measure to a growing bulk,” i.e. thinking of the growing progression of spatial ideas as a whole. The distinction Locke draws here parallels the scholastic distinction between syncategorematic and categorematic infinity.[^44] The contrast was traditionally marked in Latin by word order.

[^42]: Essay 2.17.7. and 2.17.8.
[^43]: Essay 2.17.7.
[^44]: A standard presentation of the categorematic-syncategorematic distinction can be found in William Heytesbury, *The Compounded and Divided Senses*, in N. Kretzmann and E. Stump trs., *The Cambridge
For example, *quantocumque finito majus* indicates syncategorematic infinity, whereas *majus quantocumque finito* indicates categorematic infinity. Perhaps this is why Locke uses the peculiar terms “infinity of space” and “space infinite.”

But if Locke doesn’t think that there is a consistent idea that represents an infinite quantity, why doesn’t he think with Hobbes that we cannot have an idea of infinity at all? If the idea of infinity is not an idea of an endless progression in its entirety, what is it an idea of? Perhaps the best and most detailed description Locke gives is this:

> when we suppose an inexhaustible remainder, from which we remove all bounds, and wherein we allow the Mind an endless progression of Thought, without ever completing the *Idea*, there we have our *Idea* of Infinity. 46

This passage suggests that the idea of infinity is not an idea of endless progression, but rather an idea of something that must be supposed in order to think coherently of an endless progression. The idea of infinity represents an “inexhaustible remainder,” something indeterminate beyond the particular finite quantities.47

The idea of the inexhaustible remainder is elusive. Even if we accept Locke’s vague answer to the “what is it” question, it remains a problem how we can explain our ability to form such an idea. How could the standard operations of comparing, abstracting and compounding furnish our minds with such an idea?

Locke’s account of its genesis seems to be this: We have ideas of finite quantities, and by reflecting on the nature of these ideas we can realize the truth of the proposition that for every finite quantity there is some quantity larger than it. Then – and this is the

---


45 It is also clear that Locke thought this distinction identical to the distinction between actual and potential infinity. In fact, he uses these expressions in Draft A §44.

46 Essay 2.17.8.
crucial step – we can realize that the truth of this proposition in some sense entails or presupposes that there must be something that is an inexhaustible remainder beyond the finite quantities. And in virtue of realizing this, we form the requisite idea. What is peculiar about this analysis is the thought that recognizing the truth of a proposition may enable us to form a new idea which is not itself part of the proposition. Perhaps to indicate the roundabout nature of this process, Locke calls it “supposing an inexhaustible remainder”. In sum, my suggestion is that supposition – at least in the sense in which Locke uses this term in talking about the origin of our idea of infinity – is a mental operation whereby one extracts an idea from a propositional content which was not among the original constituents of that content.

Supposition in this sense is not as far removed from ordinary supposition as one might think. Supposing an inexhaustible remainder involves the hypothesis that there is such a thing; the peculiarity of this hypothesis is that one comes to form a new idea by means of thinking it. Here is a rough and simple analogy. Suppose one knows that the proposition that Brutus was a murderer is true. The constituents of this proposition are the idea of Brutus and the idea of a murderer; clearly, the idea of the victim is not among the constituents. Nevertheless, by reflecting on the idea of a murderer, one can conclude from the proposition that Brutus was a murderer that there is someone whom Brutus murdered and hence that there is someone who was murdered. In this way, one is led to form the idea of a murder-victim of Brutus, and then by abstraction to the idea of murder-victim simpliciter. Although Locke does not discuss this process in detail, he is clearly aware that relative terms can ‘intimate’ new ideas:

[47] “... the clearest Idea [the Mind] can get of Infinity, is the confused incomprehensible remainder of
…when I give Cajus the name Husband, I intimate some other Person: and when I give him the name Whiter, I intimate some other thing: in both case my Thought is led to something beyond Cajus, and there are two things brought into consideration.⁴⁸

Even if we have no previous idea of Cajus’s wife or the thing that is less white than Cajus, we can nevertheless think the propositions expressed by ‘Cajus is a husband’ and ‘Cajus is whiter than something,’ which in turn can lead us to form those new ideas. I suggest that “supposing” and “intimating” are like processes: according to Locke, we can form an idea of inexhaustible remainder without knowing what that would be the way we can form an idea of Cajus’s wife without knowing anything about her.

Notice that although these correlative ideas are new, they are nevertheless complexes ultimately made up of constituents that the person forming the correlative idea already had. For example, the idea of Cajus’s wife is just the idea of someone who is related by the marriage relation to Cajus and this idea contains only familiar ideas as its basic constituents. In this sense, supposition is not a fundamental mental operation: ideas that are in fact formed by this means could have been formed via abstracting, comparing and compounding.⁴⁹ This may well be the reason why Locke does not offer an explicit discussion of supposition in Book II of the Essay.⁵⁰

---

⁴⁸ Essay 2.17.9.
⁴⁹ Essay 2.25.1.
⁵⁰ It is important that Locke does not say that combining, abstracting and comparing are the only operations of the mind by which we can make complex ideas. In Essay 2.12.1. he says that “The Acts of the Mind wherein it exerts its Power over its simple Ideas are chiefly these three.”
What makes the stories of how we can generate the ideas of murder-victim or wife
easier to accept than Locke’s account of the genesis of the idea of infinity is that in these
cases the intermediate step is straightforward. The step from the proposition that Brutus
is a murderer to the proposition that there was someone who was murdered is a clear case
of entailment, and so is the step from the proposition that Cajus was a husband to the
proposition that there is someone who is Cajus’ wife. By contrast, Locke’s move from
the proposition that for every finite quantity there is something that is larger than it to the
proposition that there is something that lies beyond all finite quantities is much more
problematic. Certainly, the former proposition does not entail the latter one. Perhaps
Locke had some other sort of necessitation in mind, perhaps he was simply careless; in
any case, he certainly provides no explicit discussion of the matter.

The proposed interpretation of Locke’s view regarding the genesis of our idea of
infinity is in harmony with his repeated insistence that this idea is obscure and confused.
And the obscurity is irremediable: we don’t know what infinity is intrinsically, only that
it is something that bears a certain relation to all finite quantities. In this, the idea
resembles the idea of substratum, of which all we know is that it represents something
that bears a certain relation to all observable qualities of a particular substance. I suggest
that the parallel goes much further.

Locke frequently calls the idea of substratum a “supposition.” He also says that
because we are unable to imagine how the simple ideas we observe can subsist in
themselves, “we accustom our selves, to suppose some Substratum, wherein they do
It seems likely that according to Locke, the idea of substratum is created somehow by means of this supposition. I suggest that the operation at work is the same as the one that is employed in making the idea of infinity.

The process of arriving at the ideas of infinity and substratum is this. In the first step we realize the truth of a certain proposition. The proposition in the first case is that for every finite quality there is something larger than that quality; in the second, it is that for every observable quality there is something that supports that quality. Being enlargeable is part of what it is to be a finite quantity, just as being in need of support is part of what it is to be an observable quality. The second step is the recognition that these propositions entail or presuppose the existence of something ‘over and above’ finite quantities and observable qualities. The endless progression of finite quantities necessitates an inexhaustible remainder; the co-existence of observable qualities necessitates a substratum. (The nature of the necessitation is somewhat obscure in both cases; it obviously cannot be logical necessitation.) So, in the final step, the appropriate suppositions are made, and thereby the ideas of infinity and substratum are formed.

The parallel genesis explains further similarities between the ideas of infinity and substratum. Locke calls both ideas correlative, relative, or comparative, presumably on the grounds that they both include ideas of relation. The idea of infinity includes the idea of being larger than; the idea of substratum includes the idea of support. Concerning substratum, he says that “we have no Idea of what it is, but only a confused obscure one

\[^{51}\text{Locke uses the terminology of ‘supposition’ in connection with substratum at 1.4.18., 2.12.4., 2.12.6., 2.23.1., 2.23.2., 2.23.4., 2.23.5., 2.23.6., 2.23.15., 2.23.37., 2.31.6., 3.9.13. in the Essay and throughout his discussion of substance in the Correspondence with Stillingfleet. Locke also frequently uses the term ‘supposition’ in connection with real essences. Cf. Essay 2.31.8., 3.3.17., 3.6.6., 3.6.18., 3.6.49. There is also a passage (Essay 2.23.3.) where it is not entirely clear whether the supposition is that of substratum or that of real essence.}\]
And what it does is to support observable qualities. The idea of infinity is obscure and confused for similar reasons: what we know about infinity is merely that it is something larger than the finite quantities. We understand how it relates to quantities we have ideas of, but we know nothing more about it. Despite their obscurity, the ideas of infinity and substratum are crucial constituents of other ideas. To conceive of what Locke calls “the Infinity of Number, Duration, and Expansion” we need the idea of the “inexhaustible remainder” just as to conceive of ideas of particular substances we need the idea of substratum.

The ideas of infinity and substratum can be contrasted with their illusory counterparts. One might think that one can have a clear, distinct and positive idea of an actual boundless quantity, an idea that we have independently of our ideas of finite quantities. However, on Locke’s view, such an idea would be inconsistent. On similar grounds, he rejects as absurd the thought that we could clearly and distinctly conceive of substratum over and above our recognition that it is that which underlies the observable qualities of an object.

There are two significant gaps in Locke’s account of the genesis of our idea of substratum. The first one was already hinted at. The account postulates a transition from the proposition that for every observable quality there is something that supports that quality to the proposition that the qualities which are observed to co-occur have a common support. If this is not a mere blunder, Locke owes an account of how the truth of the first proposition (perhaps together with some further truths) necessitates the truth of the second. And one might seriously wonder whether such an account could be available.

---

52 Essay 2.17.15., 2.17.18., 2.23.3., Correspondence with Stillingfleet, op. cit., p. 21.
for an empiricist. The second gap is that Locke simply assumes that we have the relational idea of support. We need this idea even to think the proposition that for every observable quality there is something that supports that quality. Locke insists that in forming the idea of a relation the mind “brings two things together, and, as it were, takes a view of them at once,” which seems to entail that in order to form the idea of support we need to have antecedently the ideas of two things one of which supports the other. Now, we undoubtedly have ideas of pillars and roofs, but it would be a stretch to say that pillars support roofs in the same sense in which substrata support observable qualities.

Both of these are significant problems for Locke, problems which, as far as I can tell, he fails to address. Nevertheless, these are difficulties which arise in the context of a serious attempt to explain how experience gives rise to the idea of substratum. They show that Locke should have made further steps in providing such an explanation, not that he failed to make the first ones.

4. Our ignorance of substratum

In his discussions of substratum, Locke tries to find a middle course between innatism and eliminativism. He is unwilling to grant that the idea of substratum is a clear and distinct idea originally imprinted on our understanding; but he is equally reluctant to declare it illusory or incoherent. We have an obscure and confused idea of substratum: we know that it is of *something*, without knowing of what it is. What makes such a position theoretically appealing for Locke?

In Descartes’s first formulations of the *cogito*-argument, the conclusion he reaches is presented as ‘I am something’ or ‘I am not nothing.’ This conclusion raises a question, which in turn receives a routine answer: “But what then am I? A thing that thinks. What is that? A thing that doubts, understands, affirms, denies, is willing, is unwilling, and also imagines and has sensory perceptions.” This does not mean yet that this thinking thing is different from one’s body; the proof of that must wait until other considerations help Descartes to exclude materiality from the attributes of thinking substances. Nevertheless, Descartes is convinced that to be a *res cogitans* is more than just to be something that happens to think: thinking is part of the nature of this substance.

Hobbes considers this last move to be fallacious. He agrees that the subject can be assured of his existence just by having the thought that he is thinking, and Hobbes also grants that the subject can know that he is a thinking thing. Nevertheless, in the end Hobbes is prepared to draw a conclusion opposite to Descartes’s: “It seems to follow from this that a thinking thing is something corporeal. For it seems that the subject of any act can be understood only in terms of something corporeal or in terms of matter.” Since the thing that thinks is a thing that does something, and since nothing besides bodies can do anything, the thinking thing is a body, argues Hobbes. And bodies do not have thinking as part of their nature.

---

54 Essay 2.25.1.
55 “But immediately I noticed that while I was trying thus to think everything false, it was necessary that I, who was thinking this, was something.” Discourse AT VI 32. [CSM Vol.1, p. 127] “... let him deceive me as much as he can, he will never bring it about that I am nothing so long as I think that I am something.” Meditations AT VII 25. [CSM Vol.2, p. 17] “But we cannot for all that suppose that we, who are having such thoughts, are nothing.” Principles AT VIII 7. [CSM Vol.1, pp. 194 - 195]
57 Objections and Replies AT VII 173. [CSM Vol.2, p. 122]
Locke is sympathetic to neither of these views. He follows Descartes and Hobbes as far as the certainty of the existence of the thinking substance, but not a step further. He writes: “I am certain that I have evident knowledge, that the substance of my body and soul exists, though I am as certain that I have but a very obscure and confused idea of any substance at all.”\(^{58}\) The possibility that our substance is material cannot be excluded, since God could have superadded to our substance the ability to think.\(^{59}\) In his reply to Stillingfleet, Locke makes his position explicit:

> Your lordship in this paragraph proves, that from what I say, “we can have no certainty whether we have any spiritual substance in us or not.” If by spiritual substance your lordship means an immaterial substance in us, […] I grant what your lordship says is true, that it cannot, upon these principles, be demonstrated. But I must crave leave to say at the same time, that upon these principles it can be proved, to the highest degree of probability. If by spiritual substance your lordship means a thinking substance, I must dissent from your lordship, and say, that we can have a certainty, upon my principles, that there is a spiritual substance in us. In short, my lord, upon my principles, i.e. from the idea of thinking, we can have a certainty that there is a thinking substance in us.”\(^{60}\)

The claim that our idea of substratum is an idea of “something we know not” enables Locke to distance himself from both Descartes’s and Hobbes’s dogmatism. Since we do not know what substratum is, and since the idea of substratum is a component in all our ideas of substances, our knowledge of bodies and of minds is essentially incomplete.

Locke believed that our reason cannot fully penetrate the nature of things. He shared this conviction with many skeptics. But Locke was also fully committed to the significance of rational inquiry. To articulate a *reasoned agnosticism* about final questions concerning body and mind, Locke needed the idea of substratum. I suggest that

\(^{58}\) Correspondence with Stillingfleet, *op. cit.*, p. 345. Cf. also *Essay* 4.9.3.


\(^{60}\) Correspondence with Stillingfleet, *op. cit.*, p. 37.
this may well have been his chief motivation in trying to give an account of the way in which we construct such an idea from ideas of observables.

I have argued that Locke can give an account of the origin of the idea of substratum which is both non-trivial and (depending on the resolution of the difficulties mentioned at the end of section 3) might be acceptable for an empiricist. It is non-trivial, because it does not make the assumption that such an idea is received passively in experience as a constituent of a complex idea of a particular substance. And it might be acceptable for an empiricist, because it shows how the idea is ultimately grounded on ideas of observable qualities.

There is, of course, a stricter sense of the term ‘empiricist’, and if we consider that sense, Locke’s account is a non-starter. For it definitely does not rule out reason as a significant factor in the creation of an idea. After all, according to the present interpretation, Locke thinks that we come to have such an idea by realizing the truth of a certain proposition (i.e. that observable qualities require something else to inhere in) and by recognizing that the truth of this proposition presupposes or entails the existence of something whose idea had not been included among the constituent ideas of the proposition. In doing all this, we definitely exercise our reason. In fact, it is correct to say, that Locke believes that the idea of substratum is rationally necessitated by our ideas of observable qualities.

But Locke was not an empiricist in this stricter sense of the term, and he never claimed that to be. In his reply to Stillingfleet, he writes:

Your lordship’s argument, in the passage we are upon, stands thus: ‘If the general idea of substance be grounded upon plain and evident reason, then we must allow an idea of substance, which comes not in by sensation or reflection.’ This is a consequence which, with submission, I think will not hold, because it is formed
on a supposition which, I think, will not hold, viz. That reason and ideas are inconsistent; for if that supposition be not true, then the idea of substance may be grounded on plain and evident reason: and yet it will not follow from thence, that it is not ultimately grounded on, and derived from, ideas which come in by sensation and reflection, and so cannot be said to come in by sensation and reflection.\footnote{Correspondence with Stillingfleet, \textit{op. cit.}, p. 21.}

Locke’s concern was to show that reason by itself without the materials provided by the senses and reflection cannot produce ideas. Nothing in this account of the origin of the idea of substratum contradicts this thesis.\footnote{I thank Richard Boyd, Gail Fine, Tamar Szabó Gendler, Carl Ginet, John Hawthorne, John Heil, Nicholas Jolley, the late Norman Kretzmann, Lisa Shapiro, and Sydney Shoemaker for comments and discussion on previous drafts. I am also thankful to an anonymous referee of this journal for criticism, which led to the final revisions of the paper.}